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Sempozyumlar uzman kişilerin bilimi ve toplumu yakından ilgilendiren temel konu, sorun ya da olaylar hakkındaki araştırmaların yer aldığı akademik buluşma platformlarıdır. NWSA Akademik Dergiler olarak ikincisini düzenlediğimiz ve Bilim Şenliği ortamında 80'nin üzerinde farklı yükseköğretim kurumlarının yanı sıra mesleki kurum ve kuruluşlarla birlikte olmanın gururunu yaşamaktayız. Farklı bilim dallarında üretilen, geliştirilen çalışmaların evrensel bilimle paylaşma sorumluluğu ve gururu içerisindeyiz. Bu vesile ile ISS2017 Bilim Festivali'ne tebliğ ve poster bildiri sunan bütün taraflara sonsuz şükranlarımı sunarım.

NWSA Ailesi bilimi sevgi yumağı olarak görmektedir. Sevginin paylaşıldıkça çoğalması-büyümesi gibi, biliminde paylaşıldıkça daha da gelişeceğine inanmaktadır. Farklı bilim dallarını bir araya getirerek, bilim dalları arasında, ortak projeler, ortak araştırma alanları oluşturmak, tanışmak, fikir ve görüş birliğine sahip olmaktır.

ISS2017 Bilim Şenliği'ne yaklaşık 300 akademik çalışma başvurusu yapılmıştır. Düzenleme ve Bilim Kurulunun incelemesi sonucu bu çalışmalardan 210 tanesinin sözlü sunum ve 20 tanesinin de poster sunum olarak yer alması uygun görülmüştür. Bu çalışmaların hakemlik sürecinden geçirildikten sonra NWSA Akademik Dergilerde ve Sempozyum Kitapçığında tam metin olarak ayrıca yayınlanacaktır.

Sempozyumun gerçekleştirilmesinde her türlü özveriyi gösteren Düzenleme Kurulu, Bilim Kurulu üyelerine ve Yunus Emre Enstitüsü'ne teşekkürlerimi sunuyorum. ISS2017 Bilim Sempozyumu Özetler Kitabının evrensel bilime yararlı olmasını diliyorum.

3. Bilim Şenliğinde tekrar görüşmek ve bildiklerimizi ilgili taraflarla paylaşmak dileğiyle…

Mehmet Şen
Yunus Emre Enstitüsü Tiflis Türk Kültür Merkezi Müdürü

NWSA tarafından ikincisi düzenlenen, 80'nin üzerinde yükseköğretim kurumu ve mesleki kurum ve kuruluşların katılacağı Bilim Şenliğine ev sahipliği yapacağımız için mutluyuz. Dünyada 40'tan fazla kültür merkezi olan, Türk kültür, sanat ve dilini tanıtma, öğretme misyonuna sahip Yunus Emre Enstitüsü olarak farklı ülkeler, üniversiteler ve kuruluşlardan bilim sevdalılarını biraraya getirerek hedeflerimiz doğrultusunda yeni bir faaliyete aracılık etmenin hazzını duymaktayız. Çünkü biliyoruz ki farklı bilim dallarından akademisyen ve uzmanların bir araya gelmesi ortak projeler ve araştırma alanlarının oluşturulmasını sağlayacağı gibi tanışmaya, kültürel etkileşim ve hoşgörünün inşaasına da yol açacaktır.

Sempozyumun gerçekleştirilmesinde emeği geçen Düzenleme Kurulu ve Bilim Kurulu üyelerini tebrik ediyorum. Sempozyuma katılacak 210 sözlü ve 20 poster sunum arasından teknik süreçler sonucunda seçilip dergilerde tam metin olarak yer alacak sunumların ve yayınlanacak ISS2017 Bilim Sempozyumu Özetler Kitabının bilime önemli katkılar sağlamasını diliyorum.

Bundan sonraki faaliyetlerinizde de sizleri ağırlamaktan onur duyacağımızı belirtmek isterim.

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ISS2017 Keynote Speaker

Prof. M.Asım Yeğinobalı	The Past, Present and the Future of Concrete

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THE PAST, PRESENT AND THE FUTURE OF CONCRETE

ABSTRACT

The evolution of concrete as a construction material from the early ages to the present day is summarized by listing the date's of important developments in the history. This also included the historical developments in the cementitious materials. Developments beginning from simple lime-sand mortars to present day concretes and their varieties included invention of Portland cement, uses of mineral and chemical admixtures and different types of concretes with their uses in various types of projects and important structures. Cement and concrete industries are taking necessary measures to curb their use of natural resources and greenhouse gas emissions for sustainable development. Supplementary cementitious materials such as fly ash and blast furnace slag are used to reduce clinker content and all sorts of waste material are being used as alternative fuels to reduce fossil fuel consumption and emissions. This trend will also continue in the future. High performance concretes containing blended cements with low clinker factor and chemical admixtures will be used to construct more durable structures. As global population increases and urbanization continues there will always be a demand for concrete.

Keywords: Cement, Concrete, Future of Concrete, History of Concrete, Past of Concrete

BETONUN GEÇMİŞİ, BUGÜNÜ VE GELECEĞİ

ÖZ

Bir yapı malzemesi olarak betonun ilk çağlardan günümüze kadar olan gelişimi geçmişteki önemli gelişme tarihleri sıralanarak özetlenmiştir. Aynı zamanda bağlayıcı malzemenin de tarihsel gelişimi kapsanmaktadır. İlkel kireç-kum harçlarından başlayarak günümüz betonuna ve çeşitlerine kadar olan gelişmeler Portland çimentosunun bulunuşunu, mineral ve kimyasal katkıların kullanılmasını, beton türlerini ve çeşitli projelerde ve önemli yapılarda kullanımlarını içermektedir. Sürdürülebilir gelişme için çimento ve beton endüstrileri doğal kaynak kullanımları ile sera gazı emisyonlarını kısıtlayarak gerekli önlemleri almaktadırlar. Uçucu kül ve yüksek fırın cürufu gibi ilave bağlayıcı malzeme ve her türlü atık malzemenin alternatif yakıt olarak kullanılması sonucu fosil yakıt kullanımı ve emisyonlar azaltılmaktadır. Buna gelecekte de devam edilecektir. Düşük klinker faktörlü katkılı çimentolar ve kimyasal katkılar içeren yüksek performanslı betonlar daha dayanıklı yapıların inşaatında kullanılacaktır. Dünya nüfusundaki artış ve şehirleşme sonucu gelecekte de her zaman betona ihtiyaç duyulacaktır.

Anahtar Kelimeler: Çimento, Beton, Betonun Geleceği, Betonun Tarihçesi, Betonun Geçmişi

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ID	Title and Author(s)	Science Branch
5A13IJ	İSKENDERUN KÖRFEZİ'NDE AKDENİZ KARİDESİ (*Penaeus kerathurus* forskal, 1775)'NİN BÜYÜME PARAMETRELERİ **Meltem Manaşırlı, Caner Enver Özyurt, Volkan Barış Kıyağa, Dursun Avşar**	Ecological Life Sciences
1C4IJ	ÖĞRETMEN ADAYLARININ SAHİP OLDUĞU ÖĞRETİM ANLAYIŞLARI ÜZERİNE BİR ANALİZ **Erdoğan Tezci, Yalçın Dilekli, Soner Yıldırım, Serdan Kervan, Fatmir Mehmeti**	Education Sciences
1A41IJ	SOLUTION OF INDETERMINATE TRUSS STRUCTURES WITHOUT HUMAN INTERVENTION **Önder Halis Bettemir**	Engineering Sciences
D3IJ	DEVLET KONSERVATUARLARI TEMEL BİLİMLER BÖLÜMLERİNDE KALİTE ÇALIŞMALARI **Nilgün Sazak**	Fine Arts
4C2IJ	ONTIC OBSESSION AND REAL MEANING OF BELIEF IN GOD **Süleyman Aydın**	Humanities Sciences
4B10IJ	A RANDOMIZED CONTROLLED STUDY ON ANALYSIS OF EFFECT OF HOSPITAL BASED BREAST-FEEDING GROUP TRAINING PROVIDED IN EARLY POSTPARTUM PERIOD ABOUT BREAST-FEEDING SELF-EFFICACY AND BREAST-FEEDING STATUS OF MATERNALS **Yeşim Yeşil, Aysun Başgün Ekşioğlu, Ayten Yorulmaz, Esin Çeber Turfan**	Life Sciences
1B24PB	RATLARDA Parasetamolle OLUŞTURULAN KARACİĞER TOKSISITESINDE NAR ÇEKIRDEĞI YAĞININ TERAPOTIK ETKILERI **Damla Çetin, Pınar Aksu Kılıçle, Gülname Fındık Güvendi, Muhammed Yayla**	Medical Sciences
4A4IJ	INFLUENCE OF STIMUFUNG ON BIOLOGICALLY ACTIVE SUBSTANCES OF FRUITS OF ORANGE WASHINGTON-NAVEL **Eteri Jakeli, Aleko Kalandia, Tamar Baramidze, Inga Kartsivadze**	Nature Sciences
3A10IJ	THE EFFECT OF SMALL SUBSTITUTIONS OF *GD* ON THE MAGNETIC PROPERTIES OF SYSTEM $Y(Co_{1-x}A\ell_x)_2$ **Zaur M. Gamishidze**	Physical Sciences
3C2IJ	İSTANBUL, EYÜPSULTAN CAFER PAŞA TÜRBESİNDEKİ MEZAR TAŞLARININ YELEK TASARIMLARINDA KULLANILMASI **Fatma Ayhan**	Social Sciences
2A9PB	THE EFFECT OF Cr/C RATIO ON THE WEAR RESISTANCE OF HARDFACING COATINGS **Sefa Yılmaz, Hülya Durmuş, Nilay Çömez, Melis Yurddaşkal, Metin Yurddaşkal**	Technological Applied Sciences
3B14PB	SODYUM NİTRİT İLE RATLARDA OLUŞTURULAN HEPATOTOKSİSİTE ÜZERİNE *TRİGONELLA FOENUM-GRAECUM* L. TOHUM EKSTRAKTININ ETKİLERİ **Gözde Atila, Hamit Uslu, Yasemen Adalı**	Veterinary Sciences
3C4IJ	MUHASEBE VE VERGİ UYGULAMALARI ÖĞRENCİLERİNİN MUHASECE MESLEK ALGISI **Bülent Duman**	Vocational Education
NWSA Young Scientists Awards		
ID	**Title and Author(s)**	**Science Branch**
1A62PB	ANALYSIS OF DEFECTS IN MEDICAL IMPLANTS BY HOLOGRAPHIC INTERFEROMETRY APPROACH **Baran Abalı, Ali Anıl Demirçalı, Hüseyin Üvet**	Engineering Sciences
1A63PB	AN ALTERNATIVE APPROACH TO ALGORITHM ANALYSIS WITH HOLOGRAPHIC INTERFEROMETRY **Nil Selen Aydın**	Engineering Sciences
1A64IJ	SEEDBOT: A LOW-COST SEMI-AUTONOMOUS MOBILE ROBOT FOR AGRICULTURAL APPLICATIONS **Alara Güler, Uğur Çelik**	Engineering Sciences
2A18PB	DETERMINING POSITIVE CANCER RESCUE MUTATIONS IN P53 BASED CANCERS BY USING ARTIFICIAL INTELLIGENCE **Gün Kaan Aygen**	Technological Applied Sciences

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ÖRNEK ÇAPININ HOMOJEN POLİKARBON ÖRNEKLERİN ULTRASONİK DALGA HIZI ÜZERİNDEKİ ETKİSİNİN İNCELENMESİ

ÖZ

Ultrasonik dalga hızı deneyi kaya mühendisliği uygulamalarında sıklıkla kullanılan ve örnek üzerinde tahribat etkisi olmayan; bununla birlikte kaya malzemesinin bazı mekanik özelliklerinin tahmininde oldukça basit ve ucuz bir yöntemdir. Birçok çalışmada, ultrasonik dalga hızının örnek çapına bağlı olarak farklı değerler sunduğu belirtilse de bu çalışma kapsamında dalga hızının silindirik şekilli homojen (%99) polikarbon örnekler üzerinde bir dizi direkt ultrasonik dalga hızı ölçümleri yapılmış ve örnek çapının boyuna dalga hızı üzerindeki etkisi incelenmiştir. 4 farklı çapta (37mm, 51mm, 68mm ve 82mm) 20 adet örnek hazırlanmıştır. Ultrasonik hız ölçümleri Pundit Plus marka ölçüm aleti kullanılarak yapılmış, ölçümlerde 150 kHz'lik piezoelektriksel özellikte alıcı ve verici problar kullanılmıştır. Örneklerin ortalama dalga hızı değerleri sırasıyla 2324, 2335, 2342 ve 2329m/s olarak ölçülmüştür. Sonuçlar tüm örnek gruplarının yaklaşık aynı ultrasonik dalga hızı değerlerine sahip olduğunu, dolayısıyla dalga hızının çaptan bağımsız olduğunu göstermiştir. Literatürde boyuna dalga hızının çağa bağlı olarak değiştiği belirtilse de bu değişimin örneklerin fiziksel olarak heterojen olması nedeniyle gerçekleştiği sonucuna varılmıştır.

Anahtar Kelimeler: Ultrasonik Dalga Hızı, Örnek Çapı, Heterojenlik, Kaya Malzemesi, Mühendislik

INVESTIGATING EFFECT OF SAMPLE DIAMETER ON THE P-WAVE VELOCITY VALUES OF HOMOGENEOUS POLYCARBON SAMPLES

ABSTRACT

Ultrasonic P-wave velocity measurement is a nondestructive, inexpensive and relatively easy-to-conduct method which is widely used in rock engineering practices for predicting certain mechanical properties of rock material. Even though many past studies suggest the ultrasonic P-wave velocity values change with sample diameter, cylindrical homogeneous polycarbonic materials with different diameters were used in a series of direct P-wave velocity measurement tests, and the effect of sample diameter on the test results was investigated in this study. 20 samples with 4 different diameters (37mm, 51mm, 68mm, and 82mm) were prepared. Pundit Plus test apparatus with 150 kHz piezoelectrical transmitter and receiver was used in the tests. Average Vp values of the samples were determined as 2324, 2335, 2342, and 2329m/s, respectively. Results indicate the P-wave velocity for all sample groups are almost identical, so they are not dependent on sample diameter. It is concluded that varying P-wave velocity values obtained in other studies in the literature may be resulting from sample heterogeneity.

Keywords: Ultrasonic P-wave Velocity, Sample Diameter, Heterogeneity, Rock Material, Engineering

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ÖRNEK ÇAPININ HOMOJEN POLİKARBON ÖRNEKLERİN ULTRASONİK DALGA HIZI ÜZERİNDEKİ ETKİSİNİN İNCELENMESİ

ÖZ

Bu çalışmada Trabzon ve çevresinde birçok alanda yapı taşı olarak kullanılan tefrit örneklerinin yüksek sıcaklık etkisi altında fiziko-mekanik özelliklerinde meydana gelen değişimler araştırılmıştır. Çalışma kapsamında her sıcaklık kademesi için 10 ar adet silindirik örnek kül fırınında 2 saat süreyle 200°C 400°C, 600°C, 800°C, 1000°C ve 1200°C sıcaklıklara maruz bırakılmıştır. Fırından çıkarılan örneklerin yarısı termal şok için suya atılarak, diğer yarısı ise oda sıcaklığında soğutulmuştur. Her sıcaklık kademesinde ve her iki koşulda soğutulmuş örneklerin özellikleri tespit edilmiş ve ilksel değerlerle kıyaslanmıştır. Sıcaklık artışıyla birlikte tek eksenli sıkışma dayanımda 127MPa dan 32MPa'la ve ultrasonik hız değerlerinde ise 5334 m/sn'den 1897 m/sn düştüğü görülmüştür. Bu düşüm %70'nin 600°C'ye kadar ve ilk bir buçuk saat içinde gerçekleştiği bu nedenle tefrit örnekleri için kritik ısınma süresi 90 dakika olduğu tespit edilmiştir.

Anahtar Kelimeler: Fiziko-mekanik Özellikler, Termal Hasar, Yüksek Sıcaklık Etkisi, Polikarbon, Trabzon

ABSTRACT INVESTIGATION OF VARIATIONS IN PHYSICO-MECHANICAL CHARACTERISTICS OF HIGH TEMPERATURES

ABSTRACT

At this study achieves to figure out the effect of high temperatures on some physico-mechanical properties of tephrite samples, as it is widely used to Trabzon and many surrounding areas used as naturel building stones (the Eastern Black Sea Region). Scope of this study each 10 core samples were gradually exposed to specific temperatures level of 200°C, 400°C, 600°C, 800°C, 1000°C and 1200°C in the oven for two hours. Half of hot samples were cooled down in water for causing thermal shock, other half cooled down room temperature. After each temperature level the samples roperties were determined and compared with the initial properties. This study indicates that as the heating temperature increases uniaxial compressive strength decrease from 127MPa to 32MPa and ultrasonic P-wave velocity decrease from 5334m/sn to 1897m/sn. This decrease was determined to be 70 minutes at 600°C and within the first one and a half hours, because of this the critical warm-up time for tephrite samples was determined 90 minutes.

Keywords: Physico-mechanical Properties, Thermal Damage, High Temperature Effect, Polycarbonate, Trabzon

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GÜNBATUR (GÜMÜŞHANE/KELKİT) GÖLETİ AKS YERİ GEÇİRİMLİLİĞİNİN ARAŞTIRILMASI

ÖZ

Bu çalışmada Gümüşhane ili Kelkit ilçesi Günbatur köyünde Balıklı dere üzerinde sulama amacıyla yapımı devam eden Günbatur göletinin aks yerinde oluşturulan perde enjeksiyonlarının başarısı araştırılmıştır. Çalışma kapsamında aks ve dolusavakta 6 adet sondaj ve Basınçlı Su Testi deneyi yapılmıştır. Deney sonucunda aks yerindeki kuyularda yapılan BST deneylerinde kaya kütlesinin %19 oranda çok geçirimli, %55 oranda geçirimli ve %26 oranda az geçirimli olduğu tespit edilmiştir. Sıyırma kazısından sonra sol sahilde 40m d, talvegde 22-24m ve sağ sahilde 32-34m derinlikler de perde enjeksiyonu ve memba-mansap taraflarında 2 sıra, 5m derinliğinde 3m aralıklarla kapak enjeksiyonu yapılmıştır. Uygulamalar sonucunda yapılan enjeksiyonların bulunduğu alan iki bölgeye ayrılmış ve ayrı ayrı değerlendirilmiştir. Birinci bölgedeki enjeksiyonlar da efektiflik sağlanmış olup, ikinci bölge enjeksiyonlarda ise özellikle zemin karakterli malzemenin litolojik özelliklerinden ötürü bazı kademeler hariç enjeksiyonlar başarılı bir şekilde uygulanamamıştır. Bu bölgedeki birimlerin geçirimlilikleri devam etmekte olup bu bölgede istenilen efektiflik sağlanamamıştır.

Anahtar Kelimeler: BST, Geçirimlilik, Günbatur Göleti, Lugeon, Gümüşhane

INVESTIGATION OF PERMEABILITY OF GUNBATUR (GUMUSHANE/TURKEY) POND AXIS

ABSTRACT

In this study, the success of curtain grouting created at the axis of Günbatur pond, which is under construction for irrigation on Balikli creek, in Gunbatur village of Kelkit district of Gümüshane province was investigated.In the scope of the study, 6 drilling and Lugeon tests were carried out in axis and spillway. It was determined that19% of rock mass was high permeable, 55% permeable, and 26% low permeable according to the Lugeon test results conducted in wells at the axis. After the stripping excavations, curtain grouting applications at 40 meters from the left shore, 22-24 meters from the thalweg and at 32-34-meter depths in the right shore; and cap grouting applications in 2 lanes on the upstream and downstream with 3-meter intervals at5 meter depth were conducted. As a result of the applications, the area where the injections are made is divided into two regions and evaluated separately. Grouting in the first region was effective, and in the second region, with some exceptions, the application was not successful due to the lithological properties of the material, especially the soil character. The units in this region are still permeable and the desired effectiveness is not achieved in this region.

Keywords: Lugeon Test, Permeability, Günbatur Pond, Hydraulic Pressure Test, Gümüşhane

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SENSITIVITY ANALYSIS OF ELECTRICITY PRODUCTION BASED HOURLY AND DAILY CO_2 EMISSION ESTIMATION FOR TURKEY

ABSTRACT

The main aim of this study was to determine the electricity production based daily and hourly emissions profile. Electricity production based hourly and daily emissions are calculated by utilizing long period data. It is determined as CO_2 intensity of electricity generation fluctuates with both hour and day. Maximum, minımum and the average CO_2 intensity of electricity generation amounts are determined. It varies from 384g/kWh to 738g/kWh, 580g/kWh in average. According to hourly bases analyzes, highest CO_2 intensity of electricity generation occurs between 06:00 and 07:00. According to Turkey's power plant utilization characteristics and electricity demand, lowest CO_2 intensity of electricity generation occurs between April 1st and 20th for Turkey. The highest CO_2 intensity per kWh electricity occurs during the New Year season. The highest CO_2 intensity of electricity generation occurs in Sunday despite the lowest electricity demand. The annual total of 161 Mt CO_2 is released to atmosphere as a result of electricity generation. Electricity production based CO_2 emission per capita is calculated as 2.025 ton CO_2.

Keywords: Electricity Production, Sensitivity Analysis, CO_2 Intensity of Electricity Generation, CO_2 Emission Per Capita, Turkey

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INVESTIGATION OF POWER PLANT WASTE HEAT UTILIZATION IN BIOGAS BASED ELECTRICITY PRODUCTION PROCESS

ABSTRACT

In this paper, biogas reactor heating system using power plant waste heat as a heat source is conducted in the first time in literature. The feasibility of utilization of biogas for electricity and increase in efficiency of overall system electricity production are investigated. Can power plant in Çanakkale, Turkey is chosen for the investigation in this case study. Can power plant releases 195MW thermal energy to air in condenser unit with relatively low temperature (43°C). Given temperature range is ideal for mesophilic bacteria growth in digestion process during the biogas production process. 39.8MW biogas based electricity production potential is available for Can power plant condenser waste heat. Overall electricity production energy efficiency can be increased by 9.7%. This analysis will provide a very good example to recover the released high amount of waste heat with low temperature for many power plants. Motivation of authorities on huge capacity biogas based electricity production can be increased by designing such kind of applications.

Keywords: Power Plant, Waste Heat, Energy Recovery, Biogas Production, Electricity Production, System İmprovement

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CR TAKVİYELİ NiAL/Ni3AL FONKSİYONEL DERECELENDİRİLMİŞ MALZEMENİN MİKROYAPI İNCELEMESİ

ÖZ

Bu çalışmada, kendi ilerleyen yüksek sıcaklık sentezi (self-propagating high temperature synthesis=SHS) yöntemiyle Cr katkılı NiAl/Ni_3Al intermetalik fonksiyonel derecelendirilmiş malzeme (FDM) üretilmiştir. Çalışmada kullanılan tozlar element olarak temin edilmiş ve hassas terazide %50 Ni-%50 Al ve %75 Ni-%25 Al atomik oranlarında hazırlanan bileşiklere %1, %2 ve %3 oranlarında takviye elemanı olarak Cr ilave edilmiş 12 saat 300dev/dk'da karıştırılmışlardır. Daha sonrasında 35Mpa basınç altında kompaktlanmış ve sabit ön ısıtma sıcaklığında ateşlenmişlerdir. Ateşleme sonrasında yapılan analizlerde Cr katkılı NiAl/Ni_3Al fonksiyonel dereceleli bir malzemenin başarıyla üretilebileceği görülmüştür. Ni_3Al bölgesinde ve ara bölgede NiAl'a oranla gözenekliliğin daha yoğun olduğu gözlemlenmiştir. Ayrıca yapılan mikrosertlik analizinde en yüksek değerler Ni_3Al kısmında elde edilirken en düşük değer ise NiAl kısmında elde edilmiştir.

Anahtar Kelimeler: FDM, İntermetalik, SHS, Cr, NiAl/Ni_3Al

MICROSTRUCTURE INVESTIGATION OF CR-DOPED NiAL/Ni_3AL FUNCTIONALLY GRADED MATERIAL

ABSTRACT

In this study, Cr-doped NiAl/Ni_3Al intermetallic functional graded materials (FGM) was produced by self-propagating high-temperature synthesis (SHS) method. Metallic powders used in the study were supplied as elements and prepared at 50% Ni-50% Al and 75% Ni-25% Al in atomic ratios and 1%, 2%, and 3% Cr was added to the compounds, they were mixed at 300rpm for 12 hours. Then, the mixtures were compacted at a constant pressure of 35MPa and ignited at a constant preheating temperature. Analysis conducted after ignition, it has been found that Cr-doped NiAl/Ni_3Al functional graded material can be successfully produced. It has been observed that the porosity is more intense in the Ni_3Al side and in the intermediate region compared to NiAl side. In the microhardness analysis, the highest values were obtained in the Ni3Al part while the lowest values were obtained in the NiAl part.

Keywords: FGM, Intermetallics, SHS, Cr, NiAl/Ni_3Al

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FARKLI KALINLIKTAKİ DP600/TRIP800 ÇELİK SACLARIN NOKTA DİRENÇ KAYNAK KABİLİYETİ

ÖZ

Otomotiv endüstrisinde aynı ve farklı kalınlıktaki farklı cins çeliklerin kaynaklı birleştirme işlemlerine ihtiyaç duyulmaktadır. Bu amaçla çalışmada otomotiv endüstrisinde sıklıkla kullanılan aynı ve farklı kalınlıktaki ileri yüksek mukavemetli DP600/TRIP800 çelik saclar nokta direnç kaynak yöntemiyle aynı kaynak parametrelerinde birleştirilmiştir. Birleştirmelere çekme makaslama, çapraz çekme testleri uygulanmış ve sertlik ölçümü gerçekleştirilmiştir. Ayrıca birleştirmelerin mikroyapıları incelenmiş ve kaynak çekirdek geometrisi belirlenmiştir. Birleştirmelerin çekme makaslama ve çapraz çekme dayanımları, kopma türleri ve enerji absorpsiyonları mukayese edilmiştir. Sonuç olarak; çalışmada farklı cins DP600/TRIP800 birleştirmesinde, malzeme kalınlığının mekanik özelliklere ve kaynak çekirdek geometrisi değişimine etkili olduğu belirlenmiştir.

Anahtar Kelimeler: Nokta Direnç Kaynağı, Farklı Sac Kalınlığı, Farklı Cins DP600/TRIP800 Birleştirmesi, Mekanik Özellikler

THE RESISTANCE SPOT WELDABLITY OF DIFFERENT THICHNESS DP600/TRIP800 STEEL SHEET

ABSTRACT

The joining process of dissimilar steels having same and different thickness is required by automotive industry. For this purpose, the DP600/TRIP800 steels having same and different thickness which are widely used in automotive industry were joined by resistance spot welding at the constant welding parameters in this study. The tensile shear, cross tensile test was applied and hardness measurement was carried out for weldment. In addition, the microstructure of weldment was evaluated and the weld nugget geometry was determined. The tensile shear and cross tensile strength results, the fracture mode and energy absorption of weldments was compared. Conclusively, it is determined that the mechanical properties and weld nugget geometry of DP600/TRIP800 dissimilar steel weldment is affected by sheet thickness.

Keywords: Resistance Spot Welding, Different Sheet Thickness, Dissimilar DP600/TRIP800 Weldment, Mechanical Properties

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KÂĞIT BARDAKLARDAN ÜRETİLEN POLİMER KOMPOZİTLERİN ISIL ÖZELLİKLERİNİN BELİRLENMESİ

ÖZ

Ahşap esaslı kaynakların azalmasıyla birlikte polimer kompozit üretiminde, geri dönüştürülebilir materyallere olan ilgi her geçen gün artmaktadır. Bu çalışmada kullanım sonrası atıl duruma gelen kâğıt bardaklar, plastik olarak da Polipropilen (PP) kullanılarak sırasıyla %20-30-40 oranlarında üç farklı formülasyonda plastik kompozit üretimi gerçekleştirilmiştir. Kullanılan plastik ve kâğıt bardak arasındaki uyumsuzluğu gidermek amacıyla da %3 oranında maleikanhidritle graftlanmış polipropilen (MAPP) kullanılmıştır. Kâğıt bardakların üretilen polimer kompozitlerin ısıl özellikleri (TGA) ve kristallik dereceleri (DSC)üzerine etkileri incelenmiştir. Polimer kompozit üretiminde atık kâğıt bardak kullanımının TGA ve DSC analizler üzerindeki etkileri daha önceki yapılan benzer çalışmalarla karşılaştırılarak atıl durumdan tekrar farklı alanda kullanılabilirlikleri üzerinde araştırmalar yapılmıştır.

Anahtar Kelimeler: Polimer Kompozitler, Kâğıt Bardak, Isıl Özellikler Özellikler, TGA, DSC

THERMAL PROPERTIES of POLYMER COMPOSITES PRODUCED FROM PAPER CUPS

ABSTRACT

The use of recycled and waste thermoplastics materials has been recently considered for producing wood plastic composites (WPCs). In this work, with different formulations to form WPCs have been fabricated from disposable cups, recycled high density polyethylene (PE) and polypropylene (PP). Some mechanical, physical and thermal properties were performed on the WPCs samples to investigation of effect of using different polymer and coupling agent. High mechanical properties have been obtained for the tested formulations beside to don't any adverse effect to thermal properties. The work demonstrates that PCs fabricated disposable cups have potential to be utilizable reuse as reinforcement in polymer composites.

Keywords: Polymer Composites, Waste Cup, Thermal Properties, TGA, DSC

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PİTYOKTEİNES CURVİDENS (GERM.) VE *CRYPHALUS PİCEAE*'NİN ZARAR VERDİĞİ DOĞU KARADENİZ GÖKNARININ SELÜLOZ VE KÂĞIT ENDÜSTRİSİNDE KULLANILABİLİRLİĞİNİN ARAŞTIRILMASI

ÖZ

Geçmişten günümüze kadar geçen sürede ağaç malzeme birçok uygulama alanı bulmuştur. Bu ağaçlar bazen orman zararlıları ve yangınların verdiği tahribattan dolayı kesilmek zorunda kalmaktadır. Özellikle böcek zararlıları son zamanlarda birçok ağaç türüne arız olmakta ve kurutmaktadır. Bu zarar gören ağaçlar orman işçileri tarafından kesilerek, ya tamamen ya da kısmen çürük odun olarak adlandırılmakta ve çoğunlukla yakacak odun olarak kullanılmaktadır. Hâlbuki bu tür zararlıların tahrip ettiği ağaçlar yonga levha, lif levha ve kâğıtçılıkta kullanılabilir. Yapılan bu çalışmada *Pityokteines curvidens* (Germ.), *Cryphalus piceae* (Ratz.)) tarafından tahrip edilen *Abies nordmanniana*'nın kimyasal analizleri ve sülfat pişirmesi sonunda testleri yapılmıştır. Çalışma sonunda zarara uğramış odunlardan elde edilen hamurların verimlerinin %1 oranında daha fazla olduğu ve ayrıca çok daha kolay piştiği belirlenmiştir. Zarara uğramış odunlardan elde edilen hamurların kappa numaraları yani kalıntı lignin oranları daha düşük bulunmuştur. Ayrıca bu hamurların parlaklık dereceleri, çekme mukavemetleri ve yırtılma dirençleri sağlam odununkilere göre daha yüksek olarak tespit edilmiştir.

Anahtar Kelimeler: *Pityokteines curvidens*, *Cryphalus piceae*, Doğu Karadeniz Göknarı, Kâğıt Endüstrisi, Selüloz

THE INVESTIGATION OF *PITYOKTEINES CURVIDENS* (GERM.) AND *CRYPHALUS PICEAE* DAMAGED *ABIES NORDMANNIANA* USABILITY IN PULP AND PAPER INDUSTRIES

ABSTRACT

In the period from the past to the present, wood material has found many application areas. Some of these trees are forced to be cut because of forest pests and fire. Especially these forest pets cause trees to dry out. These damaged trees are mostly cut by forest worker and separated as the rotten wood and firewood. Whereas these rotten wood can be utilized in chipboard, fiberboard or pulping industries as well. In this study the chemical analysis, sulphate pulping, pulp productibility of *Pityokteines curvidens* and *Cryphalus piceae* damaged *Abies nordmanniana*. At the end of the study, it was determined that the yields of the pulps obtained from the impregnated woods were 1% higher and also much easier to pulping. The kappa numbers of residual pulp lignin were found to be lower than those of the pulps obtained from the insect damaged woods. In addition, the brightness values, tensile strength and tear strength of these pulps were found to be higher than those of intact wood.

Keywords: Polymer Composites, Waste Cup, Thermal Properties, TGA, DSC

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BALLI KAYMAĞIN DUYUSAL VE KALİTE NİTELİKLERİ

ÖZ

Değişen dünya düzeni ile beraberinde gelen hastalıklar, tüketicilerin sağlıklı ve doğal beslenmeye yönelik isteklerini da pozitif yönde etkilemiştir. Özellikle kahvaltılarda tüketilen ve yüksek miktarda işlenmiş şeker içeren reçel ve sürülebilir kremalara alternatif olabilecek, doğal bileşenlere sahip ürünlere olan ilgi son yıllarda artış göstermiştir. Bu amaca yönelik hazırlanmış bal ve kaymak karışımının, çocuklar ve sağlıklı beslenmek isteyen yetişkinler için ideal bir ürün olduğu düşünülmektedir. Araştırmada, hazırlanan bal kaymak karışımının optimum oranı, yapılan ön denemeler sonucunda 30:70 (bal:kaymak) olarak belirlenmiştir. Ürünün tekstürel özelliklerini geliştirmek amacıyla, hazırlanan karışımlardan birine %1 oranında karboksimetil selüloz eklenmiştir. Karboksimetil selüloz ilave edilen ve edilmeyen örneklerin kuru madde, kül miktarı, su aktivitesi, invert şeker miktarı gibi özellikleri ve maya ve küf sayısı ile koliform grubu bakteri sayıları belirlenmiştir. Bunların yanısıra yapılan duyusal analiz ile karboksimetil selülozun duyusal kalite üzerindeki etkisi saptanmıştır.

Anahtar Kelimeler: Bal, Kaymak, Karboksimetil Selüloz, Duyusal Analiz, Sağlıklı Beslenme

SENSORY AND QUALITY CHARACTERISTICS OF HONEY CREAM

ABSTRACT

Recent diseases as a result of the developing world order have influenced the consumers' desires for healthy and natural nutrition in the positive direction. There has been a notably interest in products with all-natural ingredients as an alternative, instead of jams and spreadable creams consumed at breakfast containing high amounts of processed sugar. In order to support such an idea, it is believed that a mixture of honey and cream would be an ideal product for children and adults wishing to have a healthy-eating behavior. This research studies to explore the optimum levels for honey and cream in making a mixture. The preliminary experiment results show that 30% of honey and 70% of cream as a whole is determined to be an ideal level. To enhance the textural properties of the mixture, 1% of carboxyl methyl cellulose was added into the mixture. A number of properties of a mixture with and without carboxymethyl cellulose such as dry matter, amount of ash, water activity and invert sugar amount have been determined. In addition to this, the numbers of yeast and molds and coliform group bacteria counts have been determined. Also, the impact of carboxyl methyl cellulose on sensory quality of samples is detected through a sensory analysis conducted.

Keywords: Honey, Cream, Carboxymethyl Cellulose, Sensory Analysis, healthy-eating

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CİVİL PEYNİRDE AĞIR METAL KONTAMİNASYON KAYNAĞI VE DÜZEYİNİN BELİRLENMESİ ÜZERİNE BİR ARAŞTIRMA

ÖZ

Türkiye, yöresel peynirler açısından zengin bir çeşitliliğe sahiptir. Ancak, bu peynirlerin birçoğu aile içi üretim ve bölgesel tüketimle sınırlı kalmış, ülke ekonomisine katma değer sağlama potansiyellerinden yeterince faydalanılamamıştır. Civil peyniri özellikle Kars, Erzurum, Bayburt çevresinde yaygın olarak üretilen ve tüketilen geleneksel peynirlerimizden birisi olup, çeşitli yörelerde Kars Çeçil peyniri, Erzurum Civil peyniri, Trabzon Tel peyniri gibi değişik isimlerle tanınmaktadır. Üretim biçimleri bakımından bölgeler arasında farklılıklar göze çarpmaktadır. Günümüzde gelişen sanayileşme ve çevre kirliliğine bağlı olarak, gıdalara kontamine olan ağır metal iyonları ciddi sağlık problemlerine yol açmaktadırlar. Ağır metallerin süt ürünlerinde bulunması, hayvanın tükettiği yem ve suyun yanı sıra, uygulanan üretim yöntemi ve teknolojilerine de bağlıdır. Bu araştırma kapsamında, Bayburt ilinde geleneksel Civil peynir üretimi yapılan 5 farklı bölgeden yem, su, süt ve peynir örnekleri temin edilmiştir. Bu örneklerde ağır metal kirliliğinin boyutları ve kaynağını belirlemek amacıyla, Krom, Demir, Kadmiyum, Kurşun, Civa ve Arsenik varlığı araştırılmıştır.

Anahtar Kelimeler: Civil Peynir, Yöresel Peynirler, Ağır Metal, Çevre Kirliliği, Bayburt

A STUDY ON DETERMINATION THE SOURCE AND THE LEVEL OF HEAVY METAL CONTAMINATION OF CIVIL CHEESE

ABSTRACT

Turkey has a rich variety in terms of local cheeses. However, these cheeses are produced only their local areas and their productions are also limited. Thus, they are not utilized with their potential on the country's economy. Civil cheese is a traditional cheese, which is commonly produced and consumed especially Kars, Erzurum, Bayburt and their areas. This cheese is also called Kars Çeçil Cheese, Erzurum Civil Cheese and Trabzon Tel Cheese. There are some differences among them in terms of their production. On these days, with development of industry and the pollution, contaminated foods with heavy metals leads to problems on health. The presence of heavy metal in milk and milk products depends on the water and feeding source of animal. It also depends on the method of production and the technology that is used. In this study, the feed, water, milk and Civil cheese samples were supplied in 5 different areas of Bayburt where the Civil cheese is produced. To determine the heavy metal contamination and the contamination source of these samples, the presences of Chrome, Iron, Cadmium, Lead, Mercury and Arsenic were examined.

Keywords: Civil Cheese, Local Cheeses, Heavy Metals, Pollution, Bayburt

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PREPARATION AND CHARACTERIZATION OF QUERCETIN IMPRINTED SILICA NANOPARTICLES

ABSTRACT

Molecular imprinting is a synthetic method for preparation of polymer materials which has pre-designed molecular recognition ability. Due to this feature, molecular imprinted materials are often named as plastic antibody or enzyme mimics. Molecularly imprinted polymers (MIPs) can be used to design functional polymeric materials with selective recognition properties. After polymerization with a suitable monomer and template molecule, the template molecule is removed from the polymer matrix to form three-dimensional cavities in the polymer matrix that are the same size, shape and functionality as compared with the template molecule. In the present work, the novel quercetin (the most active compound in flavonoid family) imprinted silica nanoparticles were synthesized via surface initiated addition-fragmentation chain transfer (RAFT) polymerization. The silica nanoparticles were first functionalized with a chain transfer agent group containing organosilane and then polymerization was performed in the presence quercetin (template molecule, QCT), methacrylic acid (MAA, functional monomer), ethylene glycol dimethacrylate (EGDMA, cross-linker), azobisisobutyronitrile (AIBN, initiator) and dimethylformamide (solvent or porogen). The prepared SiO_2@MIP nanoparticles were characterized by several surface characterization methods such as tranmission electron microscopy (TEM), X-ray photoelectron spectroscopy (XPS). The binding properties of the prepared SiO_2@MIP nanoparticles were further studied by equilibrium properties, binding capacity and selectivity experiments by UV-vis spectrometer. The developed method is a good alternative to the previously reported analytical methods such as HPLC, voltammetry, immunoassay for QCT determination.

Keywords: Molecular Imprinting , Polymerization, Quercetin, RAFT, SiO_2@MIP Nanoparticles

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DESIGNING OF A THERMO AND PH SENSITIVE CELLULOSE MEMBRANE FOR SELECTIVE DETECTION OF LYSOZYME IN HUMAN SERUM

ABSTRACT

Combining surface imprinting with membranes is an effective solution to overcome template removal and achieve large binding capacity. In this work, lysozyme (Lyz) imprinted cellulose membrane (CM) was prepared via surface initiated free radical polymerization after chemical modification of a methacrylate containing organosilane molecule. The morpohology and structure property of the resultant molecular imprinted CM were characterized by scanning electron microscopy (SEM), Fourier transfor infrared spectroscopy (FTIR), and X-ray photoelectron spectroscopy (XPS). The polymerization and adsorption conditions were investigated in detail in order to obtain the highest selectivity and binding capacity. Under the optimized conditions, the imprinted CM showed higher binding affinity toward Lyz than non-imprinted CM. The selectivity for Lyz recognition was determined with competitive adsorption experiments indicating the imprinted CM has a higher selectivity for Lyz. In addition, the stability and regeneration were also examined, which indicated the imprinted CM had excellent reusability.

Keywords: Surface Imprinting, Polymerization, Adsorption, Selectivity, Fourier Transfor Infrared Ispectroscopy (FTIR)

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TERSİYER (PLİYOSEN) YAŞLI BİR KÖMÜR ARAMA SAHASINA AİT SONDAJ KAROT ÖRNEKLERİNİN DEĞERLENDİRİLMESİ

ÖZ

Kömür kalite değerlendirmesi kimyasal (nem, uçucu madde, sabit karbon, kül) ve elementel analizler (C, H, N, O, S) yapılarak belirlenmiştir. Vitrinit yansıma değerleri organik maddece zengin ve kömürlü düzeylerde %0,288-0,371 arasında değişmekte olup, düşük olgunluk düzeyine karşılık gelmektedir. Bu kalorifik değerlerle uyumludur. Organik petrografi, kömür kalite verileri ve düşük olgunlaşma nedeniyle kömürlerin alt-bitümlü-linyit kömür olarak sınıflandırılabileceği kanaatine ulaşılmıştır. Kömürlerin organik bileşimleri daha çok hümik ve daha az oranlarda ise inertinit ve liptinitik gruplardan oluşmaktadır. Kömürler, yüksek oranda kül ve sülfidli mineral içerikleri ve egemen olarak gelinitin baskın olduğu yüksek hüminit özellikleri ile karakteristiktirler. Yapılan petrografik analizler bu kömürlerin gölsel bataklıklarda oluştuğunu göstermektedir. Kömürlerin yüksek oranlarda uçucu oranlarına sahip yaklaşık 5'er metrelik üç damar şeklinde 16m kalınlığında bulunması yatağın gazlaştırma tekniğiyle değerlendirilebileceğini göstermektedir. Kömürlerin; kuru külsüz olarak ise %20.51-66.70 Hümik+Fülvik asit içerdikleri görülmektedir. Bu durum kömürlerin doğal toprak destek malzemesi olarak kullanılabileceği gibi hümik asit üretiminde de kullanılabileceğini önermektedir.

Anahtar Kelimeler: Kömür, Linyit, Karot, Analiz, Değerlendirme

EVALUATION OF DRILLING CORE SAMPLES FROM THE TERTIARY (PLIOCENE) AGED COAL FORMATION

ABSTRACT

Coal quality assessment was determined by chemical and elemental analyzes. Vitrinite reflectance values ranged from 0.288 to 0.371% corresponds to a low level of carbonization. These values are consistent with calorific value. Because of organic petrography and coal quality data, the coal samples can be as sub-bituminous lignite coal. The coal consists of more humic and to a lesser extent inertinite/liptinite group. Coal, are characterized by relatively high huminite features that high ash and sulfide mineral content and is dominated predominantly gelinite. Petrographic analyzes show that these coals are formed in lacustrine swamps. The fact that the coals are found at 16 m in thickness with three veins of about 5 meters with high volatility rates suggests that the bed can be evaluated by gasification technique. The coal samples were found to contain 20.51-66.70% total Humic and Fulvic acid in dry ash. This suggests that coal can be used both as natural soil support material and in humic acid production.

Keywords: Coal, Lignite, Core, Analysis, Evaluation

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MEAT QUALITY, OXIDATION, AND ANTIOXIDANTS IN FARMED BLUEFIN TUNA (Thunnus thynnus L.)

ABSTRACT

Bluefin tuna-BFT (*Thunnus thynnus* L.) is an important fish, and price is high because of making sushi and sashimi in Japan. The key indicator of meat quality is oxidation which is affect lipids. In the research, Lipid peroxidation (LPO), activities of antioxidant enzymes, and glutathione were measured and compared muscle tissue of farmed BFTs which are 60-200 cm fork tailed length, 20-250 kg weight. According to results, LPO, superoxide dismutase, glutathione peroxidase, and catalase activities were indicated as 14,82 nmol/g, 128,52 U/mg protein, 157,46 U/mg protein, and 0,19 AU/mg protein, however, total glutathione was emphasized as an 0,05 µg/mg protein in fattened fish. Also these parameters were higher in big size than the smaller.

Keywords: Bluefin tuna, Thunnus thynnus, Meat quality, Lipid peroxidation, Antioxidants

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ORDU KIYI SULARINDA KULLANILAN UZATMA AĞLARININ TÜR KOMPOZISYONU

ÖZ

Bu çalışmada, Ordu İl'inde kullanılan uzatma ağlarının (fanyalı ve galsama) tür kompozisyonu belirlenmeye çalışılmıştır. Fanyalı ağ balıkçılığı sonucunda 25 tür yakalanmıştır. Galsama ağ avcılığı sonucunda ise toplam 18 tür yakalanmıştır. En fazla yakalanan türler Mezgit (*Merlangius merlangus*), Barbunya (*Mullus barbatus*), Pavurya (*Eriphia verrucosa*) olmuştur.

Anahtar Kelimeler: Karadeniz, Ordu, Fanyalı ve galsama ağı, Balıkçılık, Tür kompozisyonu

CATCH COMPOSITION OF SET NETS USED IN ORDU SHORLINES

ABSTRACT

In this study, the species composition of set nets used in Ordu were exemined. The trammel net caught a total of 25 species. Gill net fished a total of 18 species. The most caught species are whiting (*Merlangius merlangus*), red mullet (*Mullus barbatus*), Crab (*Eriphia verrucosa)*.

Keywords: Black Sea, Ordu, Trammel-and Gillnet, Catch, Species Composition

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PEYNİRALTI SUYU ESASLI FİLMLERİN KAŞAR PEYNİRİNİN BAZI ÖZELLİKLERİ ÜZERİNE ETKİSİ

ÖZ

Bu çalışmada Kaşar peyniri örnekleri peynir altı suyu proteinleri, peynir altı suyu proteinleri + transglutaminaz ve peynir altısuyu proteinleri + kitosan esaslı filmler ile kaplanmış ve örnekler +4°C'de 60 gün depolanmıştır. Depolamanın 0. 30. ve 60. günlerinde örneklerde kurumadde, pH, asitlik, toplam azot, suda çözünür azot, trikloroasetik asitte çözünür azot, fosfotungustik asitte çözünür azot, lipoliz ve tekstür profil analizleri ile küf-maya sayımı yapılmıştır. Çalışma sonucunda en yüksek kurumadde, asitlik, toplam azot, suda çözünür azot, trikloroasetik asitte çözünür azot, fosfotungustik asitte çözünür azot ve lipoliz değerleri kontrol grubu örneklerden elde edilmiştir. Bu sonuçlara göre kaplamların örneklerde nem ve gaz transferini kontrol altına aldığı sonucuna varılabilir. Ayrıca kaplamaların örneklerin sertlik, esneklik, iç yapışkanlık, çiğnenirlik ve yüzey yapışkanlığı özelliklerini önemli düzeyde etkilediği ancak örneklerde küf-maya üremesi üzerine önemli bir etkisinin olmadığı belirlenmiştir.

Anahtar Kelimeler: Peyniraltı Suyu Proteinleri, Kitosan, Transglutaminaz, Kaşar Peyniri, Kimyasal Özellik

EFFECT OF EDİBLE FILMS PRODUCED FROM WHEY ON THE SOME PROPERTIES OF KASHAR CHEESE

ABSTRACT

In this study, samples of Kashar cheese were coated with edible films produced from whey protein, whey protein + transglutaminase and whey protein + chitosan and samples were stored at +4°C for 60 days. In the samples, analiysis of dry matter, pH, acidity, total nitrogen, water soluble nitrogen (WSN), trichloroacetic acid soluble nitrogen (TCA-SN), phosphotungstic acid soluble nitrogen (PTA-SN), lipolysis (ADV) and textural profile (TPA) and mold, yeast counts were determined on days 0, 30 and 60 days of storage. In the result of study the highest dry matter, acidity, total nitrogen, water soluble nitrogen, trichloroacetic acid soluble nitrogen, phosphotungustic acid soluble nitrogen and lipolysis values were obtained from uncoated control samples. These results suggest that the coatings control moisture and gas transfer in the samples. It was also determined that the edible films significantly affected the hardness, springiness, cohesiveness, chewiness and adhesiveness but did not have any significant effect on mold-yeast counts in the samples.

Keywords: Whey Proteins, Chitosan, Transglutaminase, Kashar Cheese, Chemical Properties

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YOGURT WITH PROPOLIS AS A FUNCTIONAL PRODUCT

ABSTRACT

In recent years, consumers, the food industry and researchers are increasingly interested in food that can help to conserve human health. As a result, the concept of diet, which is expressed as classical "balanced and sufficient nutrition", places its spot on the concept of "optimal nutrition". Optimal nutrition describes a diet that includes essential nutritive components as well as components that promote health, improve general welfare and reduce the risk of certain diseases. Functional foods are important in providing this nutritional concept. Propolis is a natural resinous substance collected by honey bees from various plant sources and has antioxidant and antibacterial properties. Propolis contains various chemical components such as polyphenols (flavonoid aglycones, phenolic acids and esters thereof, phenolic aldehydes, alcohols and ketones), coumarins, amino acids and inorganic compounds. In this study, 0.5% and 1% propolis were added to yoghurt samples and some properties of these yoghurt samples were compared with those of control group yoghurt samples. Yoghurt samples produced in the study were stored at +4°C for 15 days. Microbiological, sensory, physicochemical and rheological analyzes were carried out on samples 1. – 7., and 15. days of storage.

Keywords: Functional Yogurt, Propolis, Natural Additives, Propolis Yoghurt, Yogurt

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EFFECT OF DIFFERENT MARINATES ON MEAT SENSORY AND TEXTUREL PROPERTIES

ABSTRACT

Three basic quality criteria play the major role in the acceptance of food by consumers. These are the hygienic, sensory and nutritive properties of food. Sensory quality of meat and meat products is characterized by crispness and juiciness. The marination technique is important in improving the sensory properties of processed meats with advanced processing techniques. Marination is the treatment of various animal meats with salt, phosphates, organic acids, various spices and some other additives in order to soften, crispening and increase flavor and aroma and the liquid used for marination is called marinate. In this study, the effects of different marinate on the textural and sensory properties of beef were investigated and meat samples were marinated with cow milk, kefir and yoghurt. The meat samples marinated with the dipping technique were subjected to cooking for 10 min at equal temperatures and then their sensory and textural properties were examined. As a result of this study, it was observed that the marination process improved the sensory and textural properties of meat samples, and It has been seen that different marinates altered the properties of the meat in a positive way at different rates.

Keywords: Meat Marital, The Marination, Different Marinades, Meat, Texturel Properties

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GIDA ENDÜSTRİSİNDE BİYOFİLM OLUŞUMU

ÖZ

Gıda işletmelerinin amacı tüketiciler için sağlıklı, güvenli ve lezzetli gıdalar sağlamaktır. Gıdanın kalitesini ve güvenilirliğini etkileyen en önemli faktör, mikrobiyal bulaşmalardır. Gıda işletmelerindeki sıcaklık, besin maddeleri ve nem gibi koşullar mikroorganizmaların çoğalmasını sağlar. Bu koşullarda mikroorganizmalar gıda yüzeylerine ve gıda ile temas halinde olan yüzeylere tutunarak biyofilmleri oluşturmaktadır. Gıdaların bozulmasına ve gıda kaynaklı hastalıklara neden olan mikroorganizmaların çoğu biyofilm oluşturabilmektedir. Biyofilm tabakasında; mikroorganizma, yüzey ve matriks (ekzopolisakkarit, EPS) olarak 3 temel bileşen bulunmaktadır Bulundukları ortam şartlarına bağlı olarak biyofilm tabakasında %10-25 oranında bakteri, %75-90 oranında EPS bulunur. Polisakkaritlerin dışında protein, nükleik asit, hücre kalıntıları ve bazı mikroorganizmaların spesifik ürünleri de biyofim matriksinde gömülü olarak bulunur ve matrikse yapısal destek sağlar. Biyofilmlerin gıda kaynaklı enfeksiyonların en önemli kaynaklarından birisi olduğu belirtilmektedir. Biyofilmler, ısının yüzeyden akışını geciktirmesi, yüzeydeki sıvının sürtünme direncinin artması, yüzeydeki kimyasal sürtünme oranının artması gibi ciddi sorunlara neden olmaktadır. Gıda endüstrisinde biyofilmlerin sorun oluşturduğu en önemli sektörlerin başında süt, et, kanatlı ve deniz ürünleri gelmektedir.

Anahtar Kelimeler: Biyofilm, Gıdalarda Kontaminasyon, Biyofilm Oluşumu, Gıda, Mikrobiyal

BIOFILM FORMATION IN FOOD INDUSTRY

ABSTRACT

The main aim of food firms is to provide healthy, safe and delicious food for consumers. The most important factor affecting the quality and safety of food is microbial contamination. Conditions such as temperature, nutrients and humidity in food establishments allow for the multiplication of microorganisms. In these conditions, microorganisms form biofilms by adhering to food surfaces and to the surfaces that are in contact with food. Most microorganisms that causing food spoilage and foodborne diseases can produce biofilms. In the biofilm layer there are three basic component; microorganism, surface and matrix (exopolysaccharide, EPS). Depending on the environmental conditions in the biofilm layer, 10-25% bacteria and 75-90% EPS are present. Apart from polysaccharides, proteins, nucleic acids, cell residues and specific products of certain microorganisms are also embedded in the biofilm matrix and provide structural support for the matrix. Biofilms are said to be one of the most important sources of foodborne infections. Biofilms cause serious problems such as delaying the flow of heat from the surface, increasing the friction resistance of the liquid on the surface, and increasing the rate of chemical friction on the surface. In the food industry, milk, meat, poultry and seafood are the most important sectors in which biofilms cause problems.

Keywords: Biofilm, Food Contamination, Biofilm Formation, Food, Microbial

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PHYSICAL PROPERTIES OF POLYETHYLENE WAX MODIFIED BITUMEN

ABSTRACT

Modification of bitumen is used in order to diminish permeant deformation on highways such as rutting. In addition to performance enhancer modifiers, there are some other types of modifier such as mixing and compaction temperature reducer of bitumen so as to decrease cost and energy consumption during hot mix asphalt preparation. In this study, it was aimed to investigate the effects of Polyethylene wax (PW), a warm mix asphalt modifier, on physical properties of bitumen. To this end, pure and PW modified bitumens were applied to a testing program. Conventional tests were applied on the binders in order to examine physical changes after modification. Rotational viscosity test was used to determine the viscosity of PW modified binder. Dynamic shear rheometer (DSR) was employed to determinate high-temperature performance grade of binders. Tests results indicate that the using PW modified in bitumen increase flow properties of bitumen that might provide cost and energy savings which is also important for environmental awareness.

Keywords: Bitumen, Modification, Wax, Polyethylene, Rheology

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BİTÜM MODİFİKASYONUNDA SİYAH KARBONUN BİTÜMÜN KIVAMINA VE SICAKLIK DUYARLILIĞINA ETKİSİ

ÖZ

Bu çalışmada, bitüm modifikasyonunda bir katkı maddesi olarak kullanılan Siyah Karbonun (SK) bitümlü bağlayıcıların kıvamı ve termal özellikleri üzerindeki etkisi araştırılmıştır. Bu amaçla, saf B 160/220 penetrasyon sınıfı bitümlü bağlayıcısına %5, %10 ve %15 SK ilave edilerek modifiye bağlayıcılar elde edilmiştir. Saf ve modifiye bağlayıcıların özellikleri; penetrasyon, yumuşama noktası, düktilite, dönel viskozimetre ve termogravimetrik analiz deneyleri belirlenmiştir. Ayrıca, bitümlü bağlayıcıların termal duyarlılıkları, penetrasyon endeksi ve penetrasyon viskozite sayı değerleri hesaplanarak tespit edilmiştir. Test sonuçlarına göre SK katkılı bağlayıcılarda, katkısız bağlayıcılara göre düktilite ve penetrasyon değerlerinde azalma, yumuşama noktası ve viskozite değerlerinde ise önemli oranda artış meydana gelmiştir. Sonuç olarak, yumuşak kıvamlı ve sıcaklık duyarlılığı yüksek olan bağlayıcıların SK ilavesiyle daha sert bir kıvama geldiği ve sıcaklık duyarlılığının önemli ölçüde azaldığı tespit edilmiştir. Ayrıca en etkili ve uygulanabilir katkının %10-15 SK oranında olduğu belirlenmiştir.

Anahtar Kelimeler: Bitüm, Modifikasyon, Siyah Karbon, Kıvam, Sıcaklık Duyarlılığı

THE EFFECT OF BLACK CARBON ON THE STİFFNESS AND TEMPERATURE SUSCEPTİBİLİTY OF BİTUMEN İN BİTUMEN MODİFİCATİON

ABSTRACT

In the present study, the effect on the stiffness and temperature susceptibility of bituminous binders of Black Carbon (SK) used as an additive in the bitumen modification was investigated. For this purpose, modified binders were obtained by adding 5, 10 and 15 wt % SK to the pure B 160/220 penetration grading binder. The features of pure and modified binders were analyzed by Penetration, softening point, ductility, rotational viscometer and thermogravimetric analysis experiments. In addition, the thermal sensitivities of bituminous binders were determined by calculating the penetration index and penetration viscosity number values. According to the test results, ductility and penetration values were decreased in SK additive binders compared to additive free binders, while significant increases were observed in softening point and viscosity values. It was also determined that the most effective and feasible contribution was 10-15% SK. As a result, it has been found by the addition of SK that the binders with soft consistency and high temperature susceptibility have a harder consistency and the temperature susceptibility decreases considerably.

Keywords: Bitumen, Modification, Carbon Black, Consistency, Temperature susceptibility

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A DSP-CONTROLLED HIGH ACCURACY SPEED MEASUREMENT TECHNIQUES FOR MOTION CONTROL IN PMSM DRIVERS

ABSTRACT

In motion control drives, speed measurement with high accuracy is an important issue and has great influence on the motor performance. In this paper, speed measurement techniques' affects for motion control in permanent magnet synchronous machine (PMSM) with low resolution incremental encoder are discussed. Conventional speed measurement techniques such as measuring frequency method (M-method, measuring period method (T-method) and measuring both frequency and period method (M/T-method) are introduced. The simulation results are obtained in MATLAB/Simulink and the experimental results are presented based on TMS320x28xxx. Simulation and experimental comparative analysis of the various methods results show that M-method is suitable for high speed measurement, T-method is suitable for low speed measurement and M/T method is not related with speed and it works in both low speed and high speed. So the M/T method is better than the M-method and T-method and the speed measurement error is less than other methods with a high precision in a wide speed range.

Keywords: Speed Measurement, Motion Control, DSP, Incremental Encoder, Permanent Magnet Synchronous Machine (PMSM)

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TRABZON İLİNDE HEYELAN VE SELLERDEN KAYNAKLANAN ÇEVRE SORUNLARI: DÜZKÖY HEYELANI

ÖZ

Jeolojik yapısı, morfolojik ve iklimsel özellikleri nedeniyle ülkemiz, afete dönüşebilen doğal kökenli olayların sıkça gözlendiği bir coğrafya üzerinde yer almaktadır. Ülkemizin en fazla yağış alan bölgesi olan Doğu Karadeniz Bölgesi'nde ise heyelan, kaya düşmesi ve taşkınlar nedeniyle çok sayıda afet olayı meydana gelmektedir. Afet İşleri Genel Müdürlüğü'nün son 50 yıllık verilerine göre Türkiye'de heyelan nedeniyle en fazla konut nakli verilen il olan Trabzon'da yaklaşık 1200 adet heyelan meydana gelmiş ve yaklaşık 4000 adet konutun nakline karar verilmiştir. Bu nedenle bu çalışmada, Trabzon ilinde meydana gelen heyelan ve taşkın olaylarının oluşum koşulları incelenmiş, felaketlerin etkileri teknik, ekolojik ve ekonomik açıdan araştırılmış, afetlerden kaynaklanan çevre problemlerinin önlenmesi için önerilerde bulunulmuş ve sonuç olarak Trabzon ili Düzköy ilçesinde meydana gelen bir heyelan jeolojik ve jeoteknik olarak incelenmiştir. Tüm bu çalışmalar sonucunda, bölgede heyelanların gelişmesi için uygun jeolojik, morfolojik ve iklimsel şartların mevcut olduğu, ancak bununla birlikte, heyelanların oluşumunda en önemli etkinin düzensiz şehirleşme ve buna bağlı olarak insan kaynaklı kazılar olduğu sonucuna varılmıştır.

Anahtar Kelimeler: Heyelan, Jeoloji, Taşkın, Trabzon, Düzköy

ENVIRONMENTAL PROBLEMS CAUSED BY LANDSLIDES AND FLOODS IN TRABZON PROVINCE: DÜZKÖY LANDSLIDE

ABSTRACT

Due to its geological structure and morphological and climatic characteristics, Turkey is located on a geography in which natural events that may turn into disasters are frequently observed. In the Eastern Black Sea, the region which receives the greatest amount of rainfall in Turkey, many disastrous events take place due to landslides, rock falls and floods. According to the last 50 years of General Directorate of Disaster Affairs, in Trabzon, which is the province that has the highest number of residence due to landslide in Turkey, about 1200 landslides have come to the scene and about 4000 houses have been decided to be transferred. For this reason, in this research, the development conditions of the landslide and flood events that have occurred in the province of Trabzon were examined, the effects of these disasters were investigated on technical, ecological and economic terms, suggestions were made in order to prevent the ecological problems caused by these disasters and finally a landslide that occurred in the Düzköy county of the Trabzon province was examined geologically and geotechnically. As the result of these researches, it was concluded that the suitable geological, morphological and climatic conditions for the development of landslides in the region were present; however the most important factor for the development of landslides was unplanned urbanization and human-made excavations.

Keywords: Landslide, Geology, Flood, Trabzon, Düzköy

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BİNA DUVARLARININ TERMOFİZİKSEL ÖZELLİKLERİ ARASINDAKİ İLİŞKİLERİN KULLANILARAK BU ÖZELLİKLERİN ISI KAZANCINA OLAN ETKİSİNİN İNCELENMESİ

ÖZ

Binaların ısıtılması ve soğutulması için tüketilen enerjinin gün geçtikçe artması ısıl performansı yüksek olan inşaat malzemelerinin geliştirilmesine ihtiyaç duyulmuştur. Malzemelerin ısıl performansı ise direk olarak bu malzemelerin termofiziksel özelliklerine bağlıdır. Her ne kadar literatürde termofiziksel özelliklerin ısıl performans kriterleri olan ısı kazanç, zaman kayması gibi dinamik ısıl karakterlerine olan etkileri incelense de, bu özelliklerin birbiri arasındaki ilişkiler göz ardı edilmiştir. Bu amaçla; her bir termofiziksel özelliğin ısı kazancına olan etkisini incelemek için bir çalışma gerçekleştirilmiştir. Farklı bileşimli 102 beton duvar numunesi üretilerek, termofiziksel özellikleri ASTM ve EN standartlarına göre ölçülmüş ve aralarındaki ilişkiler yeni ifadelerle tanımlanmışır. Daha sonra bu ilişkiler kullanılarak, Gaziantep' te sıcak bir günde herhangi duvar ve tavanda oluşan ısı kazancını hesaplamak amacıyla kompleks Fourier dönüşüm tekniği (CFFT) kullanılarak MATLAB tabanlı bir bilgisayar programı hazırlanmış ve elde edilen sonuçlar irdelenmiştir. Sonuç olarak, bu yapılan çalışma sayesinde herhangi bir termofiziksel özelliği belli olan duvarların ısı kazançları kolaylıkla hesaplanabilmektedir.

Anahtar Kelimeler: Duvar, Beton, Termofiziksel Özellikler, Isı Kazancı, CFFT

INVESTIGATION OF THE EFFECT OF THERMOPHYSICAL PROPERTIES OF BUILDING WALLS ON HEAT GAIN UTILIZING THE RELATIONSHIPS BETWEEN EACH PROPERTY

ABSTRACT

The growing concern about energy consumption of heating and cooling of buildings has led to a demand for improved thermal performances of building materials. Thermal performance of building structures strictly depend on thermophysical properties of the structures. Many investigations are presented in literature arguing to find the influence of each thermophysical property of building components on the dynamic thermal characteristics such as heat gain, time lag, while the properties have been assumed as independent of each other. The purpose of this study is to investigate the effect of each property on heat gain; therefore, 102 new concrete wall samples were produced, their properties were tested in accordance with ASTM and EN standards and expressions related between these properties are obtained. By using those expressions, heat gain values for each building structure is computed from the solution of transient heat transfer problem by Complex Finite Fourier Transform (CFFT) technique. A program based on the solution in MATLAB is prepared, and the results are discussed. Consequently, if one of the thermophysical properties of a building material is known, heat gain can be calculated easily for the selected walls.

Keywords: Walls, Concrete, Thermophysical Properties, Heat Gain, CFFT

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RCCI YANMALI MOTORDA ASPİR BİYODİZELİ KARIŞIMLARI VE BENZİN KULLANIMININ ORTA YÜKLERDE PERFORMANS VE EMİSYON ETKİLERİNİN İNCELENMESİ

ÖZ

Dizel bir jeneratörde RCCI uygulamasının performans ve emisyonlar üzerine etkileri, yüksek reaktviteli (birincil yakıt) yakıt olarak aspir yağı biyodizeli ve dizel karışımları, düşük reaktiviteli yakıt olarak benzin kullanımıyla incelenmiştir. RCCI uygulaması ikincil bir yakıt enjeksiyon sisteminin emme manifolduyla irtibatlandırılmasıyla sağlanmıştır. Benzin RCCI uygulama oranı motorun toplam kütlesel yakıt tüketiminin %40'u ve %60'si oranında olup, PFI olarak önceden karıştırılmıştır. Testler dizel-jeneratör grubunun tam gücünün %50' ine karşılık gelen ve orta yükleme sayılacak sabit bir 7.2kW motor gücü ve 1500 devir/dakikalık bir motor devri gerçekleştirildi. Dizel ile biyodizel karışımının amacı, yanmanın başlamasını kolaylaştırmak için birincil yakıtın reaktivitesini arttırmaktır. Motor alanındaki çalışmaların için en önemli performans ve emisyon parametreleri derinlemesine incelenmiş ve sonuçlar sunulmuştur. RCCI uygulamasında toplam yakıt tüketimi artmış, NO_x emisyonları önemli ölçüde azalırken, CO ve HC emisyonları düşük oranda artmıştır.

Anahtar Kelimeler: RCCI, Aspir Biyodizeli, Benzin, Dizel Jeneratör, Biyodizel

INVESTIGATION OF PERFORMANCE AND EMISSION CHARACTERISTICS OF A RCCI COMBUSTION ENGINE FUELED WITH SAFFLOWER BIODIESEL BLENDS AND GASOLINE ON MEDIUM LOADS

ABSTRACT

In this study, the effects of RCCI application on engine performance and emissions in a diesel generator are investigated by using safflower oil biodiesel and diesel mixtures as high reactivity fuel (primary fuel) and gasoline as low reactivity fuel. The RCCI application is provided by the connection of a secondary fuel injection system with the intake manifold. The gasoline RCCI application rate is 40% and 60% of the total mass fuel consumption of the engine and is pre-mixed as PFI. The tests were carried out corresponding to 50% of the full power of the diesel-generator, at a constant engine velocity of 7.2kW and 1500rpm which would be considered a medium load. The purpose of the diesel and biodiesel mixture is to increase the reactivity of the primary fuel to facilitate the start of the combustion. The performance and emissions, which are the most important parameters of the engine field work, have been thoroughly investigated and the results were presented. In RCCI application, in mass fuel consumption partial increases were determined. While the RCCI ratio increases, the NO_x emissions significantly decreased, the CO and HC emissions increased at low rates and the efficiency also increased.

Keywords: RCCI, Safflower, Gasoline, Diesel Generator, Biodiesel

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ASPİR BİYODİZELİ KARIŞIMLARI VE BENZİN İLE ÇALIŞAN BİR RCCI MOTORUNUN ORTA YÜKLERDE YANMA ÖZELLİKLERİNİN ARAŞTIRILMASI

ÖZ

Dizel bir jeneratörde RCCI uygulamasının performans ve emisyonlar üzerine etkileri, yüksek reaktviteli (birincil yakıt) yakıt olarak aspir yağı biyodizeli ve dizel karışımları, düşük reaktiviteli yakıt olarak benzin kullanımıyla incelenmiştir. RCCI uygulaması ikincil bir yakıt enjeksiyon sisteminin emme manifolduyla irtibatlandırılmasıyla sağlanmıştır. Benzin RCCI uygulama oranı motorun toplam kütlesel yakıt tüketiminin %40'u ve %60'si oranında olup, PFI olarak önceden karıştırılmıştır. Testler dizel- jeneratör grubunun tam gücünün %50' ine karşılık gelen ve orta yükleme sayılacak sabit bir 7.2kW motor gücü ve 1500 devir/dakikalık bir motor devri gerçekleştirildi. Dizel ile biyodizel karışımının amacı, yanmanın başlamasını kolaylaştırmak için birincil yakıtın reaktivitesini arttırmaktır. Motor alanındaki çalışmaların için en önemli yanma parametreleri derinlemesine incelenmiş ve sonuçlar sunulmuştur. Benzin RCCI uygulamasında maksimum basınç, ısı salınımı değerleri artmış, kütlesel yanma oranları benzer olmuştur. Tek yakıt ve RCCI uygulamasında vuruntu oluşmamıştır.

Anahtar Kelimeler: RCCI, Aspir Biyodizeli, Benzin, Dizel Jeneratör, Biyodizel

COMPARISON OF COMBUSTION CHARACTERISTICS OF A RCCI COMBUSTION ENGINE FUELED WITH SAFFLOWER BIODIESEL BLENDS AND GASOLINE ON MEDIUM LOADS

ABSTRACT

In this study, the effects of RCCI application on engine combustion in a diesel generator are investigated by using safflower oil biodiesel and diesel mixtures as high reactivity fuel (primary fuel) and gasoline as low reactivity fuel. The RCCI application is provided by the connection of a secondary fuel injection system with the intake manifold. The gasoline RCCI application rate is 40% and 60% of the total mass fuel consumption of the engine and is pre-mixed as PFI. The tests were carried out corresponding to 50% of the full power of the diesel-generator, at a constant engine velocity of 7.2 kW and 1500 rpm which would be considered a medium load. The purpose of the diesel and biodiesel mixture is to increase the reactivity of the primary fuel to facilitate the start of the combustion. The most important combustion parameters of the engine field work have been thoroughly investigated and the results were presented. The gasoline RCCI operation increased peak pressure values and total heat release rates. The mass fraction burned curves are quite similar. There are no signs of engine knock whether for single or gasoline RCCI operations.

Keywords: RCCI, Safflower, Gasoline, Diesel Generator, Biodiesel

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BİNA ISITMA VE BUZ PİSTİ SOĞUTMA SİSTEMLERİNİN YERALTI ENERJİ DEPOLAMA TANKIYLA ISIL ANALİZİ

ÖZ

Bu çalışmada, küresel yeraltı enerji depolama tankı (TES) ile iki termal sistemin uzun süreli performansı araştırılmıştır. Bu sistem, buz paten pisti ile buz pisti soğutma sistemi, mahal ile ısı pompası ve küresel yeraltı ısı tankından (TES) oluşan sistemlerden oluşmaktadır. Soğutma ve ısıtma sistemlerinin termal performansını bulmak için sistemler için iki analitik model geliştirilmiştir. Bu modeller, TES tankı dışında geçici ısı transfer problemi çözümü ile buz pateni pistinin, soğutma ünitesinin, ısı pompasının kazanç-kayıp enerji gereksinimlerinin hesaplanmasıyla oluşturulmuştur. Problemin çözümü, benzerlik dönüşümü ve Duhamel süper-pozisyon teknikleri kullanılarak elde edilmiştir. TES tankındaki su sıcaklığının saatlik değişimini, soğutma sistemi ile ısı pompasının performans katsayılarını (COP) ve yıllık periyodik çalışma koşullarına ulaşmak için gereken zaman aralığı tespit etmek için analitik modellere dayalı interaktif Matlab bilgisayar programı kullanılarak çözüm programı oluşturulmuştur. Sonuç olarak, soğutma sisteminin performans katsayısının 2 ile 5, ısı pompasının performans katsayısının 4 ile 7 ve bütünleşik sistemin sürekli rejime ulaşma zaman aralığı ise 6 ile 7 yıl aralığında değişmekte olduğu görülmektedir.

Anahtar Kelimeler: Buz Pateni Pisti, Mahal Isıtma, Enerji Depolama Tankı, Isı Pompası, Soğutma ve Isıtma Sistemi

ENERGY ANALYSES OF ICE RINK COOLING AND BUILDING HEATING SYSTEMS WITH UNDERGROUND STORAGE TANK

ABSTRACT

In this study, the long-term performance of two thermal systems with the spherical underground thermal energy storage (TES) tank is investigated. The thermal systems are an ice rink cooling system, and ice rink cooling and house heating system with the TES tank, which consist of an ice rink, a chiller unit, a house to be heated, a heat pump and spherical underground TES tank. Two analytical models for the systems are developed for finding the thermal performance of the cooling and heating systems. The models are based on the solution of transient heat transfer problem outside the TES tank, energy requirements of the ice rink, chiller unit, heat pump and house. The solution of the problem is obtained using a similarity transformation and Duhamel superposition techniques. Analytical models are consisted of by combining of the solution equation and expressions for the each component of the thermal systems. Interactive computer programs in Matlab based on the analytical models are prepared for finding an hourly variation of water temperatures in the TES tank, coefficients of performance (COP) of the chiller and heat pump, and timespan required to attain annually periodic operating conditions. Results indicate that COP of the chiller and heat pump, and operation time of span changes between 2-5 and 4-7, and 6-7 years respectively.

Keywords: Ice Rink, Chiller Unit, Energy Storage Tank, Heat Pump, Cooling and Heating System

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THE EFFECT OF DRILLING PARAMETERS ON STRENGTH OF GLASS FIBRE-EPOXY LAMINATES BY PRODUCED HAND LAY-UP

ABSTRACT

In this study, the effects of delamination factor on strength of glass fiber reinforced plastic (GFRP) composite with +45/-45 orientation angle fabrics were investigated. GFRP composite specimens, which contain 36% fiber volume, were produced by hand lay-up. The all specimens were prepared according to ASTM D5766-2002 standards. The experiments were conducted the different drilling parameters such as cutting speeds and feed rates using tungsten carbide (WC) and Brad Spur drill tools. Delamination factors of drilled specimens were determined by optical microscope. The tensile strength values of the drilled GFRP composite specimens were determined by universal tensile testing machine. As results, it was determined that the increasing cutting speed and feed rate increased the delamination factor. The strength of GFRP composites decreased with increasing delamination factor.

Keywords: Delamination, Drilling, GFRP, Tensile Strength, Glass Fibre-Epoxy Laminates

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DOĞAL PARTİKÜL TAKVİYELİ POLYESTER KOMPOZİTİN AŞINMA DAVRANIŞININ İNCELENMESİ

ÖZ

İlerleyen teknoloji ile beraber geleneksel malzemeler yetersiz kalmakta ve bu malzemelerin yerine kompozit malzemeler kullanılmaktadır. Kompozit malzemelerin geleneksel malzemelere göre birçok avantajı bulunmaktadır. İstenilen fiziksel özelliklere göre kombine edilebilmesi önemli avantajlarındandır. Kompozitlerde takviye elemanı olarak genellikle cam, karbon, aramid, grafen gibi malzemeler kullanılır. Ancak bu malzemelerin üretim maliyetlerinin yüksek olması, geri dönüşüm işlemlerinin zorlu proseslerden oluşması ve doğada kaybolma sürelerinin uzun olması kenaf, jut, bambu, fıstık ve ceviz kabuğu gibi doğal takviye elemanlarının kullanımını arttırmaktadır. Bu çalışmada, farklı oranlarda fıstık kabuğu tozu takviyeli polimer matrisli kompozitler üretilmiştir. Üretilen bu kompozitlerin sertlik değerleri, basma dayanımları ve aşınma davranışları incelenmiştir. Aşınma deneyleri farklı yük ve kayma mesafelerinde gerçekleştirilmiştir. Yapılan çalışmalar sonucunda, takviye oranının artması ile beraber sertlik değerinin, basma dayanımının ve ağırlık kaybına bağlı aşınma direncinin arttığı tespit edilmiştir. Ayrıca uygulanan yük ve kayma mesafesinin artmasıyla kompozitteki ağırlık kaybının arttığı görülmüştür.

Anahtar Kelimeler: Giyim, Doğal Kompozit, Antepfıstığı Kabuğu, Polyester, Doğal Malzeme

INVESTIGATION OF WEAR BEHAVIORS OF PISTACHIO SHELL REINFORCED COMPOSITES

ABSTRACT

Along with the advancing technology, traditional materials are inefficient and composite materials are used instead of these materials. Composite materials have many advantages over traditional materials. It is an important advantage to be able to combine according to desired physical properties. In composites glass, carbon, aramid, graphene are usually used as reinforcing element. However, the high production costs of these materials, the difficult processing of recycling processes and the long periods of disappearance in the environment increase the use of natural reinforcement elements such as kenaf, jute, bamboo, pistachio and walnut shells. In this study, pistachio shells particule, which have different ratios, reinforced polymer matrix composites were produced. Hardness values, compressive strength and wear behavior of these produced composites were investigated. Wear tests were carried out at different load and sliding distances. As a result of the studies, it was determined that the hardness value, the compressive strength and the wear resistance increased with increasing of the reinforcement ratio depending the weight loss. It was also seen that the weight loss in the composite increased with the increase of applied load and sliding distance.

Keywords: Wear, Natural Composite, Pistachio Shells, Polyester, Natural material

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BAL PETEĞİ SANDVİÇ KOMPOZİTLERİN DÜŞÜK HIZLI DARBE TESTİ SONRASI EĞİLME MUKAVEMETİNDEKİ DEĞİŞİMİN ARAŞTIRILMASI

ÖZ

Teknolojinin farklı endüstri alanlarında gelişmesi ile birlikte enerji sönümleme ve hafif şok emicilerine olan ihtiyacın artması bal peteği sandviç kompozitler gibi yapılara olan ilgiyi arttırmıştır. Gerçekleştirilen çalışmada bal peteği sandviç kompozitlerin darbe ön hasarı sonrası üç nokta eğilme mukavemetlerindeki değişim araştırılmıştır. Darbe enerjisi olarak 5 ve 10 J kullanılmıştır. Bütün numunelerde artan darbe enerjisinin numune mukavemetini düşürdüğü görülmüştür. Darbeden en çok etkilenen modelin cam fiber yüzey malzemesine sahip numuneler olduğu tespit edilmiştir.

Anahtar Kelimeler: Düşük Hızlı Darbe, Balpeteği Sandviç Kompozit, Üç Nokta Eğilme, Cam Fiber, Mukavemet

INVESTIGATION OF THREE POINT BENDING BEHAVIORS OF HONEYCOMB SANDWICH COMPOSITES AFTER LOW VELOCITY IMPACT

ABSTRACT

Through the increasing development of technology in different industries, and the integral requirement of energy absorption, light shock absorbers such as honeycomb structure under in-plane and out-of-planeloads have been in the center of attention. Flexural properties of sandwich composites after impact studied. Three different face sheet thicknesses used. 5 J and 10 J are used as impact energy levels. The results indicated that the strength of samples is decreased with increased impact energy. Most affected samples from impact are glass fiber reinforced composite face sheet models.

Keywords: Low Velocity Impact, Honeycomb Sandwich Composite, Three Point Bending, Glass Fiber, Resistance

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BAL PETEĞİ SANDVİÇ KOMPOZİTLERİN DÜŞÜK HIZLI DARBE DAVRANIŞLARININ ARAŞTIRILMASI

ÖZ

Bal peteği sandviç komozitler ileri mühendislik uygulamalarında önemli bir yapı elemanı olarak kullanılırlar. Bu nedenle darbe etkisi atında nasıl bir davranış sergileyeceklerinin bilinmesi diğer yükler kadar kritiktir. Gerçekleştirilen çalışmada bal peteği sandviç kompozitlerin düşük hızlı darbe yüklemesine karşı davranışları deneysel olarak araştırılmıştır. Bal peteği sandviç kompozitlerin tasarım parametrelerinin tamamına yakınının etkisi incelenmiştir. Sonuçlar bal peteği hücre yüksekliğinin mukavemet üzerinde bir etkisi olmadığının gösterirken numunenin darbe davranışını en çok etkileyen parametrenin yüzey malzemesi kalınlığı olduğunu göstermiştir. Numune yüzey malzemesi kalınlığı arttıkça en belirgin mukavemet artışı karbon fiber takviyeli kompozit yüzey malzemesi kullanılan modellerde görülmüştür. 10 J darbe enerjisinde bütün yüzey malzemesi tipleri için 0.5mm yüzey malzemesi kalınlığın sahip numunelerin üst yüzey malzemeleri delinmiştir

Anahtar Kelimeler: Kompozit, Düşük Hızlı Darbe, Balpeteği Sandviç Kompozit, Mukavemet, Karbon Fiber

INVESTIGATION OF LOW VELOCITY IMPACT BEHAVIORS OF HONEYCOMB SANDWICH COMPOSITES

ABSTRACT

Honeycomb sandwich composites are used as significant structural members in advanced engineering applications. Thus, it is critical to determine how they behave under impact loading, in addition to other loads. In this study, low velocity impact loading behaviors of honeycomb sandwich composites were experimentally investigated. Almost all of the design parameters of honeycomb sandwich composites were investigated. The results indicated that the core thickness of honeycomb had no effect on the strength of the composite, and the parameter influencing the impact behavior of the specimen the most was the face sheet thickness. When the face sheet thickness of the specimen was increased, the most apparent strength increase was observed in the models using carbon fiber-reinforced composite face sheets. For all face sheet types subject to impact energy of 10 Joules, the upper face sheets of 0.5 mm-thick specimens were perforated.

Keywords: Composite, Low Velocity Impact, Honeycomb Sandwich, Resistance, Carbon fiber

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HARZBURJİTLERDE PRİMER KLİNOPİROKSEN ORANI KROMİTİT OLUŞUM KRİTERİ OLARAK KULLANILABİLİR Mİ?

ÖZ

Türkiye'de çok sayıda harzburjit bileşimli peridotit masifi mevcuttur. Bunların kapladıkları alanlar birkaç kilometrekareden 2000 kilometrekareye kadar değişir. Bu masiflerin bir kısmı kromitit bakımından oldukça fakir iken, bir kısmı büyük rezervli kromitit yatakları içerir. Kromititler daime dünitik bir zarf ile çevrilmekle beraber, çevre peridotitler harzburjit bileşimlidir. Harzburjitler başlıca olivin ve ortopiroksenden (hipersten) oluşurken, %5 i aşmayacak şekilde primer klinopiroksen (pijonit, ojit) içerirler. Tektonit dokulu olan klinopiroksenler polarizan mikroskopta dalgalı sönmeli olmalarıyla sekonder klinopiroksenlerden ayrılırlar. Kromitit cevheri açısından fakir olan harzburjit masifleri zengin olan harzburjit masifleri ile karşılaştırıldıklarında primer klinopiroksen oranlarında önemli farklılıklar olduğu belirlenmiştir. Zengin kromitit yatakları içeren harzburjit masiflerinde primer klinopiroksen oranı son derece düşük (%0.5-2) iken kromitit açısından fakir olan harzburjit masiflerinde bu oranın nispeten yüksek olduğu (%3-5) görülmüştür. Bu değerler, kromitit aramalarında, sahaların ekonomik açıdan değerlendirilmesinde veya masif içerisinde kromititin oluşup oluşmadığı hususunda bir ön kriter olarak değerlendirilebilir.

Anahtar Kelimeler: Harzburjit, Kromitit, Oluşum Kriteri, Primer Klinopiroksen,

CAN THE PRIMARY CLINOPYROXENE RATIO IN HARZBURGITE BE USED AS A FORMATION CRITERION?

ABSTRACT

There are numerous harzburgite compounded peridotite masses in Turkey. The surface area of these massifs ranges from a few kilometers to two thousand kilometers. Some of these massifs are very poor in chromitite, while some contain large chromitite deposits. The chromitites are always surrounded by a thin dunitic envelope in harzburgitic peridotites. Harbburjites mainly contain olivine and orthopyroxene (hypersten), and less than 5% of the primary clinopyroxene (pijonite, augite). The primary clinopyroxenes with tectonite texture are distinguished from the secondary clinopyroxenes via wavy extinction under polarized microscopy. Compared with the rich harzburgite massifs which are poor in chromitite, it was determined that there are significant differences in the primary clinopyroxene ratios. The ratio of primary clinopyroxene in harzburgite massifs containing rich chromitite deposits is extremely low (0.5-2%), whereas it is relatively high in harzburgite massifs (3-5%), which is poor for chromitites. These values can be considered as a preliminary criteria for the chromitite research, for the economic evaluation of the fields, or for the occurrence of chromitite in the mass.

Keywords: Harzburgite, Chromitite, Formation Criterion, Primer Clinopyroxene

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ERZİNCAN (TÜRKİYE) CİVARI KROMİT POTANSİYELİNİN FERROKROM TESİSİ BESLEME AÇISINDAN DEĞERLENDİRİLMESİ

ÖZ

Erzincan çevresini saran sıradağlar ofiyolitik kayaçlar ile örtülüdür. Ofiyolitik kayaçların yayılım alanları 100-750km^2 arasında değişir. Bu kayaçlar içinde harzburjitler çoğunlukta, dünitler daha az oranda bulunur. Kromititler ekonomik olarak özellikle dünit, nadiren harzburjit içinde bulunur. Kromitit ile dünit arasında jenetik bir ilişki mevcuttur. Eş yaşlı olan bu kayaçların gelişim mekanizmaları da ortaktır. Dolayısı ile rezerv açısından da kromitit ile dünit (kısmen piroksenit) arasında doğrusal bir ilişki mevcuttur. Geniş alanlarda yüzeyleme veren dünitler, büyük rezervli kromitit yataklarına da ev sahipliği yaparlar. Jeolojik açıdan Erzincanı çevreleyen yakın alanda çok sayıda kromit yatağının ve yüzlerce kromitit zuhurunun varlığı, Erzican'ı tüvenan kromit ve ferrokrom üretim merkezi yapabilecek durumdadır. Her yıl bu alandan 750000-1000000 ton kromit cevheri üretimi, bunun %40'ı kadar da ferrokrom üretimi yapılabilir.

Anahtar Kelimeler: Ferrokrom, Erzincan, Kromitit Potansiyeli, Türkiye, Tüvenan Kromit

EVALUATION OF THE CHROMITE POTENTIAL OF THE ERZINCAN BASIN (TURKEY) FROM THE FEEDING POINT OF THE FERROCHROME PLANT

ABSTRACT

Ophiolitic rocks are widely found in the mountains surrounding Erzincan. The extent of ophiolitic rocks varies between 100-750 km^2. Within these rocks, harzburgites are mostly present and dunites are less. Chromites found mainly in dunite, rarely in harzburgite. These rocks, which have the same developmental mechanisms, are also of the same age. Therefore, there is a linear relationship between chromitite and dunite (partly pyroxenite) in terms of reserve. The dunites, outcropping in large areas, also host large-bedded chromite deposits. Geologically, the presence of numerous chromite beds and hundreds of chromitic occurrences in the Erzincan basin can make it the chromitite and ferrochrome production center. Every year, 750,000-1,000,000 tons of chromite ore production is produced from this area, of which up to 40% of ferrochrome production can be done.

Keywords: Ferrochrome, Erzincan, chromite potential, Turkey, Trusted Chromite

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PREDICTION OF ORBITAL DECAY OF LOW EARTH ORBIT SATELLITES

ABSTRACT

Electric energy requirement of satellites are supplied by the assembled solar panels which increases the surface area of the satellites. Altitude of a satellite affects orbital period, velocity of the satellite and many operational parameters such as ground resolution, swath width and temporal resolution of imaging satellites, tracking duration with a point on the ground or ground station, tracking duration of communication satellites and life-time of the satellite. In this study, several Low Earth Orbits with different altitudes are analyzed for specific satellites. Orbital decay of Nano-satellites, commercial imaging satellites, small research satellites and communication satellites are examined. This study illustrates the effects of altitude and effective surface area of the satellite on the orbital decay. Moreover, the effects of orbital decay on the operational parameters are briefly represented and the output of the study can be beneficial for research institutes for predicting the performance of the satellite.

Keywords: Atmospheric Drag, Satellite Orbits, Electric Energy, Satellite, Nanotechnology

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SOLUTION OF INDETERMINATE TRUSS STRUCTURES WITHOUT HUMAN INTERVENTION

ABSTRACT

Truss structures become statically indeterminate because of support or member conditions. Solution of indeterminate truss structures can be implemented by virtual load method. However, virtual load method requires elimination of redundant support reactions or member forces to obtain statically determinate structures. In this study, an algorithm which determines the redundant support reactions or member forces and implements virtual load method and solves statically indeterminate structures is developed. The algorithm avoids obtaining three parallel reaction forces or three intersecting reaction forces when it obtains a statically determinate structure. In case of internally indeterminate truss structure, a network analysis algorithm determines the critical joints where a truss member cannot be eliminated. The analysis results show that the developed algorithm can solve statically indeterminate truss structures successfully without any human intervention. The proposed algorithm can be beneficial for the truss designers to try several design alternatives without entering too much input data.

Keywords: Virtual Load Method, Statically Indeterminate Truss, Algorithm, Static, Truss Systems

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PİRİT KÜLÜ VE BAKIR CURUFUNUN AĞIR ORTAM MALZEMESİ OLARAK UYGUNLUĞUNUN ARAŞTIRILMASI

ÖZ

Kömür yıkama tesislerinde yaygın olarak ağır ortam zenginleştirme yöntemi kullanılmaktadır. Ağır ortam malzemesi olarak ise genellikle manyetit tozları kullanılmaktadır. Bu tesislerde değişen miktarlarda manyetit kayıpları meydana gelmekte ve bu manyetit kayıpları işletme giderlerini önemli derecede arttırmaktadır. Madenlerin işletilmesi sonucunda açığa çıkan atıkların depolanması gerek doğa tahribatına gerekse de çevresel kirliliğe sebep olmaktadır. Bu nedenden dolayı, bu çalışmada kömür yıkama tesislerinde işletme giderlerini azaltmak ve maden atıklarının değerlendirilmesini sağlamak amacıyla manyetite alternatif olarak bakır cürufu ve pirit külünün ağır ortam malzemesi olarak kullanılabilirliği araştırılmıştır.

Anahtar Kelimeler: Ağır Ortam, Alternatif Ağır Ortam Malzemesi, Pirit Külü, Bakır Cürufu, Kömür

INVESTIGATION OF SUITABILITY OF PIRITE ASH AND COPPER SLAG AS HEAVY MEDIUM MATERIAL

ABSTRACT

Heavy media enrichment method is widely used in coal washing plants. Magnetite powders are generally used as heavy media. Magnetite losses occur in varying amounts in these plants, and these magnetite losses increase operating costs significantly. As a result of the operation of the mines, the storage of the wastes that are exposed to them causes environmental damage as well as environmental pollution. For this reason, in this study, it was investigated that the use of copper slag and pyrite ash an alternative heavy media materials to magnetite in order to reduce operating costs in coal washing and to evaluate the mining waste plants.

Keywords: Heavy Media, Alternative Heavy Media Material, Pyrite Ash, Copper Slag, Coal

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PASLANMAZ ÇELİK İLE DÜŞÜK KARBONLU ÇELİK MALZEMELERİN MIG KAYNAK YÖNTEMİYLE BİRLEŞTİRİLEBİLİRLİĞİNİN İNCELENMESİ

ÖZ

Bu çalışmada, 3mm kalınlıkta paslanmaz çelik ve düşük karbonlu çelik levhalar; MIG kaynak yöntemi ile farklı parametreler kullanarak birleştirilmiştir. Birleştirilen numunelere çekme, eğme, çentik darbe testleri uygulanmış ayrıca mikrosertlik ve mikroyapı özellikleri incelenmiştir. Çekme testleri sonucunda; malzemelerin kaynak metali veya ısı tesiri altında kalan bölgeden (ITAB) ayrılmadığı, kopmanın düşük karbonlu çelik malzemede meydana geldiği tespit edilmiştir. Eğme testlerinde; kaynaklı numuneler 180˚ eğildiklerinde gözle görülebilir bir kaynak hatasına rastlanılmamıştır. Çentik darbe testlerinde, kaynak metali darbe tokluğu ITAB'lardan daha yüksek ölçülmüştür. Mikrosertlik testleri sonucunda en yüksek sertlik değeri kaynak metalinde ölçülmüştür. Mikroyapı incelemelerinde ısı girdisine bağlı olarak, paslanmaz çelik ve düşük karbonlu çeliğin ITAB bölgesinde tane irileşmesinin meydana geldiği tespit edilmiştir.

Anahtar Kelimeler: MIG, Paslanmaz Çelik, Düşük Karbonlu Çelik, Mekanik Özellikler, Mikroyapı

AN INVESTIGATION OF JOINABILITY OF STAINLESS STEEL AND THE LOW CARBON STEEL MATERIALS BY MIG WELDING METHOD

ABSTRACT

In this study, stainless steel and low carbon steel plates with 3mm thickness were joined using different parameters by MIG welding method. Tensile, bending, notch impact tests were applied to the joined samples and microhardness and microstructure properties were examined. The results of the tensile test indicated that separation was not occurred on weld metal or heat affected zone (HAZ). In that case fracture observed at low carbon steel side in the all samples. No crack or separation was observed in welded samples during 180° bending tests. In notched impact tests, weld metal impact strength is measured higher than HAZ. As a result of microhardness tests, the highest hardness is measured in the weld metal. In microstructure investigation, the grain growth was observed in the HAZ of the stainless steel and low carbon steel depending on the exerted heat input.

Keywords: MIG, Stainless Steel, Low Carbon Steel Mechanical Properties, Microstructure

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DÜZLEM TAŞLAMA İŞLEMİNDE TEĞETSEL VE NORMAL KUVVETLERİN İLİŞKİSİ

ÖZ

Bu çalışma, düzlem taşlama tezgahında taşlama esnasında oluşan teğetsel ve normal kuvvetlerinin ilişkisini belirlemek amacıyla yapılmıştır. Taşlama işlemi esnasında oluşan taşlama kuvvetlerinin ölçülmesi ve bilgisayara kaydedilmesi için, daha önce tasarımı ve imalatı yapılan bir dinamometre kullanılmıştır. Dinamometre tasarımında iki adet gerinim ölçer esaslı 3000N kapasiteli analog yük hücresi kullanılmıştır. Taşlama deneyleri 46, 60 ve 80 taneli Al2O3 taşlarla altı farlı kesme derinliklerinde yapılmıştır. İş parçası olarak sertleştirilmiş AISI 1050 (50 HRc) ve AISI 4140 (55 HRc) çeliği kullanılmıştır. Taşlama işlemi esnasında oluşan normal kuvvetler, teğetsel kuvvetlerin iki katından fazla gerçekleşmiştir.

Anahtar Kelimeler: Düzlem Taşlama, Normal Kuvvet, Teğetsel Kuvvet, Kaba Taneli, İnce Taneli

THE RELATION BETWEEN NORMAL AND TANGENTIAL FORCES IN GRINDING

ABSTRACT

This study was carried out in order to determine the relation between normal and tangential forces in surface grinding operations. A previously designed and constructed dynamometer was used to measure and record the grinding force components during grinding. Two strain-gauge based analogue load cells of 3000N capacity were used for the dynamometer. Grinding tests were carried out at six different depth of cuts using Al_2O_3 grinding wheels of various grain sizes (46, 60 and 80 meshes). The grinding tests were carried out on hardened AISI 1050 (50 HRc) and AISI 4140 (55 HRc) steel workpieces. The normal forces were found to be twice larger than the tangential forces.

Keywords: Surface Grinding, Normal Force, Tangential Force, Coarse-grained, Fine-grained

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TOOLOX 44 MALZEMESİNDE TALAŞ KALDIRMA MİKTARININ YÜZEY PÜRÜZLÜLÜĞÜ VE TAKIM AŞINMASINA ETKİLERİNİN İNCELENMESİ

ÖZ

Bu çalışmada, gelişen imalat sektöründe kullanılmak üzere yeni üretilen Toolox 44 sıcak iş takım çeliği (44 HRC) kullanılarak işlenebilirlik deneyleri gerçekleştirilmiştir. İşlenebilirlik deneylerinde, kaldırılan talaş miktarına göre iş parçası yüzeyindeki yüzey pürüzlülüğü, deney sırasında oluşan kesme kuvveti ve kesici takımda oluşan takım aşınması incelenmiştir. Yapılan deneyler yüzey frezeleme yöntemiyle dört farklı kesme hızında (150-180-210-240m/dak), dört farklı ilerleme miktarında (0.4, 0.8, 1.2, 1.6mm/diş) ve iki farklı talaş derinliğinde (0.2-0.4mm) soğutma sıvısı kullanılmadan gerçekleştirilmiştir. Aşınma deneylerinde ise kaldırılan talaş hacmine (320-1600-3200-6400mm^3) göre incelemeler gerçekleştirilmiştir. Sonuçlar neticesinde ilerleme miktarının ve kesme hızının artmasıyla yüzey pürüzlülük değerinin arttığı, kesme kuvveti değerlerinin ise ilerleme miktarına bağlı olarak arttığı kesme hızının artmasına bağlı olarak da azaldığı görülmüştür.

Anahtar Kelimeler: Toolox 44, Yüzey Pürüzlülüğü, Takım Aşınması, Talaş Miktarı, Frezleme

INVESTIGATION OF THE EFFECTS OF SURFACE ROUGHNESS AND TOOL WEAR IN THE TOOLOX 44 MATERIAL

ABSTRACT

In this study, machinability tests were carried out using the newly produced Toolox 44 hot work tool steel (44 HRC) for use in the developing manufacturing sector. In machinability tests, the surface roughness of the workpiece surface, the cutting force generated during the test, and the tool wear on the cutting tool were investigated according to the amount of chips removed. The tests were carried out dry through surface milling method at four different cutting speeds (150, 180, 210 and 240 m/min), four different feed rates (0.4, 0.8, 1.2 and 1.6 mm/tooth) and at two different depth of cut (0.2 and 0.4 mm). In the abrasion tests, investigations were carried out according to the raised chip volume (320-1600-3200-6400 mm^3). As a result, the surface roughness value increased with the amount of feed rate and cutting speed, and the cutting force values decreased with the increase of the cutting speed depending on the amount of feed rate.

Keywords: Toolox 44, Surface Roughness, Tool Wear, Amount of Chip, Milling

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BİR YÜKSEKÖĞRETİM BİNASININ MÜHENDİSLİK ÖZELLİKLERİNİN BUD KAPSAMINDA İNCELENMESİ

ÖZ

Bu çalışmada yeni hizmete alınan bir yükseköğretim binasının mühendislik özellikleri BUD (Biyoharmolojik Uygunluk Değerlendirmesi) kapsamında incelenmiştir. Binanın incelemesi Nisan 2017 döneminde tamamlanmıştır. Bina incelemesinde toplam 14 mühendislik özellikleri ve kriterleri ele alınmıştır. Yapılan BUD inceleme çalışma sonucunda daha yeni tamamlanan ve hizmete alınan binanın "İyileştirilmeli" sınıfında ve minör değişikliklere ihtiyacı olduğu anlaşılmıştır. Binanın BUD puanı 402.17 olarak hesaplanmıştır. Ayrıca binanın eksiklik ve yetersizlik değeri %27.27'dir. İncelenen binanın mühendislik özelliklerinden sismolojik özelliği yeterlidir. Öte yandan Binanın diğer mühendislik özelliklerinde önemli eksiklik ve yetersizlikler tespit edilmiştir.

Anahtar Kelimeler: BUD, Biyoharmoloji, Biyoharmolojik Binalar, Binaların Mühendislik Özellikleri, Kullanıcı, Kimliği ve Kullanım Amacı

INVESTIGATION OF THE ENGINEERING PROPERTIES OF A HIGHER EDUCATION BUILDING IN THE SCOPE OF BCA

ABSTRACT

In this study, the engineering characteristics of a newly built high education structure were investigated within the BCA (Bioharmological Conformity Assessment). The building investigation was completed in April 2017. Totally 14 engineering features and criteria were considered in the building investigation. As a result of the BCA study, it was understood that the newly completed and newly accessible building needs "Minor Improvements" in its "Rehabilitation" class. BCA of the building score is calculated as 402.17. In addition, the building's lack and inadequacy value was 27.27%. The seismological character of the studied building engineering properties is sufficient. On the other hand significant deficiencies and inadequacies have been identified in other engineering properties of the building.

Keywords: BCA, Bioharmology, Bioharmological Buildings, Engineering Properties of Buildings, User Identity and Usage Purpose

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AVUÇİÇİ KODLAMA TEKNİKLERİNİN KISITLAMASIZ ORTAMDA ELDE EDİLEN GÖRÜNTÜLERE UYGULANMASI

ÖZ

Avuçiçi tanıma sistemlerinde hem daha az bellek kullanmak için, hem de eşleştirme sürelerini azaltmak için avuçiçi örüntüsünü karekoda benzer şekilde kodlayan teknikler geliştirilmiştir. Bu teknikler, elin hareketini kısıtlayan aparatların bulunduğu düzenekler ile alınmış görüntülerde çok yüksek tanıma oranlarına ulaşabilmektedir. Fakat kısıtlamasız cihazlarla alınan görüntülerde elin serbest hareketinden dolayı perspektif bozulmalar ortaya çıkmaktadır. Bunun sonucunda tanıma oranları düşmektedir. Bu çalışmada perspektif bozulmaya uğramış avuçiçi örüntülerinde farklı avuçiçi kodlama tekniklerinin performansları ortaya konulmuştur. Özellikle kamera düzlemi ile avuçiçi düzlemi arasındaki açısal farkın 15 dereceyi geçtiği görüntülerde kodlama tekniklerinin çok başarısız olduğu görülmüştür. Buna çözüm olarak geometrik dönüşümlerle bu bozulmalar giderilmeye çalışılmıştır. Düzeltilmiş görüntülerde tanıma oranlarında gözle görülür bir iyileşme olmasına rağmen, istenilen değerlere ulaşılamamıştır. Biz, çalışmamızda bunun nedenlerini ortaya koymaya çalıştık ve aynı zamanda perspektif bozulmaların olduğu durumlarda kullanılabilecek yaklaşımlar önerdik. Özellikle bütünsel tabanlı yaklaşımlar kullanıldığında, tanıma oranları %60 seviyesinden %90'ların üzerine çıkarılabilmiştir.

Anahtar Kelimeler: Avuçiçi Tanıma, Perspektif Bozulma, PalmCode, CompCode, Yazılım

IMPLEMENTATION OF PALMPRINT CODE TECHNIQUES ON IMAGES OBTAINED IN UNRESTRICTED ENVIRONMENT

ABSTRACT

Techniques have been developed to encode the palmprint in a similar way to the palmprint recognition system to use less memory and reduce matching times. These techniques can achieve very high recognition rates in images taken with mechanisms that restrict the motion of the hand. However, perspective distortions occur due to the free movement of the hand in images taken with unrestricted devices. As a result, the recognition rates are decreasing. In this study, the performance of different palmprint coding techniques was demonstrated in the perspective distorted palmprint pattern. In particular, it has been shown that coding techniques fail in images where the angular difference between the camera plane and the palm plane is 15 degrees. As a solution to this, it has been tried to eliminate these distortions by geometric transformations. Although there is a noticeable improvement in the recognition rates in the corrected images, the desired values cannot be achieved. We have tried to reveal the causes of this in our work, and at the same time have offered approaches that can be used in situations where perspective distortions are present. Especially when holistic based approaches were used, recognition rates could be increased from 60% to 90%.

Keywords: Palmprint Recognition, Perspective Distortion, PalmCode, CompCode, Software

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ÖZNİTELİK BELİRLEYİCİ ALGORİTMALARIN GPU İLE GERÇEKLENMESİ

ÖZ

Öznitelik belirleyiciler, bir görüntüde ilgin noktaların veya bölgelerin tespit edilmesi için kullanılmaktadır. Genellikle, bu yöntemlerde türev tabanlı yaklaşımlar tercih edilir ve görüntü piramitleri oluşturularak farklı alanlar veya geçişler yakalanmaya çalışılır. Fakat bu yöntemlerin hesaplama karmaşıklıkları yüksektir. Dolayısıyla gerçek zamanlı uygulamalarda sıkıntılar yaşanabilmektedir. Biz çalışmamızda çok bilinen öznitelik belirleyicilerinden SIFT ve SURF algoritmalarının GPU implementasyonunu gerçekleştirdik. Çalışmamızda, bu kodlamaların CUDA mimarisi ile aşamalı olarak nasıl gerçekleştirildiği ortaya konulmuş ve yöntemlerin CPU versiyonları ile performans karşılaştırmaları verilmiştir.

Anahtar Kelimeler: GPU, CPU, SIFT, SURF, Algoritma

IMPLEMENTATION OF FEATURE DESCRIPTOR ALGORITHMS WITH GPU

ABSTRACT

Feature descriptor algorithms are used to identify interesting points or regions in an image. Generally, derivative based approaches are preferred in these methods and image pyramids are created to try to capture different areas or transitions. However, the computational complexity of these methods is high. Therefore, real-time applications can experience difficulties. In our work, we implemented the GPU implementation of the SIFT and SURF algorithms from well-known attribute identifiers. In this study, it was demonstrated how the gradual realization of this encoding with CUDA architecture. And the CPU versions of the methods and performance comparisons are given.

Keywords: GPU, CPU, SIFT, SURF, Algorithm

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THE PRODUCTION OF TAHINI (SESAME PASTE) AND ITS COMPOSITION

ABSTRACT

Tahini is a food product obtained from sesame seed (Sesamum indicum L.), and it is widely consumed with pekmez, honey and sugar syrup, or commonly consumed as tahini halva in Turkey. Tahini is also used in many salads and appetizers. The production of tahini includes the separation of sesame seed skin in accordance with the technique, drying and roasting in the oven and grinding stages. Due to the separation of the sesame skin, tahini, which contains higher fat and protein content than sesame's, is important and nutritionally unique food, since it contains unsaturated fatty acids, vitamins E and B, minerals and lignans. In this review, the contents of sesame and tahini, and tahini production technique are discussed.

Keywords: Sesame Paste, Tahini, Sesame, Lignans, Public Health

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EFFECTS OF MICROWAVE AND CONVECTIVE HOT-AIR DRYING CONDITIONS ON SOME CHARACTERISTICS OF *LACTARIUS DELICIOSUS* L. MUSHROOM

ABSTRACT

Lactarius deliciosus L. is one of the naturally grown mushrooms. It is known as a "Kanlica" mushroom in Turkey. In this study, it was dried by different drying techniques and the properties of the dried product were evaluated. For this purpose, the sliced samples were dried by two dryers which are convective air dryer and microwave oven. The drying characteristics, color and antioxidant activity of dried mushrooms were investigated. It was observed that as the temperature and microwave power increased, the total drying time decreased. Six different mathematical models were compared according to their coefficients of determination to estimate drying curves. The rehydration characteristics of the dried samples were monitored at 20°C during 10 hours. As a result, it was concluded that the convectional drying was better than the microwave drying for the *Lactarius deliciosus* L. mushroom, and the rehydration abilities, color and antioxidant activity values of the dried samples were good at 50 and 60°C.

Keywords: Mushroom, Conventional Drying, Microwave Drying, Antioxidants *Lactarius Deliciosus* L., Convective Hot-Air

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ANALYSIS OF DEFECTS IN MEDICAL IMPLANTS BY HOLOGRAPHIC INTERFEROMETRY APPROACH

ABSTRACT

The purpose of this study is to be able visually display and discuss the possible issues faced with medical implants in patients, by the use of holograph. Although this issue can be solved in many different ways, the object of this study aims to use current technology in order to facilitate the use of holograph technology, which can easily be used in classroom or home settings, in order to be able to assess the stability of the testing method at hand. With this method, it is easy to assess the reasoning behind the shortened lifespan of an implant by optically comparing its original state to its current state. We can also see that the use of holographic technology is 100 times more cost-effective and easy to apply than other conventional methods. The main axis of this method shows us holographic interferometry utilizing interference pattern made up of constructive and destructive waves. This study focuses highly on this method of utilizing technology that can easily turn even mobile phones into laboratories by concentrating on image processing technology, in turn creating an interface which can meet the needs of many researchers. With this study, it will be possible to create high-quality, cost-effective, and user- friendly test devices, which can be used in order to educate and fabricate.

Keywords: Holographic Interferometry, Medical Implants, Image Processing Algorithms, Constructive and Destructive Waves, Interference Patterns

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AN ALTERNATIVE APPROACH TO ALGORITHM ANALYSIS WITH HOLOGRAPHIC INTERFEROMETRY

ABSTRACT

The main purpose of this study is to test the software which runs circuits using a holographic interferometer. With this, it will be possible to develop coding that making the circuit elements work more productively. This study will make testing simpler by using different code clusters and algorithms that can be tested on the same sample or different samples, which vary from being more durable to interchangeable, making it simple to observe whether or not the charge is distributed throughout the circuit evenly. The first step in this study was to test the precision of the experiments mechanism by factoring in the interference pattern by creating a simple electrical circuit element hologram and observing it. First, a hologram of the Arduino circuit in its non-working state was made, then the interference of its working state was observed alongside the hologram by implementing the code, the two states were also compared. By doing so, the possibility of being able to compare and contrast the states of varying code clusters create on the circuit by hologram was tested. The main purpose of our study is to be able to make software comparisons using holographic interferometry in circuit analysis. It was observed that users are able to easily record the hologram, without the use of other mechanisms or a laboratory, in order to use them in testing

Keywords: Algorithm, Holography, Interferometry, Analysis of Electronic Circuits, Software

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SEEDBOT: A LOW-COST SEMI-AUTONOMOUS MOBILE ROBOT FOR AGRICULTURAL APPLICATIONS

ABSTRACT

Agricultural applications (farming) is one of the oldest profession for humankind. As time passes many ways and tools have been invented while technology arises. This study represents design, build and testing of a low cost semi autonomous robot called "SeedBot" to achieve agricultural tasks more efficient and precise by using current technological advancements. To be more specific, this study focuses on the seeding process by using a semi-autonomous mobile robot which is able to dig soil, plant seed and make soil flat on the ground. Main goal of this study is to perform unmanned agricultural tasks on a small and medium sized lands while spending less amount of power, budget and time by comparing classical agricultural methods.

Keywords: Agricultural Robots, Semi-Autonomous Robots, Robot Farming, Seeding Robot, Agricultural

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FOR A SUSTAINABLE WORLD LOW COST RENEWABLE HYBRID CELL PHONE CHARGER

ABSTRACT

Limitedness and increasingly depletion of world's energy resources have led scientists to generate alternative solutions. Besides the depletion of energy sources, the damages caused through the fossil energy sources to the environment have also increased the researches carried on renewable energy sources. .Energy is required for the operation of mobile phones, tablet computers, game consoles, mp3 players as well as many similar electronic devices that have entered our lives and become an indispensable part thereof in parallel with the development of technology. In this context, the charging devices come to the fore. Charged devices can usually be recharged via 220volt AC-DC converters or computers. Much as the cited devices can be charged either way, they consume a very large amount of energy annually. In this study, a portable charging device model has been designed which employs low-flow natural resources unlike the existing products in the market such as solar energy, energy generated with piezoelectricity generator and kinetic energy as hybrid by increasing them through virtue of ultra-boost circuit for a sustainable world and subsequent to the efficiency tests performed, 7/24 usability thereof has been proven.

Keywords: Solar Energy, Piezoelectricity, Kinetic Energy, Cell Phone with Charger, Lithium-Polymer Batteries

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RISK ANALYSES AND ACCIDENTS OF WORKERS IN AQUACULTURE FISH VACCINE SYSTEMS IN TURKEY

ABSTRACT

Aquaculture sector and production of cultured fish in Turkey is growing rapidly. Export of cultured fish especially in Europa, give an important income. Thus, fish farms are progress such as fish vaccines and related applications. On the other hand, risks and accidents are arise in workers of fish vaccine systems especially injections, injuries, allergenic shock etc. In this research, disease and accidents of fish vaccine workers were determined and all data were established from questionnaire randomly. According to the results, mean age of interviewed workers were 25 years old, and 63 percent man, 37 percent women, 16 percent marriage, 84 percent single, and also many of them were working 6-12 month (42%) and educated high school or university. The main accidents in occupational area were injury from injection and shock from allergenic fish vaccines, falling on the deck or in to the sea, punctures by fish rays, cut, bone fractures, finger injuries, muscle tears etc.

Keywords: Workers, Risk, Accident, Fish Vaccine System, Fish Farm

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OCCUPATIONAL SAFETY IN AEGEAN FISHERMEN, TURKEY

ABSTRACT

One of dangerous occupations is fisherman because it includes highly risk and hazards such as fatalities, serious injuries, physical and biological environment, broad social, economic, and cultural factors. Mortality in fishing sector is high, however their family aren't cover their relevant health and social security arrangements. In the research, fishermen from small-scale fishing boat, trawl, and purse seine were classified and their health, disease and accidents were determined. Main important diseases were classified such as musculoskeletal system, skin and subcutaneous tissue diseases, respiratory system, digestive system, genitourinary system, circulatory system, nervous system, mental and behavioural disorders, eye, ear and mastoid process diseases, respectively. Accidents were categorized minor -loss of working time- (skiing, falling, strikes, etc) middle -loss of workdays- (dislocations, fractures etc) and badly injuries -loss of working- (amputation, falling in the sea, apnea, dead). Hence, the study was concluded that fishermen need safety working conditions and occupational health policy developed and health insurance system need for marine workers.

Keywords: Aegean fishermen, Occupational safety, Accident, Disease

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OCCUPATIONAL HEALTH AND SAFETY MATURATION STAGE, TURKEY

ABSTRACT

Occupational health and safety system (OHS) is important for Turkish government, employer and worker. Recently, OHS program is developed day by day and try to secure working environment and decrease accidents and faults. In addition, OHS is not only enough for improving security culture, but also it needs collateral training and continuation courses. For this purpose, it should be internalizing the written job security rules in workplace. All employees can be comply from the top to the bottom of organization and contribute to development of rules through their own personal knowledge, experience, and in-house training. And, they are complying job security rules without requiring an audit. Thus, it is called as an occupational safety culture. Matures and evolves all time in countries or companies are included in this concept. In the study, new model will be emphasized in maturation and continuation of occupational safety culture that is shown below.

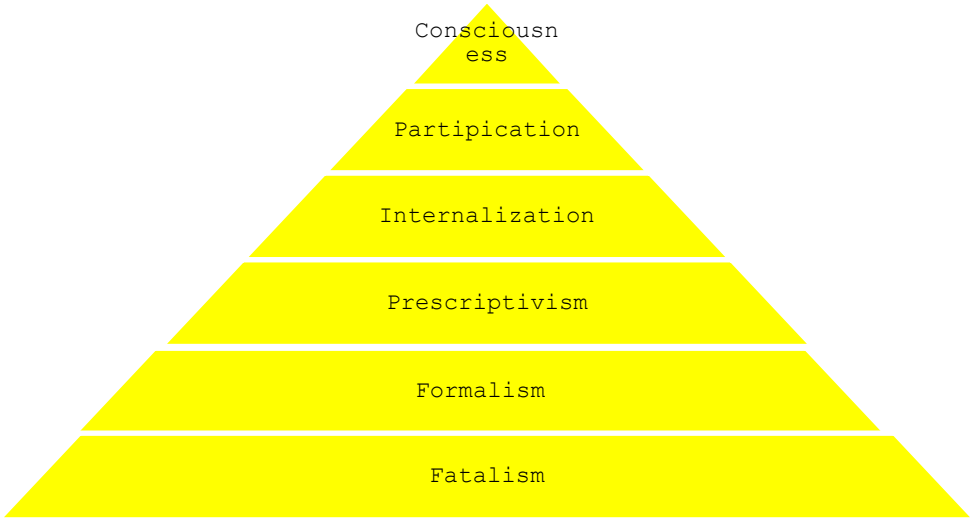

Fig.1. Stage of occupational safety culture and maturation pyramid

Keywords: Occupational Health and Safety (OHS), Employee, Workplace, Maturation, Turkey

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İLERİ MİKROSKOPİ YÖNTEMLERİ İLE PARLAK KESİT ANALİZLERİ

ÖZ

Bu çalışmada pirit içeren kayaçların parlak kesit analizleri, trinoküler araştırma mikroskobuna entegre clemex görüntü analiz sistemi ve motorize tabla kullanılarak yapılmıştır. Motorize tabla ile bütün kesitin patern oluşturarak taranması mümkün olmuştur. Clemex görüntü analiz sistemi ile çok kısa sürede analizler yapılabilmiştir. Bu nedenle manuel olarak yapılan analizlere göre daha güvenilir ve daha hızlı olduğu anlaşılmıştır. Çalışılan kayaçlardaki pirit oranının diğer minerallere oranı ile pirite ait en küçük, en büyük ve ortalama tane boyutları hesaplanmıştır. Sonuç olarak daha kısa sürede daha doğru sonuçlar alma açısından motorize tabla ve clemex gibi sistemlerin kullanılmasının önem taşıdığı anlaşılmıştır.

Anahtar Kelimeler: Clemex, Motorize Tabla, Parlak Kesit, Pirit, Kayaç

ANALYSES OF POLISHED SECTION VIA ADVANCED MICROSCOPY METHODS

ABSTRACT

In this study, polished section analyses of rocks that contain pyrite were performed with clemex image analysis system and motorized table which are integrated into the trinocular research microscope. It was possible to pattern scanning the entire cross section with the motorized table. With the clemex image analysis system, very short time analyzes were possible. For this reason, it is understood that it is more reliable and faster than the manual analysis. The rate of pyrite with other minerals in the rocks studied and the smallest, largest and average grain sizes of pyrite were calculated. Consequently, it was understood that the importance of using the systems such as motorized table and clemex in terms of getting more accurate results in a short time.

Keywords: Clemex, Motorized Table, Polished Section, Pyrite, Rocks

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ISITMA VE SOĞUTMA SÜRECİNDE OPTİMUM YALITIM KALINLIĞININ EKONOMİK VE ÇEVRESEL ANALİZİ

ÖZ

Yapılarda enerjiden kazancı amacıyla kullanılan en etkin yöntemlerin başında yalıtım gelmektedir. Bu çalışmada Türkiye'nin dört farklı iklim bölgesindeki iller için farklı yakıt (doğalgaz, kömür, fuel-oil ve elektrik) ve yalıtım (XPS ve EPS) türleri kullanılarak ısıtmada ve soğutmada optimum yalıtım kalınlığı, toplam maliyet, enerji tasarrufu, geri ödeme süresi ve çevresel analizi yapılmıştır. İzmir, Bursa, Konya ve Erzurum illerinin ortalama optimum nokta tespitiyle; yalıtım kalınlığı ısıtmada sırasıyla 0.065m, 0.083m, 0.099m ve 0.126m ile soğutmada 0.028m, 0.016m, 0.013m ve 0.006m şeklindedir. Yıllık kazanç ısıtmada sırasıyla 20.53$/m^2, 32.85$/m^2, 49.92$/m^2 ve 75.64$/m^2 iken soğutmada 3.76$/m^2, 1.19$/m^2, 0.77$/m^2 ve 0.24$/m^2 olmuştur. Geri ödeme süresi ısıtmada sırasıyla 1.67 yıl, 1.52 yıl, 1.42 yıl ve 1.32 yıl olurken soğutmada 2.70 yıl, 4.6 yıl, 5.88 yıl ve 12.48 yıl değerlerini almıştır. Çevreye salınan CO_2 ve SO_2 emisyonlarında ilk duruma oranla optimum noktada %81 civarında azalma gözlenerek kayda değer miktarda fayda sağlanmıştır.

Anahtar Kelimeler: Yalıtım, Çevresel Analiz, Enerji Tasarrufu, Geri Ödeme Süresi, İklim Bölgeleri

THE ECONOMICAL AND ENVIRONMENTAL ANALYSIS OF OPTIMUM INSULATING THICKNESS WITHIN THE PROCESS OF HEATING AND COOLING

ABSTRACT

Insulating is the most effective method coming, that is used to gain energy in buildings. In this work, the analysis of optimum insulating thickness in heating and cooling, by using different fuels(natural gas, coil, fuel-oil and electric) and types of insulation (XPS and EPS), total cost, repaying span, saving energy, and environmental was made. By fixing of average optimum point belonging to İzmir, Bursa, Konya, and Erzurum; insulating thickness is respectively, 0.065m, 0.083m, 0.099m and 0.126m, in heating and 0.028m, 0.016m, 0.013m and 0.006m in cooling The annual earning, occurred in heating respectively, 20.53$/m^2, 32.85$/m^2, 49.92$/m^2 and 75.64$/m^2, while in cooling 3.76$/m^2, 1.19$/m^2, 0.77$/m^2 and 0.24$/m^2. The repaying span took the value of; in heating respectively 1.67 years, 1.52 years, 1.42 years and 1.32 years, while in cooling 2.70 years, 4.6 years, 5.88 years and 12.48 years. In the emissions of CO_2 and SO_2 released to environment, decrease at the optimum point, about 81% rate in consideration of the first case was observed, and so, utilized.

Keywords: Insulation, Environmental Analysis, Energy-Saving, Payback Period, Climate Zones

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KENTSEL ULAŞIM ALANLARDAKİ KULLANICI MEMNUNİYETİ: ERZİNCAN ÖRNEĞİ

ÖZ

Kentler, insanların ortak yaşamlarını sürdürdükleri yapısal ortamın yani, ortak hayatın varlık nedeni ve yaşama alanıdır. Kentsel ulaşım alanları, cadde/sokak genişliklerinden bisiklet yoluna, bulvar ve kavşak çözümlerinden toplu taşıma durak yerlerine, yaya yollarından otopark alanlarına kadar geniş bir yelpazeyi içermektedir. Bu işlev alanları planlanırken kent imar planlarıyla eşgüdüm içinde yapılmalıdır. Bu çalışmada, Erzincan kent merkezindeki ulaşım alanları, fiziki planlama esaslarına göre incelenmiş, kent merkezindeki farklı mahallelerde yaşayanların ulaşım alanlardan memnuniyetleri bir anket uygulaması yapılarak değerlendirilmiştir. Uygulama çalışmasına göre katılımcılar; ulaşım imkanlarından yüksek oranda(ortalama 3.63) memnun ve ulaşım alanlarını yeterli (2.991) düzeyde bulmuşlardır. Çalışmada, kentlerin sağlıklı bir şekilde yerleşimine katkıda bulunmak ve kullanıcılarında ihtiyaçlarına cevap veren kentsel ulaşım alanları için öneriler sunulmuştur.

Anahtar Kelimeler: Ulaşım, Kent Planlama, Kentsel Ulaşım Alanı, İmar Planı, Kullanıcı Memnuniyeti

USER SATISFACTION IN THE URBAN TRANSPORT AREAS: THE CASE OF ERZINCAN

ABSTRACT

Cities are structured environment in which people's communal life. That is why the presence of common life and a living area. Urban transport areas contains a wide range of that to bicycle route from street widths, to public transport stops from boulevard and intersection solutions, to parking areas from pedestrian roads. These functionaries should be done in coordination with of urban development plans. In this study, transport areas in the Erzincan center was examined according to the principles of physical planning, transport areas satisfaction from living in different neighborhoods in the city center was evaluated by a survey. According to application study; There is a high level of satisfaction (average 3.63) and a sufficient (2.991) level on the transport areas. In this work for the city is presented proposals that for urban settlements are contributing to a healthy way and for urban transport areas that meet the needs of users.

Keywords: Transportation, Urban Planning, Urban Transport Area, Development Plan, User Satisfaction

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LİMONİT AGREGASI İLE ÜRETİLEN BETONLARIN HVL VE TVL DEĞERLERİ

ÖZ

Radyasyon günümüzde birçok yararlı amaç için kullanılmaktadır. Radyasyonun yararlı yönü olduğu gibi, canlı organizmalara zarar verme özelliğinden dolayı, kullanımı sırasında bu zararlı yönü de dikkate alınmalıdır. Tecrübeler göstermiştir ki eğer, radyasyonun etki ve tehlikeleri iyi anlaşılır ve bu tehlikeleri minimuma indirgeyecek önlemler alınırsa radyasyon ile güvenli bir biçimde çalışmak mümkündür. Bu çalışmada TS EN 802 ye uygun dökülmüş normal beton ile agrega miktarları hacimce sırasıyla %20, %40, %60, %80, %100 oranında azaltılıp yerine aynı oranlarda Limonit madeni ilave edilerek elde edilen ağır beton karışımlarının radyasyon tutuculuğu HVL ve TVL cinsinden incelenmiştir.

Anahtar Kelimeler: Radyasyon, Limonit, Beton, HVL, TVL

HVL AND TVL VALUES OF CONCRETES PRODUCED WITH LIMONITE AGGREGATE

ABSTRACT

Penetrating radiation serves many useful purposes, but it can also damage or destroy living organism, and these effect must be considered when radiation is used. Experience has shown that radiation can be used safety if its dangers are understood and and work with radiation to planned to minimize these dangers and eliminate unnecessary exposure. For this purpose, with the normal concretes prepared according to TS EN 802, amounts of aggregates were reduced at the rates of 20%, 40%, 60%, 80% and 100% by volume respectively and heavy concrete mixes were prepared that were obtained by adding limonite at the same rates in their place and the radiation holdings of heavy concrete obtained in terms of HVL and TVL.

Keywords: Radiation, Siderite, Limonite, Concrete, HVL, TVL

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2007 DEPREM YÖNETMELİĞİNE GÖRE MEVCUT BETONARME BİR YAPININ PERFORMANSININ BELİRLENMESİ VE GÜÇLENDİRME ÖNERİSİ

ÖZ

Bu çalışmada deprem hesabı 1975 deprem yönetmeliğine göre yapılmış 5 katlı çerçeve sistemli betonarme bir bina ele alınmıştır. Deprem Bölgelerinde Yapılacak Binalar Hakkındaki Yönetmelik 2007 Bölüm 7'ye göre konut türü yapılar için ön görülen "Can Güvenliği" performans seviyesi araştırılmıştır. Bina taşıyıcı elemanlarına ait eğilme moment kapasiteleri, mevcut malzeme dayanımları ve donatı miktarlarına göre hesaplanmış, yatay yük analizlerinden elde edilen deprem etkileri de göz önüne alınarak her bir eleman üzerinde oluşacak hasar seviyeleri belirlenmiştir. Bu çalışma sonunda yapının "Can güvenliği" performans seviyesini karşılamadığı görülmüş, yapı için alternatif bir güçlendirme önerisi verilmiştir.

Anahtar Kelimeler: 2007 Deprem Yönetmeliği, Mevcut Bina Performans Değerlendirmesi, Bina Güçlendirilmesi, Hasar Düzeyi, Can Güvenliği

DETERMINATION OF THE PERFORMANCE OF AN EXISTING REINFORCED CONCRETE STRUCTURE ACCORDING TO THE 2007 EARTHQUAKE REGULATIONS AND STRENGTHENING PROPOSAL

ABSTRACT

In this study, a reinforced concrete building with a 5-story frame system constructed according to the 1975 earthquake regulations was dealt with. Regulation on Buildings to be performed in Earthquake Regions 2007 According to Chapter 7, the "Life Safety" performance level for residential buildings was researched. Bending moment capacities of building bearing elements are calculated according to existing material strengths and reinforcement quantities and damage levels to be formed on each element are determined by considering earthquake effects obtained from horizontal load analyzes. At the end of this study, it was found that the build did not meet the "Life Safety" performance level and an alternative strengthening proposal was given for the structure.

Keywords: Turkish Seismic Design Code 2007, Performance Evaluation of the Existing Building, Strengthening the Level of Damage, Life Safety

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NANO SİLİKA'NIN BETON BASINÇ DAYANIMINA ETKİSİNİN İNCELENMESİ

ÖZ

Bu çalışmada Nano SiO2'nin betonların basınç dayanımına olan etkisi çok yönlü olarak incelenmiştir. Dünyada en çok kullanılan yapı malzemesi olan beton, gün geçtikçe gelişmekte ve yenilenmektedir. Bilimsel çalışmalar çimentonun yerini alacak alternatifler ararken, bir yandan da çimentonun performansını geliştirmek için yeni katkılar üretmektedir. Nano Silika (SiO_2) betonun çeşitli özelliklerini iyileştirmek amacıyla beton bünyesinde çimentoyla ikame edilerek denenmekte, özellikle yüksek dayanımlı betonlarda matris özellikleri üzerinde çeşitli etkiler yapmaktadır.

Anahtar Kelimeler: Nano, Silika, SiO2, Beton, Çimento, Basınç Dayanımı

INVESTIGATION OF NANO SILICA EFFECT ON CONCRETE COMPRESSIVE STRENGTH

ABSTRACT

In this study, the effect of Nano SiO_2 on the compressive strength of concrete was sophisticatedly investigated. Concrete, the most widely used building material in the world, is being developed and renewed day by day. Scientific studies investigate the alternative materials to replace cement, while generating new admixtures to enhance cement performance. Nano Silica (SiO2) has been tried by substituting cement within the concrete in order to improve various properties of the concrete, and it has various effects on matrix properties especially in high strength concretes.

Keywords: Nano, Silica, SiO2, Concrete, Cement, Compressive Strength

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ASSESSMENT OF FLOW DURATION CURVES AT DIFFERENT TIME SCALES

ABSTRACT

Flow Duration Curve (FDC) is one of the most fundamental tools that provide information for the design of hydropower projects particularly. Therefore, for practitioners who deal hydropower design, understanding the flow duration curve becomes extremely important. The time scales of FDC can be taken as either daily, ten daily, monthly, or annual. Decision makers decide for the required time scale of the FDC based on the purpose of hydropower project in consideration. In this study, FDCs were produced at daily, monthly and annual time scales from the observed mean streamflow data of a selected gauging station from the Meric-Ergene river basin in the European part of Turkey. Comparison of flow duration curves at different time scales shows that FDCs at shorter time intervals look more beneficial in getting more accurate quintiles needed for hydropower design. By considering the FDC of the gauging station, it is possible to produce power duration curves of the hydropower plant which is an important practical tool.

Keywords: Flow Duration Curve, Gauging Station, Hydropower, Meric-Ergene River Basin, Power Duration Curve

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PREDICTION OF RUNOFF USING RAINFALL AND EVAPORATION DATA

ABSTRACT

Predetermination of the quantity of water is important for all water resources projects. It becomes vital particularly when low and high extreme events. Streamflow data are used in the determination of available amount of water to provide for the demand. Therefore, it is important to have a wide network of streamflow gauges; however, it is a fact that catchments are not properly gauged in Turkey creating lack of information for many case studies. This makes the estimation of water availability a hard practical task. Due to non-availability of streamflow data, in this study, a simple relationship between runoff as the dependent variable and precipitation and evaporation as independent variables is investigated. Multiple variable-linear regressions are used for the purpose of this study in deriving the model for a catchment in Meric-Ergene River Basin in the European part of Turkey. The simple model is expected to be helpful in providing runoff data for any water resources project planned in the ungauged basin.

Keywords: Evaporation, Meric-Ergene River Basin, Precipitation, Runoff, Ungauged Basin

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EFFECTS OF SOCIAL SKILLS EDUCATION ON COMMUNICATION AND ANGER CONTROL IN ADOLESCENTS

ABSTRACT

Today nurses, particularly school nurses can play important roles in providing assistance and guidance adolescents for obtaining such skills. In order to examine the effect of social skills training related to anger control, communication quasi-experimental research, single-group pretest-posttest were used. The sample consisted of 65 adolescents. For collecting data for the study, Adolescent Personal Information Form, Communication Skills Rating Scale (OCS), State-Trait Anger Expression Inventory (STAS) and the Education Information Test were used. The findings of the present study showed that there were significant statistical differences ($p<0.005$) between pretest and posttest in terms of scores of all the relevant scales used in this study. However, the scores of trait anger and anger control training in pretest were not significantly different from those in post-test. Training was found to increase the level of knowledge and communication skills of adolescents.

Keywords: Adolescence, Communication Skills, Anger Management, Social Skills, Nursing

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DUDAK, ÇENE VE PHILTRUM BOYUTLARININ KİŞİLİK ÖZELLİKLERİYLE İLİŞKİSİNİN ARAŞTIRILMASI

ÖZ

Kişilik özelliklerimizin yüz ifademize yansıdığı bilinmektedir. Ancak yüz anatomimizi oluşturan dudak, philtrum, çene gibi yapıların boyutları ile kişilik özelliklerimiz arasındaki ilişki bilinmemektedir. Çalışmamızda bu konuya ışık tutabilmeyi hedefledik. Çalışmamıza Abant İzzet Baysal Üniversitesinde öğrenim gören yaş ortalaması 20.47±1.98 olan 74 kız öğrenci katılmış olup, öğrencilerin Sony α100 digital fotoğraf makinesi ile tam karşıdan ve profilden yüz fotoğrafları çekilmiştir. Eş zamanlı olarak 45 soruluk kişilik testi uygulanmıştır. Çekilen fotoğraflar bilgisayara aktarılarak Adobe Photoshop 14.0 versiyonlu photoshop programı ile üzerlerinde ölçümler yapılmıştır. Ağız genişliği, üst dudak kalınlığı, alt dudak kalınlığı, dudak noktaları arasındaki genişlik, philtrum uzunluğu, philtrum genişliği, yan ağız genişliği, alt çene yüksekliği, üst çene yüksekliği ölçülmüş, dudak tipi ve philtrum derinliği tanımlanmıştır. Sonuçlar öğrencilerin kendi kişilik özellikleri ile karşılaştırılmıştır. Sonuç olarak üst dudak (r=0.281) ve alt dudak (r=0.313) kalınlığı ile, kişilik özelliklerinden sadece 'gelişime açıklık' arasında pozitif korelasyon bulundu. Dudak tipi ile sorumluluk duygusu arasında pozitif (r=0.238) korelasyon bulundu. Philtrum boyutları ile kişilik özellikleri arasında ise anlamlı ilişki tespit edilemedi.

Anahtar Kelimeler: Dudak, Çene, Philtrum, Kişilik Özelliği, Yüz Anatomisi

INVESTIGATION ON THE RELATIONSHIP BETWEEN PERSONAL CHARACTERISTICS WITH LIP, JAW AND PHILTRUM DIMENSIONS

ABSTRACT

It is known that our personality traits are reflected on our facial expression. However, the relationship between the sizes of structures such as the lip, philtrum, and jaw that make up our facial anatomy is not known. We aimed to shed light on this subject in our study. A total of 74 female students with an average age of 20.47 ± 1.98 who have education at Abant Izzet Baysal University participated the study and the photographs of students' faces from the full-frontal and profile view were taken with Sony a100 digital camera. A personality test consisting of 45 questions was conducted simultaneously. The photographs taken were measured with Adobe Photoshop 14.0 version of photoshop software through being transferred to computer. The mouth width, upper lip thickness, lower lip thickness, width between lip spots, philtrum length, philtrum width, lateral mouth width, lower jaw height, upper jaw height were measured, lip type and philtrum depth were defined. The results were compared with the personal characteristics of students.In conclusion, there was a positive correlation found between the thickness of upper lip (r=0.281) and lower lip (r=0.313) and only 'openness for improvement' of personal characteristics. There was no significant relationship determined between philtrum sizes and personal characteristics.

Keywords: Lip, Jaw, Philtrum, Personal Characteristics, Face Anatomy

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CANCER PATIENT EXPECTATIONS OF NURSES

ABSTRACT

The current study aimed to examine cancer patient expectations of nurses. The sample included cancer patients who admitted to a university hospital located in the city of Rize in Turkey, who were older than 18 years of age, and who agreed to participate in the study. Data was analyzed using the SPSS software. Among 246 cancer patients, mean age was 55.9 years. It was found that 72% of the patients were married, 46.3% graduated from middle school, and 66.3% lived in urban areas. Among the patients, 32.9% had stage 4 cancer and 23.6% had respiratory system cancer. Sixty two percent of the patients regularly used medicine, 91.1% were satisfied with the clinic they attended, and 85.4% reported that their treatment improved their condition. The current study aimed to examine cancer patient expectations of nurses. Patient expectations of nurses were questioned using 18 items. Patient expectations of nurses were being merry (93.1%), being warm (91.1%), being professionally competent (89%), being understanding (88.6%), having knowledge on cancer treatment (84.1%), being confident (83.7%), protecting patient privacy/confidentiality and keeping secrets (77.2%), generating a setting for listening to patients (76.8%), and being understanding toward repetitive questions of patients (76.8%); respectively. In conclusion, cancer patients expect nurses to understand their emotions and to support patients. In addition, patients expect to receive care from nurses who are professionally well-informed, experienced, and confident. In the provision of care for cancer patients, it is suggested that nurses listen to, understand, and support patients by considering their emotional needs and also increase their professional competencies and express this quality to patients.

Keywords: Cancer, Patients, Expectaions, Nurses, Rize

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TEPECİK EĞİTİM VE ARAŞTIRMA HASTANESİ GEBE OKULUNA BAŞVURAN GEBELERİN YAŞADIĞI GEBELİĞE BAĞLI FİZİKSEL SAĞLIK SORUNLARININ İNCELENMESİ

ÖZ

Araştırmanın amacı Tepecik Eğitim ve Araştırma Hastanesi Gebe Okulu'na başvuranların gebeliğe bağlı yaşadığı fiziksel sağlık sorunlarının incelenmesidir. Araştırma analitik-kesitsel olarak, Haziran-Ekim 2015 tarihlerinde İzmir Tepecik Eğitim Araştırma Hastanesi Gebe Okulu'na başvuran 530 gebe ile yapılmıştır. Veriler gebe okulunun kayıt sisteminden alınmış, tanımlayıcı istatistikler ve ki-kare testi ile analiz edilmiştir. Gebelerin yaş ortalaması 27.73±5.87 (Range:16-43)'dir. Gebelerin %60.8'inin ilköğretim mezunu olduğu, %17.7'sinin bu gebeliğini istemediği, ortalama gebelik sayısının 2.13±1.17 (Range:1-8)ve yaşayan çocuk sayısının 1.10±1.13 (Range:0-7) olduğu bulunmuştur. Gebelerin ortalama gebelik haftası 26.33±9.17 (Range: 16-43) idi. Gebelerin %13.6'sı gebeliği süresince kendilerini rahatsız eden en az bir sağlık sorunu bildirmişlerdir. Bu sorunların en fazla karşılaşılma durumuna göre vajinal kanama (%29.16), bacak krampları (%15.27), sırt ağrısı 8 (%9.72), sık idrara çıkma (%8.33), memelerde hassasiyet (%6.94), konstipasyon/gaz (%5.55), bulantı-kusma (%4.16) ve hemoroid (%4.16) olduğu belirlenmiştir. Bu araştırma gebelerin önemli bir bölümünün fiziksel sağlık sorunu yaşadıkları sonucunu açığa çıkarmıştır. Sağlık profesyonellerinin eğitim ve danışmanlık hizmetleri sırasında bu sorunları dikkate almaları ile gebelik sürecinin sağlıklı geçirilmesine katkı sağlanabilir.

Anahtar Kelimeler: Gebelik, Sağlık, Fiziksel Problem, Prenatal Bakım, Danışmanlık

EXAMINATION OF PREGNANT WOMEN' S PHYSICAL HEALTH PROBLEMS, WHICH IS DEPENDING ON PREGNANT WOMEN IN THE TEPECİK TRAINING AND RESEARCH HOSPITAL PREGNANCY SCHOOL

ABSTRACT

The aim of the study is to examine the physical health problems, which is depending on pregnant women in the Tepecik Training and Research Hospital Pregnancy School. This study was conducted analytically and cross-sectionally with 530 pregnant women who applied to Izmir Tepecik Education Research Hospital Pregnancy School between June-October 2015. The data were taken from the registry of the pregnant school and analyzed by descriptive statistics and chi-square test. The mean age of pregnancies is 27.73±5.87 (Range: 16-43). It was found that 60.8% of pregnants were graduated at primary school, 17.7% did not want this pregnancy, the mean number of pregnancies was 2.13±1.17 (range:1-8) and the number of living children was 1.10±1.13. The mean gestational age of the pregnant women 26.33±9.17 (Range:16-43). 13.6% of pregnants reported at least one health problem that disturbed them during pregnancy. According to the most common problems are vaginal bleeding (29.16%), leg cramps (15:27%), back pain 8 (9.72%), frequent urination (8.33%), breast tenderness (6.94%), constipation/gas (5.55%), Nausea-vomiting (4.16%) and hemorrhoids (4.16%). This research show up the consequence that a substantial part of pregnants have physical health problems. Healthcare professionals should consider problems of pregnants during training and consultancy services. Thus, gestation period can be healthy.

Keywords: Pregnancy, Health, Physical Problems, Prenatal Care, Advisory Services

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EBELİK ÖĞRENCİLERİNİN SORUMLULUK PROFİLLERİNİN DEĞERLENDİRİLMESİ

ÖZ

Bu çalışma ile ebelik öğrencilerinin sorumluluk profillerinin değerlendirilmesi amaçlanmaktadır. Çalışma kesitsel tipte bir araştırmadır. Araştırmanın evreni aynı zamanda örneklem kabul edilerek, Ege Üniversitesi İzmir Atatürk Sağlık Yüksekokulu Ebelik Bölümü dördüncü sınıfta okuyan, veri toplama aşamasında okulda olan ve çalışmaya katılmayı kabul eden öğrenciler araştırmanın örneklemini oluşturmuştur (n=82). Veri toplama aracı olarak; "Ebelik Öğrencilerinin Sorumluluk Profillerinin Değerlendirilmesi" anket formu ve "Öğrenci Sorumluluk Ölçeği" kullanılmıştır. Çalışma grubunun yaş ortalamaları 22.41±1.35 (min=21.0, max=27.0)'dir. Öğrencilerin %96.3'ü bekar, %46.3'ü yurtta yaşamakta ve %4.9'u çalışmakta olduğunu belirtmişlerdir. Öğrencilerin %41.5'i "sıklıkla" herhangi bir zorunluluktan derse gelemediği zamanda dinleyemediği konuları telafi ettiğini belirtmiştir. Ölçekten alınan ortalama puan 34.64±3.42'dır (min=25.0-max=42.0). Değişkenler ile ölçek puan ortalamaları arasındaki ilişkide" Eğitimlerin İletişim Becerilerini Geliştirdiklerine İnanma Durumları" (p=0.00) maddesi ile anlamlılık tespit edilmiştir. Çalışma sonucunda ebelik dördüncü sınıf öğrencilerinin sorumluluk ölçek puan ortalamasının ortalama bir değerde olduğu ve öğrencilerin sorumluluk bilincinin farkında oldukları görülmektedir. Çalışma sonucunda eğitim programları içerisinde ebelik öğrencilerine sorumluluk bilincinin geliştirmesine yönelik konulara yer verilmesi önerilmektedir.

Anahtar Kelimeler: Ebelik, Öğrenci, Sorumluluk, Eğitim, Kesitsel Araştırma

EVALUATION OF RESPONSIBILITY PROFILES BY MIDWIFERY STUDENTS

ABSTRACT

This study aims to evaluate the responsibility profiles of midwifery students. The study was a cross-sectional study. The sample of the study was taken at the same time as the sample, and the sample of the students studying in the fourth grade of the Ege University Department of Midwifery at Izmir Atatürk Health School and studying at the school during the data collection phase and accepting to participate in the study (n=82). The questionnaire form "Assessment of Responsibility Profiles of Midwifery Students" and "Student Responsibility Scale" were used as data collection tools. The average age of the study group was 22.41±1.35 (min=21.0, max=27.0). 96.3% of the students were single, 46.3% were living in the country and 4.9% were working. 41.5% of the learners stated that they "often" compensate for what they cannot hear when they cannot learn from any obligation. The mean score of the scale was 34.64±3.42 (min=25.0-max=42.0). Relevance between variables and scale point averages was found to be significant with the item "The State of Believing that Trainings Develop Communication Skills" (p=0.00). As a result of the study, it is seen that fourth grade students of midwifery have an average value of responsibility scale point average and students are aware of responsibility consciousness. As a result of the study, it is suggested that midwifery students should include the subjects of developing the responsibility consciousness in the education programs.

Keywords: Midwifery, Student, Responsibility, Education, Cross-sectional Research

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HASTA VE YAKINLARININ ERKEK HEMŞİRELERE İLİŞKİN GÖRÜŞLERİNİN BELİRLENMESİ

ÖZ

Hemşirelik yasasındaki (2007) değişiklikle, kliniklerde çalışan erkek hemşire sayısı artmaktadır. Kesitsel ve tanımlayıcı tipte olan çalışma, hasta ve yakınlarının erkek hemşirelere ilişkin görüşlerini belirlemek amacıyla yapılmıştır. Veriler Mayıs 2016-Nisan 2017 tarihleri arasında DEÜ Hastanesi Dahiliye 1-2, Genel Cerrahi, Nöroşirurji, Ortopedi, Kadın Hastalıkları-Doğum Kliniklerindeki hasta ve refakatçılarından çalışmaya katılmaya istekli, iletişim engeli olmayan, onsekiz yaş üzeri hasta ve/veya yakınlarından elde edilmiştir. Çalışmaya başlamadan önce Başhekimlikten ve Etik kuruldan izin alınmıştır. Analizinde Ki-kare, sayı, yüzdelik testler kullanılmıştır. Çalışmada 268 hasta/yakınına ulaşılmış; %63.4'ünü (n=170) hasta yakınları oluşturmuştur. Katılımcıların %56.7'si (n=152) kadın, %53.4'ü (n=143) 36-60 yaş arasındadır. Yüzde 44.4'ünün (n=119) erkek hemşireden bakım aldığı saptanmıştır. "Erkekler de hemşirelik yapabilir" sorusuna katılımcıların %82.5'i (n=221) ve "iyi bakım verebilir" sorusuna %72'si (n=193) evet yanıtını vermişlerdir (p=0.038). Erkeklerin her serviste çalışabileceğini düşünenlerin oranı %71.3'tür. Erkek hemşireler sadece erkek hastalara bakım vermelidir sorusuna %55.2'si (n:148) hayır yanıtını vermişlerdir. Katılımcıların erkek hemşireye yönelik bakış açılarının pozitif olduğu söylenebilir.

Anahtar Kelimeler: Bakım, Cinsiyet, Erkek Hemşire, Meslek, Hasta ve Yakınları

DETERMINATION OF OPINIONS PATIENT AND RELATIVES MALE NURSING RELATIONSHIP

ABSTRACT

With the change in the nursing law (2007), the number of male nurses working in clinics is increasing day by day. The study was conducted to determine the opinions of patients and their relatives about male nurses. The cross-sectional and descriptive type study was collected from May 2016 to April 2017 from DEU Hospital Internal Medicine 1-2, General Surgery, Neurosurgery, Orthopedics and Obstetrics and Gynecology Clinics. Chi-square, number, percentage tests were used in the analysis, obtained from the patient and/or relatives over the age of eighteen, who were voluntarily, unhindered, with the permission of the chief physician and the ethics committee. 268 patients and/or close to the study were reached; 63.4% (n=170) were relatives of the patients. 56.7% of participants (n=152) were female, 53.4% (n=143) is between 36-60 years, 44.4% (n=119) were identified as the male nurse takes care. Men also do 82.5% of respondents to the question of nursing (n=221) and 72% best care you can give to the question (n=193) gave the yes response (p=0.038). The proportion of men who think that they can work in every service is 71.3%. Male nurses gave only 55.2% (n:148) no response to the question that they should treat only male patients. It can be said that the attitudes of the participants towards the male nurse are positive.

Keywords: Care, Gender, Male Nurse, Occupation, Patient and Relatives

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SİGARASIZ YAŞAMA İLK ADIM: EBELİK ÖĞRENCİLERİNDE AKRAN EĞİTİMİ PROGRAMININ ETKİNLİĞİ

ÖZ

Bu çalışma, gençlerin sigara içme konusundaki bilgilerine akran eğitiminin etkisinin değerlendirilmesi amacıyla yapılmış eğitsel bir müdahale çalışmasıdır. Araştırma Ege Üniversitesi İzmir Atatürk Sağlık Yüksekokulu Ebelik Bölümü'nde okuyan öğrenciler (n=360) üzerinde yapılmıştır. Sigara konusunda eğitim verecek akran eğitimci grubu 8 kişiden oluşmuş, bu öğrencilere "Akran Eğitici Eğitimi Programı" uygulanmıştır. Eğitim verilecek akran grupları basit randomizasyon yöntemi kullanılarak müdahale ve kontrol gruplarına ayrılmış, sonrasında akran eğitimcilerle belirlenen günlerde müdahale grubunun eğitimleri gerçekleştirilmiştir. Müdahale grubunda 132, kontrol grubunda 128 öğrenci ile çalışma tamamlanmıştır. Müdahale grubunda sigara kullanan öğrencilerin %81.8'i sigarayı bırakmak isterken, kontrol grubunda bu oran %59.3'tür ($p>0.05$). Sigarayı bırakmayı deneme oranı ise müdahale grubunda kontrol grubuna göre iki kat daha yüksek bulunmuştur ($p<0.05$). Öğrencilerin en sık başvurduğu sigara bırakma yönteminin paket taşımama olduğu saptanmıştır. Müdahale grubunda öğrencilerin %15.2'si sigara bırakma polikliniğine başvurarak profesyonel destek almış olup, kontrol grubunda hiçbir öğrencinin başvurmadığı görülmüştür. Bu çalışmada akran eğitimi yöntemi ile verilen sağlık eğitiminin öğrencilerin sigarayı bırakma davranışı üzerinde olumlu etki sağladığı söylenebilir.

Anahtar Kelimeler: Akran Eğitimi, Ebelik, Sigara İçmek, Sigara Bırakmak, Eğitici Eğitimi

THE FIRST STEP TO LIFE WITHOUT SIMOKING: THE EFFECTIVENESSOF THE PEER EDUCATION PROGRAM IN MIDWIFERY STUDENT

ABSTRACT

This research is a kind of educational intervention study which was carried out in order to evaluate the effect of peer education on the teenagers' knowledge about smoking. The population of the research comprised of the students that have been studying at Ege University Atatürk Vocational Health School, Midwifery Department (N=360). Peer groups to be trained were assigned to intervention and control groups by using simple randomization method, and training of the intervention group was performed on the days when peer trainers were determined. The study was carried out on students (n = 360) attending Ege University Izmir Atatürk Health School Midwifery Department. The peer educator group that would give training on smoking consisted of 8 people, and the peer groups that would be trained were divided into two groups via simple randomization as experimental group (n=132) and control group (n=128). 81.8% of smokers in the intervention group wanted to quit smoking, while in the control group this rate was 59.3% ($p>0.05$). The rate of attempting to quit smoking was two times higher in the intervention group than in the control group ($p<0.05$). It has been determined that the smoking cessation method most frequently used by the students is package carryover. In the intervention group, 15.2% of the students received professional support by applying to the smoking cessation clinic, and no student was seen in the control group. In this study, it can be said that the health education given by peer education method has a positive effect on the students quitting smoking behavior.

Keywords: Midwifery, Peer Education, Smoking, Quit Smoking, Educator Training

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ACİL SERVİSE BAŞVURAN OBSTETRİ HASTALARININ TRİYAJ SINIFLANDIRILMASINA GÖRE DAĞILIMLARI VE YAPILAN UYGULAMALARIN DEĞERLEDİRİLMESİ

ÖZ

Obstetrik nedenlerle acile gelenlerin 10 dakika içinde değerlendirilip, aciliyetlerine göre sınıflandırılması için sağlık personeli tarafından yapılan işleme de obstetrik triyaj denir. Araştırma, T.C. Sağlık Bakanlığı Türkiye Kamu Hastaneler Kurumu İzmir İli Kamu Hastaneler Birliği Kuzey Genel Sekreterliği Buca Kadın Doğum ve Çocuk Hastalıkları Hastanesinde 01.09.2013-30.09.2013 tarihleri arasında acil servise başvuran 1981 obstetri hastasının kayıtları incelenerek yapılmıştır. Gebelerin triyaj sınıflamasına göre dağılımlarında; %54.6'sı 1. öncelik grubunda yer alırken, %35.5'i 2. öncelik ve %9.8'si 3. öncelik grubunda yer almıştır. Acile başvuru şikayetlerine göre; hastaların %34.3 ünün sancı şikayeti nedeniyle, %10.4'ünün kanama veya lekelenme şikayeti nedeniyle, %8.9'unun suları geldiği için, %2.7'sinin bebek hareketlerinde azalma olduğu şikayeti için, %8.3'ünün kasık ağrısı şikayeti ile %7.6'sının bulantı ve kusma şikayetleri ile %10.6'sının kontrol amaçlı geldikleri görülmektedir. Acil servise başvuran gebelerin triyaj dağılımları arasında iyi düzeyde uyum ve istatistiki olarak ileri düzeyde anlamlılık (k=0.601, p=0.000)saptanmıştır.

Anahtar Kelimeler: Triyaj, Obstetrik Triyaj, Gebelik, Halk Sağlığı, Acil Servis

ADMITTED TO THE EMERGENCY DEPARTMENT OF OBSTETRICS TRIAGE PATIENTS ACCORDING TO THE CLASSIFICATION OF DISTRIBUTIONS AND THE EVALUATION OF APPLICATIONS

ABSTRACT

Obstetric reasons for patients coming to the emergency room in 10 minutes, and treated according to the urgency of the classification made by medical personnel for processing obstetric triage. Research was carried out at in the Buca Maternity and Children Diseases Hospital, and data were collected between 01.09.2013/30.09.2013. At the emergency department between these dates were admissed 1981 obstetric patients by examining the records. Pregnant women were distribution of 54.6% 1. priority group, while 35.5% 2. priority and 9.8% 3. priority group. Pregnant women reference to the emergency room, when we examine the distribution of these patients 34.3% flour pain due to complaints, and 10.4% of the flour bleeding or spotting due to complaints, 8.9% flour water, %2.7 side of decrease in the baby moving for complaints, 8.3% flour with complaints of groin pain, and 7.6% s with the complaints of nausea and vomiting, 10.6% s with the purpose of control, they can be seen. Reference to emergency obstetric triage distributions between patients and good level of compliance as advanced statistical significance (k=0.601, p=0.000) were identified.

Keywords: Triage, Obstetric Triage, Pregnancy, Public Health, Emergency Service

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EBELERİN MENTORLUK UYGULAMASINA İLİŞKİN ALGILARININ DEĞERLENDİRİLMESİ

ÖZ

Bu araştırma, ebelik lisans tamamlama eğitimi almakta ve çalışmakta olan ebelerin mentorluk hakkında bilgi ve algılarının değerlendirilmesi amacıyla yapılmış kesitsel tipte bir araştırmadır. Araştırmanın evrenini, Ege Üniversitesi Sağlık Bilimleri Fakültesi'nde "Ebelik Lisans Tamamlama Programı" kapsamında eğitim almakta olan ve çalışmakta olan ebeler oluşturmuştur. Araştırmanın örneklemine çalışmaya katılmayı kabul eden ebeler dâhil edilmiştir (n=80). Verilerin toplanmasında ebelerin sosyodemografik özelliklerini ve mentorluk algılarını değerlendiren açık ve kapalı uçlu 28 sorudan oluşan bir Anket Formu kullanılmıştır. Veriler SPSS 16.0 Windows paket programında analiz edilmiştir. Çalışma grubunu oluşturan ebelerin yaş ortalaması 43.99±3.98 (min:37, max:53) yıldır. Ebelerin %81.3'ü evlidir ve meslekte çalışma süresi ortalama 23.45±5.97 (min:2, max:35) yıldır. Ebelerin %52.5'nin hastanede, %37.5'nin ise birinci basamakta çalışmakta olduğu ve sadece %16.3'nün kadın doğum bölümünün poliklinik/servis/doğumhane bölümlerinde çalışmakta olduğu saptanmıştır. Araştırmamızda yer alan ebelerin %55.0'inin çalıştığı bölüme staj kapsamında ebelik öğrencilerinin geldiği belirlenmiştir. Ebelerin büyük çoğunluğu (%46.3) gönüllü olarak, sadece %8.8'i görevlendirme yazısı ile mentorluk yaptığını belirtmiştir. Ebelerin sadece %51.3'ü "mentorluk" hakkında bilgi sahibi olduklarını ve %33.8'i mentorluk eğitimi almak istediklerini belirtmişlerdir. Çalışmamıza katılan ebelerin yaklaşık yarısının mentorluk konusunda bilgi sahibi olduğu belirlenmiştir. Ebelik eğitiminde mentorluk uygulamalarının incelenmesine yönelik daha fazla araştırmaya ihtiyaç duyulmaktadır.

Anahtar Kelimeler: Ebelik, mentorluk, mentor, klinik eğitim, öğrenci

AN EVALUATION OF MIDWIVES' PERCEPTIONS ABOUT MENTORSHIP

ABSTRACT

This research is a cross-sectional study aimed to evaluate of knowledge and perceptions of midwives' about mentorship in midwifery. Population of the study consisted of midwives who taking undergraduate education at Faculty of Health Sciences and work at health care services various citys in Turkey. Sample of study included 80 midwives who voluntarily participated to study. In the data collection was the survey form was used in which 28 open-ended questions related to the sociodemographic characteristics with knowledge and perceptions of mentorship. Data were analyzed frequency test using SPSS 16.0 Windows package program. The mean age of the midwives are 43.99±3.98 (min:37, max:53) years. 81.3% of them are married and the mean midwives' employment are 23.45±5.97 (min:2, max:35) years. 52.5% of midwives work at secondary-tertiary healthcare services, 37.5% of them work primary health care services and only 16.3% work at maternity ward and delivery room. It was determined that 55.0% of midwives work with midwifery students at their clinic. It was determined that 55.0% of midwives do mentorship to midwifery students at their clinic. During mentorship program, percentage of midwives do mentoring voluntarily and assignment letter are 46.3% and 8.8.%, respectively. Midwives participating the study stated that 51.3% of them have knowledge about mentorship, but only 33.8% of them want to take mentorship course. Approximately half of the participants who participated in the study were found to have knowledge about mentorship. It is suggested that needed more research is to examine the practice of mentoring in midwifery education.

Keywords: Midwifery, mentorship, mentor, clinical education, student

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EBELİK BÖLÜMÜ UZAKTAN EĞİTİM ÖĞRENCİLERİNİN E-ÖĞRENME İÇİN HAZIRBULUNUŞLUK DURUMLARININ DEĞERLENDİRİLMESİ

ÖZ

Çevrimiçi ya da internet tabanlı uzaktan eğitim son zamanlarda yaygınlaştıkça, birçok profesyonel de uzaktan eğitim öğrencilerinin bu ortamda başarılı olmak için ne kadar hazırlıklı olup olmadıklarını sorgulamaya başlamışlardır. Uzaktan eğitim sağlayan eğitim kurumları artmasına rağmen, bu eğitim modelinde başarı ve memnuniyetin sağlanmasına yeterince önem verilmemektedir. Ebelik bölümü uzaktan eğitim öğrencilerinin e-öğrenme için hazırbulunuşluk durumlarının değerlendirilmesi amaçlanmıştır. Araştırmanın evrenini "Ebelik Lisans Tamamlama Programı" kapsamında eğitim almakta olan ön lisans mezunu olan ebeler oluşturmuştur. Araştırma örneklemini çalışmaya katılmayı kabul eden ebeler oluşturmuştur (n=86). Verilerin toplanmasında katılımcıların sosyo-demografik özellikleri, uzaktan eğitim bilgilerini ölçen (26 soru) anket formu ve e-öğrenme için hazırbulunuşluk öz değerlendirme ölçeği (25 soru) kullanılmıştır. Veriler SPSS 16.0 programında analiz edilmiştir. Katılımcıların yaş ortalaması 43.55±4.28 (min:36 max:53)'dir. Katılımcıların %72.1'i uzaktan eğitimi arkadaşlarından duyduğunu belirtmiştir. Birinci sınıf uzaktan eğitim öğrencilerinin ölçek puan ortalaması 101.0±14.17(min:68,max:125) iken ikinci sınıf öğrencilerinin puan ortalamaları 105.10±12.38(min:74 max:125) olarak saptanmıştır. Çalışmamızın sonucunda ikinci sınıf öğrencilerin e-öğrenme için hazırbulunuşluk düzeyi birinci sınıflara göre daha yüksek bulunmuştur.

Anahtar Kelimeler: Uzaktan Eğitim, Ebelik, Lisans Tamamlama, E-Öğrenme, Hazırbulunuşluk

EVALUATION OF MIDWIFERY DISTANCE EDUCATION STUDENTS E-LEARNING READINESS

ABSTRACT

As online or internet based distance learning has become more widespread recently, many professionals have begun to question how remote distance education students are prepared to be successful in this environment. Despite the increasing number of educational institutions providing distance education, not enough importance is given to achieve success and satisfaction in this educational model. The aim of midwifery department is to evaluate the availability of distance learning students for e-learning. The universe of the research is an associate degree graduate who is studying under the "Midwifery Undergraduate Completion Program". The research sample has been accepted to participate in the study (n=86). Sociodemographic characteristics of the participants, a questionnaire 26 questions) measuring distance education information and a self-assessment questionnaire (25 questions) for e-learning were used in the data collection. The data were analyzed in the SPSS 16.0 program. The mean age of the participants was 43.55±4.28 (min: 36 max: 53). 72.1% of the participants said they heard distance learning from their friends. The average score scale of first class distance education students was 101.0±14.17 (min:68, max:125) while the average score of second grade students was 105.10±12.38 (min:74 max:125). As a result of our study, the level of readiness for e-learning by second grade students was higher than the first grade students.

Keywords: Pregnancy, Health, Physical Problems, Prenatal Care, Advisory Services

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KANSERLİ HASTALARDA ANKSİYETE VE DEPRESYON

ÖZ

Araştırma kanser hastalarında anksiyete ve depresyon düzeyini belirlemek amacıyla planlandı. Çalışma Türkiye'de bir ilde üniversite hastanesine başvuran ve çalışmaya katılmayı kabul eden 18 yaş ve üzeri kanserli hastalar üzerinde yapıldı. Veriler araştırmacılar tarafından literatür taranarak oluşturulan sosyodemografik özelliklere ait form, hastalık bilgi formu ve Hastane Anksiyete Depresyon Ölçeği ile toplandı. Bu ölçek bedensel hastalığı olanlar hastalarda anksiyete ve depresyonu taramak üzere geliştirilmiştir. Ölçekte 14 adet soru bulunmaktadır. Sorulardan 7 tanesi anksiteyi, 7 tanesi depresyonu değerlendirmektedir. Ölçekte anksiyete alt ölçeğinin kesme noktası 10, depresyon alt ölçeğinin kesme noktası ise 7'dir. Bu çalışmada anksiyete ve depresyon ortalamalar şeklinde değerlendirildi. Veriler SPSS paket programı kullanılarak değerlendirildi. Yaş ortalaması 51.3 olan 192 kanserli hastanın %55.7'si kadın, %86.5'i evli, %40.6'sı ilkokul mezunu, %60'ı çalışmamaktadır. Hastaların %30.2'sinde meme kanseri bulunmakta, %31.2'si radyoterapi almakta, %79.2'si tedavi nedeniyle yan etki yaşamaktadır. Hastaların anksiyete puan ortalamaları 9.93+4.1 olup depresyon puan ortalamaları 10.6+4.2'dir. Sonuç olarak hastaların depresyon düzeyleri anksiyete düzeylerine göre daha fazladır. Bu sonuçlar doğrultusunda hastaların depresyonlarını azaltmaya yönelik girişimlerde bulunulması ve hastaların başta psikolojik açıdan olmak üzere desteklenmesi önerilmektedir.

Anahtar Kelimeler: Kanser, Hasta, Anksiyete, Depresyon, Sağlık

ANXIETY AND DEPRESSION IN CANCER PATIENTS

ABSTRACT

The study was planned to determine the level of anxiety and depression in cancer patients. The study was conducted on patients aged 18 years and older who were admitted to a university hospital in Turkey and who agreed to participate in the study. The data were collected by the researchers with sociodemographic characteristics form, disease information form and Hospital Anxiety Depression Scale. This scale was developed to screen anxiety and depression in patients with somatic disease. There are 14 questions on the scale. Of the questions, 7 evaluate anxiety, 7 evaluate depression. On the scale, the anxiety subscale has a cut-off point of 10 and the depression subscale has a cut-off point of 7. In this study, anxiety and depression were evaluated as mean value. The data were evaluated using the SPSS package program. Among 246 cancer patients, mean age was 51.3 years, 55.7% were women, 86.5% were married, 40.6% were primary school graduates and 60% were not working. 30.2% of the patients had breast cancer, 31.2% had radiotherapy and 79.2% had side effects due to treatment. The mean anxiety score of the patients was 9.93+4.1 and the mean depression score was 10.6+4.2. As a result, depression levels of patients are higher than anxiety levels.

Keywords: Cancer, Patients, Anxiety, Depression, Health

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TİP II DİYABET ÜZERİNE *Taraxacum officinale* EKSTRAKTININ ANTİ-HİPERGLİSEMİK VE ANTİ-İNFLAMATUAR ETKİLERİ

ÖZ

Bu çalışmada *Taraxacum officinale*'nin tip II diyabet ve onun komplikasyonları üzerindeki etkilerini belirlemek amaçlanmıştır. Gruplar; normoglisemik kontrol (NK), ekstrakt (E), diyabetik kontrol (DK), diyabetik+ekstrakt (D+E) ve diyabetik+metformin (D+M)'den oluşuyordu. 7. günde tüm diyabetik gruplarda kan glikozu önemli şekilde yükseldi ($p<0.001$). 17. günde D+M grubunda ($p\leq0.001$), 27. ve 37. günlerdeyse hem D+M ($p<0.001$) hem de D+E ($p<0.05$, $p<0.01$) gruplarında önemli azalışlar belirlendi. DK grubunun karaciğer dokusunda artan tümör nekroz faktör-alfa (TNF-α) düzeyleri ($p<0.05$) D+E grubunda ($p<0.01$) önemli şekilde azalırken, D+M grubundaysa değişiklik gözlenmedi. Böbrek dokusunda önemlilik tespit edilmedi. İnsülin seviyesinin DK grubunda azaldığı ($p<0.001$) deneme gruplarındaysa değişmediği belirlendi. Pankreatik amilaz seviyelerinde gruplar arasında değişiklik gözlenmezken, glikolize hemoglobin (HbA1c) seviyesinin DK grubunda arttığı ($p<0.001$), D+E ($p<0.01$) ve D+M ($p<0.001$) gruplarındaysa önemli şekilde azaldığı belirlendi. İrisin seviyesinin DK grubunda azaldığı ($p<0.001$), D+E ve D+M gruplarındaysa önemli düzeyde yükseldiği gözlendi ($p<0.001$). Sonuç olarak *Taraxacum officinale*'nin kan glikozu, HbA1c ve proinflamatuar sitokin TNF-α düzeylerini azaltmak ayrıca irisin düzeylerini artırmak suretiyle diyabet ve onun komplikasyonları üzerinde etkili olabileceğini göstermektedir.

Anahtar Kelimeler: Tip II diyabet, İnsülin, *Taraxacum officinale*, TNF-α, İrisin

ANTI-HYPERGLYCEMIC AND ANTI-INFLAMMATORY EFFECTS OF THE *Taraxacum officinale* EXTRACT ON TYPE II DIABETES

ABSTRACT

In this study, it was aimed to determine the effects of *Taraxacum officinale* on type II diabetes and its complications. Groups were consisting of normoglycemic control (NK), extract (E), diabetic control (DK), diabetic + extract (D+E) and diabetic + metformin (D+M). On day 7, blood glucose levels significantly increased in all diabetic groups ($p<0.001$). Significant decreases were noted at day 17 in the D+M group ($p\leq 0.001$) while at days of 27 and 37 both D+M ($p<0.001$) and D+E ($p<0.05$, $p<0.01$). Increased tumor necrosis factor-alpha (TNF-α) levels ($p<0.05$) in the liver tissue of the DK group significantly decreased in the D+E group ($p<0.01$) while no change was observed in the D+M group. No significance was found in kidney tissue. Insulin level decreased in the DK group ($p<0.001$), but not change in the experimental groups. No change was observed among groups in pancreatic amylase levels. It was determined that the level of glycosylated hemoglobin (HbA1c) increased in the DK group ($p<0.001$) however significantly decreased in the D+E ($p<0.01$) and D+M ($p<0.001$) groups. It was observed that decreasing level of irisin ($p<0.001$) in DK group increased significantly in D+E and D+M groups ($p<0.001$). As a result, Taraxacum officinale's lowering effect of blood glucose, HbA1c and proinflammatory cytokine TNF-α levels as well as it also shows that by increasing the levels of irisin, it may be affect diabetes and its complications.

Keywords: Type II diabetes, Insulin, *Taraxacum officinale*, TNF-α, HbA1c, Irisin

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MEME KANSERLİ HASTALARDA UMUTSUZLUK DÜZEYİ İLE TAMAMLAYICI VE ALTERNATİF TEDAVİ KULLANIMI ARASINDAKİ İLİŞKİ

ÖZ

Meme kanseri tedavisinde temel olarak cerrahi, kemoterapi, radyoterapi ve hormon tedavi yöntemleri kullanılmaktadır. Araştırma projesi, meme kanserli kadınların Tamamlayıcı ve Alternatif Tedavi (TAT) yöntemleri arayışları, kullanma durumları ve nedenlerinin incelenmesi amacı ile uygulanmıştır. Araştırma tanımlayıcı ve kesitsel olarak gerçekleştirilmiştir. Örnek seçimi yapılmamış olup evrenin tamamına ulaşmak hedeflenmiştir. Araştırma evrenini, Ege Üniversitesi Tıp Fakültesi Dahili Tıp Bilimleri Bölümü Radyoloji Anabilim Dalı Polikliniği'ne mamografi çektirmek üzere başvuran 336 kadın oluşturmuştur. Veri toplama sürecinde çalışmaya katılmayı kabul eden meme kanseri tanılı 336 kadına ulaşılabilmiştir. Kadınların kullandıkları TAT uygulamaları incelendiğinde ilk sırada bitkisel tedavi yöntemlerinin olduğu saptanmıştır. TAT kullanan kadınların büyük çoğunluğu tedaviye yönelmelerinde en çok medyanın etkili olduğunu belirtmiştir. Araştırmada TAT kullanmayan kadınların Beck Umutsuzluk ölçeğinden aldıkları puan ortalaması 4.44±4.10 iken, TAT kullananlarda ise 5.45±5.18 olarak belirlenmiştir. İki grup arasında bulunan fark istatistiksel olarak anlamlı olarak saptanmıştır ($p<0.05$). Sonuç olarak, sağlık personelleri TAT uygulamaları konusunda yeterli bilimsel bilgi ve donanıma sahip olmalı, bireylerin sağlık öyküsünü alırken bu uygulamaları sorgulamalı, değerlendirme ve uygun danışmanlık verebilmeli, gerekli durumlarda uygun birime yönlendirebilmelidir.

Anahtar Kelimeler: Meme Kanseri, Tamamlayıcı ve Alternatif Tedavi Yöntemleri, Umutsuzluk Ölçeği, Geleneksel Uygulamalar, Kemoterapi

RELATIONSHIP BETWEEN DESPERATION LEVEL WITH COMPLEMENTARY AND ALTERNATIVE TREATMENTS USE IN THE BREAST CANCER PATIENTS

ABSTRACT

Chemotherapy, radiotherapy and hormonal therapy methods are basically used for the breast cancer treatment. The research project has been applied in search of women with breast cancer for Complemantary and Alternative Medicine(CAM),usage status and analysis of its reasons. The research has been carried out as descriptive and cross-sectional. It is aimed to reach the whole population but sampling hasn't been made. The women who have applied (336) to the Department of Radiology Polyclinic of Internal Medicine Department of Medicine Faculty at Ege University in order to get a mammography compose the population of the research. It has been determined that herbal remedy methods are in the first place when the CAM practices that the women use are analyzed. Most of the women having CAM state that the media has mostly been effective in aiming at the treatment. In our study, the average alternative untreated women Beck Hopelessness Scale score was found to be 04:44 ± 04:10. CAM area women Beck Hopelessness Scale scores were determined as the average of the 5:45 ± 5.18.The difference between the two groups were statistically significant($p<0.05$).As a result,medical staff should have adequate scientific knowledge and support about the CAM practices,they should interrogate these practices while they take health history of the individuals,they should properly evaluate and consult and they should direct to the proper department in necessary cases.

Keywords: Breast Cancer, Supplementary and Alternative Treatment Methods, Hopelessness Scale, Conventional Practices, Chemotherapy

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KADINLARIN GEBELİK DÖNEMİNDE İNTERNETİ KULLANMA SIKLIKLARININ VE NEDENLERİNİN DEĞERLENDİRİLMESİ

ÖZ

Bu çalışmanın amacı, kadınların gebelik döneminde interneti kullanma sıklıklarının ve nedenlerinin incelenmesidir. Tanımlayıcı planlanmış çalışmada örnek seçimi yapılmamış evrenin tamamına ulaşılmak hedeflenmiştir. Çalışma grubunu, İzmir İli Bayraklı İlçesi, 75.Yıl Muhtarlığı'na kayıtlı 134 gebe oluşturmuştur. Kadınların %58.2'si bir hafta içinde 21 saat ve üzeri internet kullandığını belirtirken, %39.6'sı hem bilgisayar hem de cep telefonuyla internete bağlandığını belirtmiştir. Gebelik düşünmeye başladıktan sonra sıklık sırasıyla; "bebeğin cinsiyeti, bebeğin anne karnındaki gelişimi, gebelikte cinsellik, gebelik oluşumu ve gebe kalmayı kolaylaştıran durumlar" anahtar kelimeleriyle internet taraması yapmışlardır. Kadınlar, yeterli bilgilerinin olmadığını düşünmeleri (%35.1) ve sağlık personeline ulaşmada güçlük çekme/bilgiye hızlı ulaşabilme (%29.9) nedeni ile internette araştırma yapma ihtiyacı duyduklarını belirtmişlerdir. Kadınların, gebelik süreci ile ilgili güvenilir internet kaynaklarına ilişkin bilgi sahibi olması; gebelik/doğum/lohusalık dönemlerinde anne/yenidoğan sağlık risklerinin azaltılabilmesi açısından önemlidir. Birinci basamak sağlık hizmet sunumunda doğru/güvenilir bilgilerin aktarılmasında, birinci basamak sağlık çalışanlarına özellikle de ebelere önemli sorumluluklar düşmekte olup etkili internet kullanımı ve buna yönelik danışmalık hizmetlerine ağırlık verilmesi gerekmektedir.

Anahtar Kelimeler: Gebelik, İnternet, Sağlık, Lohusalık, Anne

EVALUATION OF FREQUENCY AND CAUSES OF INTERNET USAGE IN PREGNANCY OF WOMEN

ABSTRACT

The purpose of this study is to examine the frequency and causes of using the internet during pregnancy of women. The study was planned as a descriptive and it was aimed to reach the whole of the universe without sample selection. The working group formed 134 pregnant women registered in İzmir City Bayrakl District, 75.Yıl Muhtarlığı. 58.2% of the women stated that they use the internet over 21 hours in a week and 39.6% stated that they connected to the internet via both computer and mobile phone. After starting to think about pregnancy; they conducted internet searches with the keywords "baby's gender baby's growth in mother's womb, sexuality in pregnancy, pregnancy formation and situations that facilitate". Women indicated that they felt did not have enough information (35.1%) and that they needed to do research on the internet because of the difficulty in reaching healthcare personnel/fast access to information (29.9%). Women have information about reliable internet resources related to the pregnancy process; it is important to reduce maternal/newborn health risks during pregnancy/ birth/puerperium periods. While providing primary health care services, important responsibilities are particularly important for transferring accurate/reliable information, especially for midwives. For this reason, effective internet usage and consultancy services should be emphasized.

Keywords: Pregnancy, Internet, Health, Parents, Mother

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NEOVAJİNA OPERASYONLARI VE HEMŞİRELİK BAKIMI

ÖZ

Vaginal agenezi 4000-10000 doğumda bir görülen ve kişinin sosyal hayatını derinden etkileyen tedavisi zor bir durumdur. Kendisini öncelikle adölesan dönemde amenore şikayeti sonrasında koitus problemleri ile gösteren tablo tedavi edilmediği takdirde kişilik problemlerine, vücut imajında bozulmaya ve gebe kalamamaya bağlı düşük özgüvene yol açabilir. Konjenital vajen yokluğunun tedavisinde cerrahi ve cerrahi olmayan yöntemler kullanılmaktadır. Vaginanın sürekli vaginal dilatasyonu olan Frank Metodu'nda hastanın motivasyonu en önemli faktördür. Operatif tekniklere bakıldığında ise McIndoe ve Vecchietti prosedürü başta olmak üzere birçok farklı tekniğin kullanıldığı görülmektedir. Bu operasyonlar ülkemizde kadın hastalıkları ve doğum uzmanları tarafından daha sık uygulanır hale gelmiştir. Operasyon gerek preoperatif dönemdeki psikososyal ve fiziksel hazırlık süreci gerekse postoperatif dönemde diğer jinekolojik operasyonlara göre daha uzun hospitalizasyon süresi gerektirmesiyle hemşirelik bakımı bağlamında da ele alınması gereken bir konudur. Yapılan literatür incelemesinde neovajina operasyonlarının pre-post operatif hemşirelik bakımı ile ilgili yayın bulunmadığı görülmüştür. Bu bağlamda bildiride neovajina operasyonlarının hemşirelik bakım süreci hakkında kapsamlı bilgi verilmesi amaçlanmıştır.

Anahtar Kelimeler: Vajinal Agenezi, Neovajina, Hemşirelik Bakımı, Frank Metodu, Sağlık

NEOVAJINA OPERATIONS AND NURSING CARE

ABSTRACT

Vaginal agenesis a severe condition that affects one's social life and is seen in 4000-10000 births is a difficult situation. First, amenorrhea occurs with coitus problems and if not treated it can lead to low self-esteem due to personality problems, deterioration of body image and unable to conceive. Surgery and non-surgical methods are used in the treatment of congenital vaginal absence. The patient's motivation is the most important factor in the Frank Method, the continuous vaginal dilatation of the vagina. When operative techniques are used, it is seen that many different techniques are used, especially the McIndoe and Vecchietti procedure. These operations have become more frequent in our country by gynecologists and obstetricians. The operation requires psychosocial and physical preparation in the preoperative period and longer hospitalization period than the other gynecologic operations in the postoperative period, so it should be considered in terms of nursing care. In the literature review, it was seen that neovagina operations were not related to pre-post operative nursing care. In this context, it is aimed to give comprehensive information about the nursing care process of neovagina operations.

Keywords: Vaginal Agenesis, Neovagina, Nursing Care, Frank Method, Health

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THE INCIDENCE AND SIGNIFICANCE OF INCIDENTAL PROSTATE CARCINOMA IN TRANSURETHRAL RESECTION (TUR-P) MATERIALS BETWEEN 2014 AND 2016 AT OUR CENTER

ABSTRACT

The incidence and significance of incidental prostate carcinoma in transurethral resection (TUR-P) materials between 2014 and 2016 at our center. Like all organs, prostate has benign and malign diseases. Among benign diseases, benign prostatic hyperplasia (BPH) and among malignancies adenocarcinoma are the most common ones. One of the methods that is used to treat BPH is transurethral resection (TUR-P). In our study, we investigated incidental tumor rates observed in patients that have TUR-P due to BPH. We included 120 patients who underwent TUR-P and whose operation materials were examined in pathology department between 2014-2016 in our center. Benign diseases were noted in 117 (97.5%) of 120 patients, whereas malignant tumors were detected in 3 (2.5%) cases. In TUR-P operations performed to relieve symptoms in BPH, adenocarcinoma is reported in the literature at rates ranging from 4% to 15%. We suggest that patients with symptoms of prostatism should be carefully investigated, detailed histopathologic evaluation should be done in terms of incidental tumors and clinical pathology communication should be at maximum level.

Keywords: Prostate, Carcinoma, Adenocarcinoma, Incidental, TUR-P

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FREQUENCY OF HYDATIDIFORM MOLE IN CURETTAGE MATERIAL BETWEEN 2014 AND 2016 IN A UNIVERSITY HOSPITAL

ABSTRACT

Gestational trophoblastic diseases show a spectrum from benign and easily treatable conditions to malignancy. The disease that remains in the most benign part of this distribution is the hydatiform mole known as "grape gestation" among the population. There are two types of mole hydatiform: partial and complete, and they are confronted at different rates around the world. In our study, we aimed to determine the incidence of hydatidiform mole at our hospital. 277 cases were included in our study that came to our department of pathology which consists of abortion and pregnancy termination materials between 2014-2016. Histopathologic examination revealed mole hydatidiform in 19 of 277 cases (6.9%). Despite the need for genetic analysis for definitive typing, 5.8% of cases were found to be partial mole and 1.1% complete according to histopathological findings. The etiologic factors of molar pregnancies have not been fully elucidated. We think that frequency studies can shed light on the future studies to determine these etiological factors.

Keywords: Mol Hydatiform, Partial, Complete,
Gestational Trophoblastic Disease, Pregnancy

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RATLARDA 5-Fluorouracil İLE İNDÜKLENEN HEPATOTOKSİSİTE VE NEFROTOKSİSİTE ÜZERİNE NARİNGENİN KORUYUCU ETKİLERİ

ÖZ

Çalışmamızda 5-FU ile indüklenen hepatotoksisite-nefrotoksisite üzerine naringenin koruyucu etkilerinin araştırılması amaçlanmıştır. Çalışmamızda 220-250g Sprague-Dawley rat kullanıldı. Her gurupta 10 rat olacak şekilde 3 guruba ayrıldı. GurupI'e 14 gün boyunca 1ml intra gastrik (i.g.) distile su verildi. GurupII'ye 14 gün boyunca 1ml distile su verildi. Aynı guruba uygulamanın 9.günü i.p. 20mg/kg 5 gün 5-FU verildi. GurupIII'e 14 gün boyunca i.p. 100mg/kg dozunda Naringenin verildi. Aynı guruba 9.günü i.p. 20mg/kg 5gün boyunca 5-FU verildi. 15.günde ratlar dekapite edilerek kan, karaciğer ve böbrek dokuları alındı. Serum creatin, BUN, AST, ALT, ALP, LDH seviyelerinin ve karaciğer-böbrek dokusu sitokin(IL-1α, TNF-α, IL-6) seviyesinin GurupI'e kıyasla GrupII'de önemli ölçüde arttığı belirlenirken ($p<0.05$), bu değerlerin GurupII'de GurupIII'e kıyasla azaldığı belirlenmiştir ($p<0.05$). Sonuç olarak Naringenin 5-FU kaynaklı karaciğer-böbrek hasarını koruyucu etkisinin olduğu belirlenmiştir.

Anahtar Kelimeler: 5-FU, Rat, Naringenin, Böbrek, Karaciğer

PROTECTIVE EFFECTS OF NARINGENIN AGAINST 5-Fu-induced HEPATOTOXICITY AND NEPHROTOXICITY IN RATS

ABSTRACT

In this study we aimed to investigate the protective effects of naringen on 5-FU-induced hepatotoxicity and nephrotoxicity. 220-250g male Sprague-Dawley rats were used in our study. 3 groups were assigned as 10 rats in each group. Group I received 1ml intragatric (i.g) distilled water for 14 days. Group II received 1ml distilled water for 14 days. Same group practice day 9th i.p. 20mg/kg was given 5-FU for 5 days. GroupIII received naringenin at an i.p. 100mg/kg dose for 14 days. This group is the 9th day of the application of Naringen i.p. 20mg/kg was given 5-FU for 5 days. On the 15th day, rats were decapitated and blood, liver and kidney tissues were taken. When the kidney and liver tissues were assessed for oxidative stress, SOD and GSH levels in Gruop II were significantly reduced compared to the other groups ($p<0.05$). TBARS level was significantly decreased in GroupII compared to the other groups ($p<0.05$). It was determined that serum creatin, BUN, AST, ALT, ALP, LDH levels and liver-kidney tissue cytokine levels (IL-1α, TNF-α, IL-6) increased significantly in GroupII compared to Group I($p<0.05$), These values are similar to GroupI in GroupIII. When the liver tissues are examined histopathologically; The kidney and liver tissues of GroupI were found to be in normal structure. In GroupII, hydropic degeneration and coagulation necrosis were observed in hepatocytes in the periascinal region, and mononuclear cell infiltration in the portal region was determined. As a result, it was determined that naringenin is protective effect of 5-FU liver-kidney damage.

Keywords: 5-FU, Rat, Naringenin, Kidney, Liver

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DOĞUMHANEDE ÇALIŞAN EBE VE HEMŞİRELERDE GÖRÜLEN İŞ KAZALARI-MESLEK HASTALIKLARI VE ETKİLEYEN NEDENLER

ÖZ

Sağlık sektöründeki meslekler iş kazası açısından en riskli gruptadır. Türkiye'deki İş Sağlığı ve Güvenliği kanuna göre hastaneler, çok tehlikeli sınıfta yer almaktadır. Hastanelerdeki tehlike ve riskler fiziksel, kimyasal, biyolojik, ergonomik ve psikososyal olarak sınıflandırılmaktadır. Hastane ortamı nedeni ile sağlık çalışanları benzer iş kazası risklerine maruz kalır. Bununla birlikte mesleğe ve çalışılan biriminin hizmet özeliği ve çalışma koşullarına göre iş kazaları, riskler ve meslek hastalıkları farklılaşmaktadır. Bu derleme çalışmasında doğumhanelerde çalışan ebe ve hemşirelerin maruz kaldığı iş kazaları ve meslek hastalıkları tanımlanmıştır. Ayrıca kaza ve hastalık nedenleri, çalışanların kişisel ve mesleki özellikleri ve çalışma koşulları açısından incelenmiştir. Sağlık personeli, doğumhanede ıslak zemin, kayma, düşme, yanlış postürde çalışma, doğum veya epizyotomi tamiri sırasında ergonomik sorunlar yaşamaktadır. Çalışanlar arasında boyun, bel ve el bilek ağrısı gibi kas iskelet hastalıkları, iş stresi, panik atak gibi psikososyal sorunlar görülmektedir. Doğum sırasında ve plasentayı çıkarırken kan ve amniyotik sıvı teması nedeni ile biyolojik riskler, kesici ve delici alet yaralanmaları (kan alma, epizyotomi, enjeksiyon vb.) da sık görülmektedir.
planlama, yazma ve yayınlama konusunda teşvik edilmeleri önerilmektedir.

Anahtar Kelimeler: Doğumhane, İş Kazası, Meslek Hastalığı, Ebe, Hemşire

OCCUPATIONAL DISEASE, ACCIDENTS AND RELATED FACTORS OF MIDWIFERY AND NURSE IN BIRTH UNIT

ABSTRACT

One of the most important occupational risk groups is health workers and they face some accidents and diseases. In Turkey, according to the "Occupational Health and Safety Law –Number 6331", hospitals and health centers are categorized as a most dangerous workplace. Hazard in that places are classified as a physical, chemical, biological and psycho-social risks, and ergonomic factors. Generally, many of the employees in the hospital might be affected from same risks. However, some department or units have contained different risk factors. In the study, occupational hazards in the workplace are defined for midwifery and nurse. In addition, cause of disease and accidents were examined in terms of personal characteristics and working condition of the employee. For instance, some important problems in the birth unit were slip or fall on the wet floor, working on the wrong posture, ergonomic discomfort during the episiotomy. Among workers, it could be indicated that, main risk factors were musculoskeletal system diseases such as neck, waist, back and ankle pains, with stress and panic attack during delivery. Besides, when delivery of baby and placenta, biological factors such as blood and amniotic fluid contaminations that lead to HIV and hepatitis, were influenced to health workers, and percutaneous injuries and chemicals were also other problems in the workplace.

Keywords: Birth Ünit, Occupational Accident, Occupational Disease, Midwifery, Nurse

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RATLARDA OLUŞTURULAN OVER ISKEMI/REPERFÜZYON HASARINDA NAR ÇEKİRDEĞİ YAĞININ TERAPOTİK ETKİLERİ

ÖZ

Çalışmamızın amacı ratlarda over iskemi reperfüzyonuna bağlı gelişen over hasarında güçlü antioksidan ve antiinflamatuar olan nar çekirdeği yağının terapotik etkilerini belirlemek ve Pomegranata ekstresinin muhtemel etkilerini fizyolojik ve moleküler olarak göstermektir. 56 adet albino wistar cinsi dişi rat 7 eşit gruba ayrılmıştır. Grup 1; Sham Operasyonu, Grup 2; İskemi, Grup 3; İskemi+Reperfüzyon, Grup 4; İskemi + Pomegranate 0.32mg/ml (İ.P.), Grup 5; İskemi+Pomegranate 0.64mg/ml, Grup 6; İskemi+Pomegranate 0.32mg/ml+ reperfüzyon, Grup 7; İskemi+Pomegranate 0.64mg/ml+reperfüzyon. 3 saat iskemi ve 3 saat reperfüzyon yapıladıktan sonra çalışma sonlandırıldı. İskemi ve reperfüzyon gruplarında artan NADPH oxidase aktivitesi ile birlikte MDA ve TNF-a seviyeleri de anlamlı derecede artarken, SOD aktivitesi ve GSH seviyeleri azalmıştır. Düşük doz nar çekirdeği yağı uygulaması hem iskemi hem de iskemi ve reperfüzyon gruplarında oksidatif stresi ve NADPH oksidazın aktivitesini anlamlı derecede azaltmıştır. Aynı zamanda pomegranate yağ ekstresi düşük dozda artan TNF-a seviyelerini azaltırken antioksidan aktiviteyide anlamlı şekilde artırmıştır. Sonuç olarak güçlü antioksidan ve antiinflamatuar aktiviteye sahip olan nar çekirdeği yağı overlerde meydana gelen iskemi-reperfüzyona bağlı hasarın tedavisinde önemli bir terapotik etkinlik ortaya koymuştur.

Anahtar Kelimeler: Nar, Over, Iskemi/Reperfüzyon, Rat, Reperfüzyon

POTENTIAL THERAPEUTIC EFFECT OF POMEGRANATE SEED OIL ON OVARIAN ISCHEMIA/REPERFUSION INJURY IN RATS

ABSTRACT

The aim of this study is to determine the therapeutic effects of pomegranate seed oil, which is a powerful antioxidant and anti-inflammatory agent in over-injury caused by ovarian-ischemia and reperfusion in rats to indicate as physiologically and molecularly of the possible effects of Pomegranate extract.56 albino wistar female rats were divided into 7 equal groups. Group 1; Sham Operation, Group 2; Ischemia, Group 3; Ischemia + Reperfusion, Group 4; Ischemia + Pomegranate 0.32mg/ml (IP), Group 5; Ischemia+Pomegranate 0.64mg/ml, Group 6; Ischemia+Pomegranate 0.32mg/ml+reperfusion, Group 7; Ischemia+Pomegranate 0.64mg/ml+reperfusion. After 3 hours of ischemia and 3 hours of reperfusion, the study was terminated. While NADPH oxidase activity, MDA and TNF-a levels were significantly increased, SOD activity and GSH levels were reduced in ischemia and reperfusion groups. Low dose pomegranate oil application reduced significantly oxidative stress and NADPH oxidase activity in both ischemic and ischemic/reperfusion groups. At the same time, low-dose pomegranate oil extract reduced TNF-a levels and were significantly antioxidant activity. As a result, pomegranate oil, strong antioxidant and anti-inflammatory activity, demonstrated an important therapeutic effect in the treatment of ovarian-injury caused by ischemia-reperfusion.

Keywords: Pomegranate, Ovarian, Ischemia/Reperfusion, Rats, Reperfusion

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RATLARDA Parasetamolle OLUŞTURULAN KARACİĞER TOKSİSİTESİNDE NAR ÇEKİRDEĞİ YAĞININ TERAPOTİK ETKİLERİ

ÖZ

Çalışmamızda güçlü antioksidan ve antiinflamatuar etkinliğe sahip olan nar çekirdeği yağının parasetamol ile indüklenen karaciğer toksisitesi üzerine hem protektif hem de terapötik etkilerini biyokimyasal, moleküler ve patolojik olarak ortaya koymayı amaçladık. Çalışmamızda 64 adet albino wistar rat 24 saat boyunca aç bırakıldıktan sonra, 8 gruba ayrılmıştır. Grup 1:Sağlıklı, Grup 2:2g/kg parasetamol (2a:24.saat ve 2b:48.saat)(oral), Grup 3:140mg/kg NAC(oral) + parasetamol, Grup 4:0.32mg/ml Pomegranate(İ.P) + parasetamol, Grup 5:0.64mg/ml Pomegranate + parasetamol, Grup6:parasetamol + 0.32mg/ml Pomegranate, Grup 7:parasetamol + 0.64mg/ml Pomegranate, Grup 8:parasetamol + 140mg/kg NAC. Çalışma parasetamol verilişinden sonra 24. ve 48. saatlerde sonlandırılmıştır. Serum AST ve ALT seviyeleri kontrol grubuna göre parasetamol uygulamasının 24. saat ve 48. saatinde toksisiteye bağlı olarak anlamlı olarak artmıştır. Yine karaciğerde MDA, CYP3A4 ve TNF-a seviyesi artarken, SOD ve GSH seviyeleri anlamlı şekilde azalmıştır. Nar çekirdeği yağının özellikle düşük dozda uygulanmasıyla ALT ve AST seviyeleri ile birlikte artmış olan MDA ve TNF-a seviyeleri anlamlı şekilde azalmış ve antioksidan seviyeleri de anlamlı şekilde düzelmiştir. Sonuç olarak, nar çekirdeği yağı hem antioksidan sistemi güçlendirerek hem de inflamasyonu önleyerek özellikle de intihara meyilli kişilerin aşırı doz parasetamol alımına bağlı gelişen karaciğer toksisitesinde gelecekte potansiyel bir terapotik ajan olarak kullanılabilir.

Anahtar Kelimeler: Rat, Parasetamol, Toksisite, Karaciğer, Nar

THERAPEUTIC EFFECTS OF POMEGRANATE SEED OIL IN Paracetamol-induced LIVER TOXICITY IN RATS

ABSTRACT

We aimed to reveal both protective and therapeutic effects of pomegranate seed oil, which has strong antioxidant and anti-inflammatory activity on paracetamol-induced hepatic toxicity via biochemically, molecularly and pathologically in our study. In our study, 64 albino wistar rats were fasted for 24 hours and then divided into 8 equal groups. Group 1: Healthy, Group 2:2g/kg of paracetamol (2a:24 hours 2b:48 hours) (oral), Group 3:140mg/kg of NAC (oral) + paracetamol, Group 4:0.32mg/ml Pomegranate(i.p) + paracetamol, Group 5:0.64mg/ml Pomegranate + paracetamol, Group 6:paracetamol + 0.32mg/ml Pomegranate, Group 7:paracetamol + 0.64mg/ml Pomegranate, Group 8: paracetamol + 140mg/kg NAC. The study was terminated at 24 and 48 hours after paracetamol administration. Serum AST and ALT levels were significantly increased at 24th and 48th hours of paracetamol administration according to toxicity. While MDA, CYP3A4 and TNF-α levels also increased in the liver, SOD and GSH levels decreased significantly. Increased ALT, AST levels with MDA and TNF-a levels significantly decreased by pomegranate oil (low doses) application and antioxidant levels were also significantly improved. In conclusion, pomegranate seed oil may be used as a potential therapeutic agent in the future by strengthening the antioxidant system and preventing inflammation, especially liver toxicity due to overdose of paracetamol in suicide-battered individuals.

Keywords: Rat, Paracetamol, Toxicity, Liver, Pomegranate

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EBELERİN SERVİKS KANSERİ KONUSUNDAKİ AKADEMİK FAALİYETLERİ

ÖZ

Ebelerin serviks kanseri konusunda yaptıkları akademik çalışmaları irdelemek ve bu alandaki ihtiyacı belirlemek amacıyla yapılan çalışmada, son beş yılda (2012-2016) yayınlanan literatür incelenmiştir. Çalışma; tanımlayıcı, retrospektif ve web tabanlı bir araştırmadır. Veriler; 15 Nisan-15 Mayıs 2017 tarihleri arasında toplanmıştır. İncelenen yayınların tümünün (%100.0) araştırma makalesi ve %75.0'inin "SCI dışı uluslararası hakemli tıp dergilerinde" yayınlandığı belirlenmiştir. Makalelerin; %37.5 oranında doktorlar ve multidisipliner ekip olarak,%62.5 oranında 2. ve/veya 3. basamak sağlık kuruluşunda, %75.0 oranında 15-49 yaş arası kadınlarla yapılmış olduğu ve %62.5 oranında kadınlara serviks kanseri konusunda eğitim verildiği görülmüştür. Ebeler görev tanımları kapsamında serviks kanseri konusunda kadınlara eğitim, danışmanlık vermektedir. Fakat ebelerin verdikleri hizmetleri bilimsel bir çalışmaya dönüştürme ve yayınlama oranları oldukça azdır. Mesleklerin gelişmesinde mesleki bilgi yükünün artması, literatürün çoğalması oldukça önemlidir. Bu çalışma sonuçlarına göre, ebelerin verdikleri hizmetleri bilimsel makale olarak planlama, yazma ve yayınlama konusunda teşvik edilmeleri önerilmektedir.

Anahtar Kelimeler: Serviks Kanseri, Ebelik, Ebelik Öğrencileri, Mesleki Bilgi, Bilimsel Çalışma

AKADEMIC STUDIES OF MIDWIVES ON CERVICAL CANCER

ABSTRACT

In the research, which is made with the purpose of inspect the academic studies that the midwives had carried on cervical cancer and specifying the need of research on the area, the published medical literature of last five years (2012-2016) is analyzed. The Research is; a descriptive, retrospective and web based study. The Data; is collected between the dates of 15 April 2017 and 15 May 2017. It is observed that all of the (100.0%) analyzed publications are research articles and 75.0% of them are published on "out of SCI international medical journals." It is observed that, of the articles; 37.5% is written by doctors and multidisciplinary teams, 62.5% is written at a 2nd and/or 3rd level medical institution, 75.0% is made with women between the age of 15 and 49, and with the rate of 62.5% women are given education in cervical cancer. Midwives, as part of their job description, gives the women education and guidance in cervical cancer. But the rate of midwives' transforming the services they provide into a scientific research and publishing it is rather low. For the development of professions, cumulating of professional knowledge and enlargement of literature is important. According to the results of the research, It is advised to get the midwives encouraged on planning, writing and publishing their services as scientific articles.

Keywords: Midwifery Students, Midwifery, Cervix Cancer, Professional Knowledge, Scientific Research

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GEBELİKTE ASTIM VE EBELİK BAKIMI

ÖZ

Solunum yollarının kronik inflamatuar bir hastalığı olan astımın gebelerde görülme sıklığı %3-12'dir. Bu derleme çalışmasında astım ve gebelik arasındaki ilişki, gebelikte astımın anne ve çocuk sağlığına etkileri tanımlanmış, daha sonra gebelik öncesi, gebelik, doğum ve doğum sonrası dönemde ebelik bakımının kapsamı sunulmuştur. Gebelik sırasındaki hormanal ve mekanik değişiklikler rezidüel kapasite, rezidüel volumde azalmaya, inspiratuar kapasite de artışa neden olur. Astım ilk kez gebelikte ortaya çıkabileceği gibi daha önce var olan astım, gebelikte kötüleşebilir. Bu nedenle astım ve gebelik, astımın gebeliğe etkisi ve gebeliğin astım üzerine etkisi olarak iki yönlü ele alınır. Perinatal mortalite, hiperemezis gravidarum, hipertansiyon/preeklemsi, preterm doğum, doğumda hipoksi, düşük doğum ağırlığı, intrauterin gelişme geriliği, malformasyon gibi astımın gebelik üzerine pek çok etkisi gösterilmiştir. İngiliz Toraks Derneği, astımlı gebelerin %11-18'inin en az bir kez akut astım nedenli acile başvurduğunu, %62'sinde hastaneye yatış olduğunu bildirilmiştir. Gebelik, doğum ve doğum sonrası dönemde uygun tedavi, gebenin tedaviye uyumu ve nitelikli bir bakım ile hastalık kontrol altında tutularak potansiyel morbitide riskleri önlenebilir.

Anahtar Kelimeler: Astım, Gebelik, Riskler, Ebelik, Bakım,

ASTHMA IN PREGNANCY AND MIDWIFERY CARE

ABSTRACT

Incidence of asthma which is a chronic inflammatory disease of respiratory airways is 3-12% in pregnant women. The present compiled study defined the relationship between pregnancy and asthma and its influences on health of mother and child and later presented the scope of midwifery care during preconception, pregnancy, delivery and pre and post-delivery processes. Hormonal and mechanical changes during pregnancy cause residual capacity and residual volume to decrease and result in inspiratory capacity increasing. Asthma could emerge for the first time in pregnancy or already present asthma could worsen as well. Therefore, asthma and pregnancy are considered two aspects such as influence of asthma on pregnancy and vice versa. A variety of influences of asthma on pregnancy have been found including perinatal mortality, hyperemia, gravidae, hypertension/preeclampsia, preterm delivery, hypoxia in labor, low neonatal weight, regression in intrauterine development and malformation. British Thorax Society reported that 11-18% and 62% of asthmatic pregnant women resorted to emergency room due to acute asthma for the first time and were hospitalized, respectively. Potential risks of morbidity could be prevented by controlling the disease by means of available management, adjustment of the pregnant to therapy and quality care.

Keywords: Asthma, Pregnancy, Risks, Midwifery, Care

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SAFETY, HEALTH AND EMPLOYEE IN AQUACULTURE, TURKEY

ABSTRACT

Occupational Health and Safety (OHS) is protecting health and safety of people at work or who may be affected by work. Whether a person is a volunteer, a paid worker, a work experience student or a contractor, they have a right to have their health and safety protected when they are carrying out work. OHS law has been announced (law principle 6331) in 2012 according to International Labour Organisation (law principle 155 and 161), and World Health Organisation. Aquaculture is defined as establishment of man-made enclosures to raise aquatic life forms, such as shellfish, fish, and sea weeds, for human consumption purposes. The hazard sources in aquaculture are affected to the workers such as physical, chemical, biological and physiological risk factors, aquatic environment, ergonomic risks, job rotation, hygiene, electricity, machines, pressure vessels, welding process, hand tools, and personal protective equipment. In the research, it should be give some information about hazardous risk factors, accidents, and protection techniques in aquaculture, Turkey.

Keywords: Aquaculture, Employee, Hazardous Risk, Safety, Health

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IMMUNOHISTOCHEMICAL AND ELECTRON MICROSCOPIC ANALYSIS OF THE NORMOZOOSPERMIC INFERTILE PATIENTS'SPERMS OBTAINED BY DIFFERENT SELECTION METHODS

ABSTRACT

In normozoospermic infertile patients, we aimed to investigate immunohistochemical and electron microscopic examination of sperm obtained by swim up, density gradient and microfluidic chip methods as well as to determine the ideal method. Semen parameters of 20 normozoospermic infertile patients were evaluated. Aniline was used to identify chromatin condensation defects and TUNEL staining was used for sperm DNA fragmentation. ROS levels were determined by flow cytometry and fine structure evaluation by electron microscopy. Sperm chromatin condensation defect and SDF were found to be significantly lower in the microfluidic chip method. In ROS analysis, the number of sperm stained with DCFH was calculated to be the lowest in the microfluidic chip method. When the methods were examined by electron microscopy, it was seen that granular chromatin and apoptosis decreased with the selection methods. This study shows that sperm obtained by microfluidic chip method may be more effective at insemination treatment.

Keywords: Sperm Selection Methods, TUNEL, ROS, Electron Microscopy, Microfluidic Chip

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ZİHİNSEL YETERSİZLİĞİ OLAN BİREYLERİN DİNLEDİKLERİNİ ANLAMA DÜZEYLERİ ÜZERİNDE GELENEKSEL DİNLEME VE DİJİTAL HİKAYE KULLANIMININ ETKİLİLİK VE VERİMLİLİKLERİNİN KARŞILAŞTIRILMASI

ÖZ

Bu araştırmanın amacı; zihinsel yetersizliği olan bireylerin dinlediğini anlama becerisi üzerinde geleneksel dinleme ve dijital hikaye kullanımının etkililiği ve verimliliğini karşılaştırmalı olarak incelemektir. Araştırmada tek denekli araştırma yöntemlerinden dönüşümlü uygulamalar modeli kullanılmıştır. Araştırmaya yaşları yedi ile sekiz arasında değişen ikisi kız biri erkek toplan üç öğrenci katılmıştır. Araştırmanın bağımlı değişkeni dinlediğini anlamaya yönelik soruları doğru cevaplama düzeyidir. Araştırmanın bağımsız değişkenleri ise, geleneksel dinleme ile dijital hikaye uygulanmasıdır. Araştırmada başlama düzeyi, öğretim, öğretim sonu değerlendirme, genelleme ve izleme oturumları yer almıştır. Araştırma sonucunda katılımcıların dinlediğini anlamaya yönelik doğru cevap düzeylerinin dijital hikaye kullanıldığında daha yüksek olduğu ve dijital hikaye kullanımının daha verimli olduğu tespit edilmiştir.

Anahtar Kelimeler: Zihinsel Yetersizlik, Zihinsel Yetersizliği Olan Birey, Dinleme, Anlama, Dijital Hikaye

COMPARISON OF THE EFFECTIVENESS AND PRODUCTIVITY OF THE USE OF DIGITAL STORIES AND CONVENTIONAL LISTENING IN LISTENING COMPREHENSION ON INDIVIDUALS WITH MENTAL DEFICIENCIES

ABSTRACT

Aim of this study is to conduct a comparative analysis of the effectiveness and productivity of the use of digital stories and conventional listening in listening comprehension, on individuals with mental deficiencies. In the research, alternate application model has been used as a single subject research model. A total of three children participated in the study between the ages of seven and eight; two of them being female and one of them being male. The dependent variable of the study is the level of correct answering to the questions on listening comprehension. The independent variable of the study is the application of conventional listening and digital stories. The research consists of start level, teaching, and evaluation upon teaching, generalization and monitoring sessions. The research reached the conclusion that the participants reveal higher number of correct answers to the questions on listening comprehension when digital stories are applied; and that use of digital stories increases the productivity.

Keywords: Intellectual Disabilities, Individual With Intellectual Disabilities, Listen, Comprehension, Digital Story

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ÖĞRETMEN ADAYLARININ SAHİP OLDUĞU ÖĞRETİM ANLAYIŞLARI ÜZERİNE BİR ANALİZ

ÖZ

Bu araştırmada öğretmen adaylarının öğretme anlayışlarının çeşitli değişkenlere göre farklılık gösterip göstermediğinin belirlenmesi amaçlanmıştır. Araştırma eğitim fakültelerinin son sınıfında öğrenim gören ve öğretmenlik uygulaması dersini almış olan öğretmen adayları ile yürütülmüştür. Araştırmaya 1021 erkek ve 990 kadın olmak üzere toplam 2011 öğretmen adayı katılmıştır. Veriler 5'li likert yapıdaki Öğretim Anlayışı Ölçeği ile toplanmıştır. Toplanan veriler betimsel analizin yanı sıra, Bağımsız Gruplar t Testi ve Tek Yönlü Varyans Analizi uygulanarak analiz edilmiştir. Analiz sonucunda kadın öğretmen adaylarının erkelere göre daha fazla öğrenci merkezli anlayışa sahip oldukları belirlenmiştir. Sayısal alanlarda öğrenim görenlerin sosyal bilimlerde öğrenim görenlere göre daha fazla öğretmen odaklı anlayışına sahip oldukları ve daha az öğrenci odaklı strateji benimsedikleri belirlenmiştir. Sonuçlar, öğretmen adaylarının öğrenci merkezli anlayışlarının geliştirilmesinde özellikle sayısal bilimler alanında öğrenci merkezli öğretime dayalı öğretim uygulamaları ve rol-model olunması gerektiğini göstermektedir.

Anahtar Kelimeler: Öğretmen Yetiştirme, Öğrenme, Öğretim Yaklaşımı, Öğretmen Merkezli Yaklaşım, Öğrenci Merkezli Yaklaşım

AN ANAYLSIS ON PRE-SERVICE TEACHERS' TEACHING CONCEPTION

ABSTRACT

The purpose of this study is to determine whether the pre-service teachers' teaching conceptions differ with regards to different variables. The participants of the study consisted of 1021 male and 990 female pre-service teachers who have taken the teaching internship class at the senior class in faculty of education. The data were gathered with five- point Likert type Teaching Conception Scale. Data were analyzed using Independent-Samples t Test and One Way Variance Analysis methods as well as descriptive analysis. According to the results of the study female pre-service teachers have more student centered teaching conception rather than male pre-service teachers. The pre-service teachers who are educated in mathematics and science departments have more teachers centered teaching conception and adopt less student centered strategy in comparison with the pre-service teachers who are educated in social sciences. The results of the study demonstrate that for developing student centered teaching conception of pre-service teachers, teacher educators should be role model and student centered instruction methods should be used especially in science and technology departments.

Keywords: Special Education, Students With Special Needs, Competency, Teacher, Teacher Competency

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YARATICILIK BİLGİ VE İNANÇLARI ÖLÇEĞİ: GEÇERLİK VE GÜVENİRLİK ANALİZİ

ÖZ

Bu araştırmada öğretmenlerin yaratıcı düşüncenin geliştirilmesine yönelik bilgi ve inançlarının belirlenmesine kullanılabilecek ölçek geliştirmek amaçlanmıştır. Öncelikle madde havuzu oluşturulmuş ve kapsam geçerliğinin belirlenmesine yönelik 15 uzmanın görüşü alınmıştır. Uzman görüşünden sonra 12 maddelik bilgi ve 10 maddelik inanç ölçekleri 5'li likert olarak düzenlenerek uygulamaya hazır hale getirilmiştir. Ölçeklerin Açımlayıcı Faktör Analizi (AFA) için 240 öğretmenden veriler toplanmıştır. Analiz sonucunda her iki ölçeğin de iki faktör yapısına sahip olduğu ve bilgi ölçeği varyansın %50.699, inanç ölçeğinin varyansın %56.093'ünü açıkladığı belirlenmiştir. Doğrulayıcı Faktör Analizi (DFA) için 300 öğretmene tekrar uygulama yapılmıştır. DFA sonucunda bilgi ölçeğinde 2, inanç ölçeğinde 1 modifikasyon yapılmıştır. Her iki ölçekte yapılan modifikasyon sonucunda mükemmel düzeyde uyum indeksleri elde edilmiştir. Ölçeklerin iç tutarlık bağlamında güvenirliklerinin yüksek ve maddelerin ayırt edici olduğu belirlenmiştir. Bilgi ve inanç ölçekleri arasında orta düzeyde pozitif korelasyon vardır. Sonuçlar, öğretmenlerin yaratıcılıkla ilgili bilgilerinin ve yaratıcı düşünme becerisinin geliştirilmesine ilişkin inançlarının belirlenmesinde kullanılabilir olduğunu göstermektedir.

Anahtar Kelimeler: Yaratıcılık, Yaratıcılık Bilgisi, Yaratıcılık İnancı, Öğretmen Yetiştirme, Yaratıcı Problem Çözme

CREATIVITY KNOWLEDGE AND BELIEFS SCALE: VALIDITY AND RELIABILITY

ABSTRACT

The aim of this research is to develop a scale which can be used to determine the knowledge and beliefs about the development of teachers' creative thinking. First, an item pool was created and views of 15 experts were taken to determine content validity of the item pool. After that, 12 items knowledge and 10 items beliefs scales were designed as 5 point Likert-type and prepared for application. For Exploratory Factor Analysis (EFA), data were collected from 240 teachers. The results showed that both scales had two factors. The variance of knowledge scale was found as 50.699%, while the variance of the belief scale was 56.093%. For Confirmatory Factor Analysis (CFA), the scales were administrated to 300 teachers again. As a result of the CFA, there were 2 modifications in the knowledge scale and 1 modification in the belief scale. As a result of the modifications, perfect fit indices were obtained in the both scales. For the internal consistency of scales, it was determined that their reliability is high and the items are distinguishable. There is a moderate positive relationship between knowledge and belief scales. The results indicate that the scales can be used to determine teachers' knowledge of creativity and beliefs about the development of creative thinking skills.

Keywords: Creativity, Knowledge Of Creativity, Belief About Creativity, Teacher Education, Creative Problem Solving

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ÖZEL GEREKSİNİMLİ ÖĞRENCİLERLE ÇALIŞAN ÖĞRETMENLERİN YETERLİKLERİNİN İNCELENMESİ

ÖZ

Araştırmanın amacı, özel eğitim okullarında çalışan öğretmelerin yeterliklerini incelemektir. Bu araştırmada nitel ve nicel araştırma yöntemleri bir arada kullanılmıştır. Araştırmaya Bolu ve Sakarya illerinde Milli Eğitim Müdürlüğü'ne bağlı özel eğitim okullarında görev yapan özel eğitim, sınıf ve okul öncesi öğretmenlerinden oluşan 112 öğretmen araştırmanın nicel verilerinin toplanmasında, bu öğretmenler arasından 12 tanesi de nitel verilerin toplanmasında sürece dahil olmuştur. Araştırmada veriler kişisel bilgi formu, öğretmen yeterlik ölçeği ve görüşme tekniği ile toplanmıştır. Öğretmenlerin yeterliklerini belirlemek için araştırmacı tarafından geliştirilen "Kişisel Bilgi Formu", Gibson ve Dembo (1984) tarafında geliştirilen ve daha sonra Guskey ve Passaro (1994) tarafından yeniden gözden geçirilen ve Türkçe Diken (2005) tarafından uyarlanan "Öğretmen Yeterlik Ölçeği" kullanılmıştır. Ayrıca görüşmede kullanılmak için alan yazın taranarak araştırmacı tarafından hazırlanıp uzman görüşü ile son hali verilen görüşme formu kullanılmıştır. Araştırmanın nicel verileri, SPSS programında ortalama, standart sapma, t Testi, Anova kullanılarak, nitel verileri ise betimsel analiz yöntemi kullanılarak analiz edilmiştir. Araştırma sonucunda, özel eğitim alanında çalışan öğretmenlerin yeterlikleri; yaş, cinsiyet, mezun oldukları alan, deneyim süresi ve çalıştıkları kurum türü arasında anlamlı farklılaşma olup olmadığı ve yeterliklerine yönelik görüşleri belirlenmiştir.

Anahtar Kelimeler: Özel Eğitim, Özel Gereksinimli Öğrenci, Yeterlik, Öğretmen, Öğretmen Yeterliği

ANALYSING THE COMPETENCIES OF TEACHERS WORKING WITH CHILDREN WITH SPECIAL NEEDS

ABSTRACT

Aim of this study is to analyze the competencies of teachers working at schools of special education. In the study, qualitative and quantitative research methods are used together. A total of 112 special education, classroom and pre-school teachers who work at special education schools affiliated to the General Directorate of Education in Bolu and Sakarya participated in the study for collecting the quantitative data; while 12 of them were involved in the process during the collection of qualitative data. In the research, data has been collected through personal information form, teacher competency scale and interviews. To identify the competency of teachers, "Personal Information Form" developed by the researcher and "Teacher Competency Scale" developed by Gibson and Dembo (1984), reviewed by Guskev and Passaro (1994) and adapted by Turkish Diken (2005) have been used. Besides, an interview form developed by the researcher and reviewed by specialists has also been used by means of reviewing the related literature. Quantitative data of the research has been analyzed on SPSS program by using average, standard deviation, T-test and Anova; while the qualitative data has been analyzed through descriptive analysis method. At the end of the study, it is identified whether there is a significant differentiation between the competencies, ages, genders, fields of study, experiences and type of institutions the teachers work; as well as opinions regarding their competencies.

Keywords: Special Education, Students With Special Needs, Competency, Teacher, Teacher Competency

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ÖZEL EĞİTİM OKULU YÖNETİCİLERİNİN OKULLARINDAKİ İŞ SAĞLIĞI VE GÜVENLİĞİNE YÖNELİK GÖRÜŞLERİ

ÖZ

Bu araştırmada, özel eğitim okulunda çalışan yöneticilerin okullarındaki iş sağlığı ve güvenliğine yönelik görüşlerinin belirlenmesi amaçlanmıştır. Araştırmaya özel eğitim okulunda yöneticilik yapan altısı erkek, üçü kadın olmak üzere toplam dokuz yönetici katılmıştır. Araştırma nitel araştırma desenine göre kurgulanmış olup araştırmada yarı yapılandırılmış görüşme tekniği ile veriler toplanmıştır. Görüşmeler sekiz ile 17 dk arasında sürmüştür. Yapılan görüşmelerden elde edilen veriler betimsel analiz tekniği ile çözümlenmiştir. Araştırma sonucunda özel eğitim okulunda çalışan yöneticilerin iş sağlığı ve güvenliği uygulamalarına yönelik görüşleri, özel eğitim okulundaki olası risk ve tehlikelere dair görüşleri, risk ve tehlikeleri ortadan kaldırmaya yönelik görüşleri, İSG kapsamında okulda yaptıkları çalışmalara yönelik görüşleri tespit edilmiştir.

Anahtar Kelimeler: İş Sağlığı, İş Güvenliği, Yönetici, Özel Eğitim, Özel Eğitim Okulu

OPINIONS OF MANAGERS WORKING IN SPECIAL EDUCATION SCHOOL ABOUT WORK HEALTH AND SAFETY AT THEIR SCHOOL

ABSTRACT

In this study, it was aimed to determine the opinions of the managers working in the special education school about the occupational health and safety in schools. A total of nine administrators, six of whom are male and three of whom are female, participated in the study-special education school. The research was designed according to the qualitative research design and the data were collected by semi-structured interview technique. The interviews lasted between 17 minutes to eight. The data obtained from the interviews were analyzed by descriptive analysis technique. As a result of the research, the opinions of the managers working in the special education school about the occupational health and safety practices, the possible risks and hazard in the special education school, to remove the possible risks and hazards in the special education school and the work they did in the scope of ILO were determined.

Keywords: Occupational Healty, Occupational Safety, Manager, Special Education, Special Education School

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İLKOKUL ÖĞRETMENLERİNİN MATEMATİK DERSİNDEKİ ÖĞRETİM STİLLERİNİN BELİRLENMESİ

ÖZ

Bu çalışmanın amacı ilkokul öğretmenlerinin matematik dersinde kullandıkları öğretim stillerinin yaş, cinsiyet, mesleki kıdem ve mezun olunan okul değişkenlerine göre belirlenmesidir. Araştırma Balıkesir il merkezindeki devlet okullarında yürütülmüştür. Araştırma da veri toplama aracı olarak Grasha Öğretim Stilleri Envanteri kullanılmıştır. Araştırma sürecinde Türkçe formu kullanılan Grasha Öğretim Stilleri Envanteri Matematik dersine uyarlanmış ve ölçeğin yapı geçerliliği Doğrulayıcı Faktör Analizi ile belirlenmiştir. Elde edilen uyum indeksleri ve faktör yükleri ölçeğin yapı geçerliliğini teyid edici düzeyde bulunmuştur. Öğretmenlerin envantere verdikleri cevaplar ise SPSS 16 ile analiz edilmiştir. Elde edilen veriler doğrultusunda sınıf öğretmenlerinin kolaylaştırıcı/kişisel model/uzman kategorisinde yer aldıkları bulunmuştur.

Anahtar Kelimeler: Öğretim Stili, İlkokul, Matematik Dersi, Grasha Öğretim Stili, Doğrulayıcı Faktör Analizi

THE DETERMINING OF PRIMARY SCHOOL TEACHERS TEACHING STYLES IN MATHEMATICS

ABSTRACT

The aim of this study is to determine Teaching Styles of primary school teacher in terms of age, gender, graduating and length of service. The study was conducted in primary schools in Balıkesir province. Grasha Teaching Styles Inventory is data collection tool. In research process, Grasha Teaching Styles Inventory was adapted for mathematics and construct validation was determined confirmatory factor analysis. The fit indexes that found were confirmed construct validation. Age, gender, graduating and length of service were analyzed in SPSS 16. According to results of study, primary school teachers were used facilitator/personal model/expert teaching model in math lessons.

Keywords: Teaching Styles, Primary School, Mathematics, Grasha Teaching Styles, Confimatory Factor Analysis

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ÖYKÜ YAZMA STRATEJİSİNİN KAYNAŞTIRMA ÖĞRENCİLERİNİN ÖYKÜ YAZMA BECERİLERİNE ETKİSİ

ÖZ

Bu araştırmanın amacı öykü yazma stratejisinin kaynaştırma öğrencilerinin öykü yazma becerilerine etkisini incelemektir. Araştırmaya kaynaştırma eğitimine devam eden 12 yaşında iki erkek ve 13 yaşında iki kız öğrenci olmak üzere 4 ortaokul öğrencisi katılmıştır. Araştırma tek denekli araştırma yöntemlerinden denekler arası yoklama evreli çoklu yoklama modeli ile desenlenmiştir. Araştırmanın bağımsız değişkeni öykü yazma stratejisi, bağımlı değişkeni ise öğrencilerin öykü yapısına uygun öykü yazma düzeyleridir. Araştırmanın verileri grafiksel analiz ile analiz edilmiştir. Araştırma sonuçlarına göre, öykü yazma stratejisinin öğretiminin öğrencilerin öykü yazma becerisini olumlu yönde etkilediği tespit edilmiştir.

Anahtar Kelimeler: Bilişsel Strateji, Öykü Yazma, Kaynaştırma, Kaynaştırma Öğrencisi, Öykü Yazma Stratejisi

THE IMPACT OF STORY WRITING STRATEGY ON STORY WRITING SKILLS OF MAINSTREAMING STUDENTS

ABSTRACT

The purpose of this research is to examine the effect of the effect of story-writing strategy based on story-writing skills of mainstreaming students. Four students with specific learning disabilities participated to the study. Research is designed with multiple probe design across participants. The independent variable is the instruction of story-writing strategy based on self-regulated strategy development and the dependent variable is story-writing skills. According to the results, it is found that the story-writing strategy affects the students' ability to write stories in a positive way.

Keywords: Cognitive Strategy, Story Writing, Mainstreaming, Mainstreaming Student, Story Writing Strategy

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ZİHİNSEL YETERSİZLİĞİ OLAN BİREYLERE TEHLİKE UYARI SEMBOLLERİNİN ÖĞRETİMİNDE ARTAN BEKLEME SÜRELİ ÖĞRETİM YÖNTEMİNİN ETKİLİLİĞİ

ÖZ

Bu araştırmanın amacı, zihinsel yetersizliği olan bireylere tehlike uyarı sembollerinin öğretiminde artan bekleme süreli öğretim yönteminin etkililiğini araştırmaktır. Ayrıca, bireylere öğretimi hedeflenen tehlike uyarı sembollerinin tehlikesine yönelik hedeflenmeyen bilgi sunumu yapılmıştır. Araştırmaya hafif düzey zihinsel yetersizliği olan ve yaşları 11-13 arasında değişen üç birey katılmıştır. Araştırmada tek denekli araştırma yöntemlerinden, denekler arası yoklama denemeli çoklu yoklama modeli kullanılmıştır. Araştırmanın bağımlı değişkeni, gösterilen tehlike uyarı sembolünün adını doğru söyleme düzeyidir. Araştırmanın bağımsız değişkeni ise artan bekleme süreli öğretim yöntemidir. Araştırma sonunda zihinsel yetersizliği olan bireylerin, tehlike uyarı sembollerinin adını söyleme becerisini artan bekleme süreli öğretim yöntemi ile öğrendikleri ve öğretim bittikten 1, 3 ve 4 hafta sonra öğrendiklerini korudukları tespit edilmiştir. Ayrıca araştırmaya katılan katılımcıların, tehlike uyarı sembollerinin adını söyleme becerisini gerçek ürünlerdeki uyarı işaretlerini gördüklerinde sergiledikleri ve hedeflenmeyen bilgileri öğrendikleri tespit edilmiştir. Tehlike uyarı sembollerinin artan bekleme süreli öğretim yöntemiyle öğretilmesine yönelik katılımcıların ailelerinin görüşlerinin de olumlu olduğu tespit edilmiştir.

Anahtar Kelimeler: Zihinsel Yetersizlik, Zihinsel Engelli Bireyler, Artan Bekleme Süreli Öğretim, Yanlışsız Öğretim Yöntemi, Tehlike Uyarı Sembolleri Güvenlik Becerileri

THE EFFECTIVENESS OF TEACHING WITH PROGRESSIVE TIME DELAY PROCEDURE ON HAZARD WARNING SYMBOLS TO INDIVIDUALS WITH INTELLECTUAL DISABILITIES

ABSTRACT

The purpose of this study was to investigate the effectiveness of teaching with progressive time delay procedure on hazard warning symbol to individuals with intellectual disabilities. Additionally, nontarget information presentation was conducted in this study. The nontarget information's were about the risk of all hazards warning symbol that was aimed to be taught to the individuals. Three individuals with mild intellectual disabilities ages ranging from years 11 to 13 participated in the study. One of the single subject research methodologies, multiple probes with probe trials design across participants' models, was used in conducting this study. The dependent variable of this study was ability to say hazard warning symbols which are shown. The independent variable of this study was progressive time delay procedure. The findings of this study demonstrated that the progressive time delay procedure is effective on teaching ability to say hazard warning symbols and all the participants maintained the hazard warning symbols 1, 3, and 4 weeks after the initial criterion was met. Additionally all participants of this study was able to generalize the hazard warning symbols on the actual products and acquired the nonetarget information which were presented by researcher. The social validity of the study showed that the parents of individuals with mild intellectual disabilities have positive opinions about this study teaching with progressive time delay procedure on hazard warning symbol.

Keywords: Intellectual disabilities, Individuals With Intellectual Disabilities, Errorless Learning Procedure, Progressive Time Delay, Hazard Warning Symbol

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AĞIR DÜZEY YETERSİZLİKTEN ETKİLENMİŞ ÇOCUĞU OLAN AİLELERİN GEREKSİNİMLERİNİN BELİRLENMESİ

ÖZ

Eğitimde özellikle de özel eğitimde ailenin desteği ve işbirliği oldukça önemlidir. Özel eğitime ihtiyacı olan ağır düzeyde yetersizlikten etkilenen bireylerin eğitiminde ailenin desteğini sağlamak için ailelerin gereksinimlerinin belirlenmesi önceliklidir. Bu araştırmanın amacı, ağır düzey yetersizlikten etkilenmiş çocuğa sahip anne-babaların ve kardeşlerin gereksinimlerini belirlemektir. Nitel araştırma yöntemi kullanılarak gerçekleştirilen araştırmanın örneklem grubunu, Bolu ve Sakarya illerinde ikamet eden ağır düzeyde yetersizlikten etkilenmiş çocuğa sahip 20 ebeveyn ve 10 kardeş katılmıştır. Veriler, görüşme tekniğinden yarı-yapılandırılmış görüşme tekniği kullanılarak toplanmıştır. Elde edilen veriler betimsel analiz tekniği ile analiz edilmiştir. Araştırma sonunda ağır düzeyde yetersizlikten etkilenen çocuğa sahip ebeveynlerin ve kardeşlerin, yetersizliğe sahip çocuğun gelişim sürecinde, eğitiminde, öğretmenlerine yönelik, tanılama sürecinde, psikolojik açıdan, sosyal destek açısından, diğer bireylere çocuklarının durumlarını açıklama konusunda gereksinimlerinin olduğu tespit edilmiştir.

Anahtar Kelimeler: Özel Eğitim, Ağır Düzeyde Yetersizlik, Ağır Düzeyde Yetersizlikten Etkilenen Birey, Aile, Gereksinim

IDENTIFYING THE NEEDS OF FAMILIES WHO HAS CHILDREN WITH SEVERE DISABILITIES

ABSTRACT

Support and cooperatıon with the family in education, special education in particular, is crucial. It is a priority to identify the needs of families who has children with severe disabilities and in need of special education, in order to have their support. Aim of this study is to identify these needs of mothers, fathers and siblings who have children affected from severe disabilities. This study has been conducted based on qualitative research method and the sample group consists of 15 parents and 10 siblings who reside in Bolu and Sakarya provinces with children affected from severe inabilities. Data has been collected by means of semi-structured interview technique. Obtained data has been analyzed with descriptive analysis technique. At the end of the research, it has been concluded that the parents and siblings who have children (and siblings) with severe disabilities need psychological and social assistance in terms of explaining the situation of their children to other individuals during their development, education and diagnosis.

Keywords: Special Education, Severe Disabilities, Individual with Severe Disabilities, Family, Needs

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EVALUATION OF COURSE ON SEX EDUCATION FOR CHILDREN

ABSTRACT

This study aims at evaluating the course on sex education for children, which is included in the special education program, in the 2017-2017 Spring term. For this purpose, the syllabus was prepared based on literature scanning conducted by the author in consultation with a specialist for the course, which was included in the curriculum of special education for the first time, and the course was given for 14 weeks with two lessons per week. It was observed at the end of the course that special education teachers received successful points. The teacher candidates expressed in the interviews that they are informed on sexual development and education of children and teenagers with special needs that they can easily provide a solution when they encounter an issue on this subject, and that the course also contributed to their personal developments. At the end of the course, the students were instructed to prepare a sex education syllabus and the candidate teachers prepared successful and applicable syllabuses on toilet training, boy and girl clothing, sex discrimination, treatment of inappropriate sexual behaviors, protection from sexual abuse, sexually transmitted diseases, pad changing, shaving etc.

Keywords: Sexuality, Sex Education, Sex Education Programms, Adolescents, Indivudials With Disabilities

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FRICTION WELDING OF AZ63 MAGNESIUM ALLOYS

ABSTRACT

In this study, the weldability of AZ63 magnesium alloys using friction welding was investigated. AZ63 magnesium alloys each of which had a 12mm diameter were used to fabricate the joints. The friction welding tests were performed by using a direct-drive type friction welding machine. After friction welding, interface regions of the welded specimens were examined by OM, SEM, EDS and X-Ray analysis to determine the microstructure changes. Microhardness and tensile tests were conducted to determine mechanical properties of the welded specimens. The experimental results indicated that AZ63 magnesium alloys using the friction welding technique for achieving a weld with sufficient strength. Tensile strength values also confirmed this result and intermetallic phases did not occur at the interface.

Keywords: AZ63, Friction Welding, Microstructure, Tensile Strength, Microhardness Test

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FATIGUE BEHAVIOR OF AISI 430-AISI 1010 STEELS WELDED BY LASER BEAM WELDING

ABSTRACT

In this study, fatigue behavior of AISI 430 ferritic stainless steel to AISI 1010 low carbon steel welded by CO_2 laser beam welding were investigated. Laser welding experiments were carried under helium atmosphere at 2000W, 2250W and 2500W welding powers and 100cm.min^{-1} welding speeds. The welding zones were examined by optical microscopy, scanning electron microscopy, energy dispersive spectroscopy analysis. Fatigue tests were applied to specimens extracted from welded joints. Fracture surfaces of fatigue samples were examined by scanning electron microscopy. The experimental results indicate that mechanical properties and microstructural features are affected significantly by welding power. The fatigue strength of CO_2 laser welded samples increase due to higher of deep penetration in welding zone with increasing welding power in chosen conditions. The best properties were observed at the specimens welded, at 2500 W welding power.

Keywords: Laser Beam Welding, Fatigue Strength, AISI 1010, AISI 430

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ISIL İŞLEM UYGULANMIŞ ORTA KARBONLU ÇELİKTE MİKROYAPI DEĞİŞİMİNİN BULANIK MANTIK İLE TAHMİN EDİLMESİ

ÖZ

Bu çalışmada, su verme işlemi ile mikroyapısı martenzit faza getirilmiş, AISI 1050 orta karbonlu çeliğe üç farklı ısıl işlem sıcaklığı ve üç farklı ısıl işlem süresi uygulanmış ve bu işlemler sonucunda mikroyapıda gözlenen değişimler bulanık mantık ile tahmin edilmiştir. Mikroyapı değişimlerini tahmin etmek için üç farklı sıcaklık 500°C, 600°C ve 700°C ve üç farklı süre 15, 60 ve 180 dakika giriş parametresi olarak seçilmiştir. Giriş parametrelerine bağlı olarak mikroyapının küreselleşme oranı dilsel ifade olarak hiç, az, orta ve çok sözcükleri ile bulanıklaştırılarak dokuz adet kural oluşturulmuştur. Küreselleştirme oranı tahminlerini yapılabilmesi için Mamdani çıkarım yöntemi kullanılmıştır. Sonuç olarak bulanık mantık ile orta karbonlu çeliğin mikroyapı değişimleri başarılı bir şekilde tahmin edildiği görülmüştür.

Anahtar Kelimeler: Isıl işlem, Mikroyapı, Bulanık Mantık, Orta Karbonlu Çelik, Mamdani Yöntemi

ESTIMATION WITH FUZZY LOGIC OF THE MICROSTRUCTURE CHANGE IN HEAT TREATED MEDIUM CARBON STEEL

ABSTRACT

In this study, three different heat treatment temperatures and times have been applied to AISI 1050 medium carbon steel that have been converted to martensite phase by quenching and as result of this heat treatmenets, the changes observed in its microstructure was estimated by fuzzy logic. To predict the microstructure changes have been selected three different temperatures of 500°C, 600°C and 700°C and three different times of 15, 60 and 180 minutes as input parameters. Depending on the input parameters, the spheroidization rate of the microstructure has been blurred with no, low, medium and high words as linguistic expressions and nine rules were formed. The Mamdani method has been used to estimate the spheroidization rate. As a result, it has been seen that fuzzy logic has successfully predicted microstructure changes of medium carbon steel.

Keywords: Heat treatment, Microstructure, Fuzzy logic, Medium Carbon Steel, Mamdani method

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SÜRTÜNME KARIŞTIRMA KAYNAK İŞLEMİ SONRASI UYGULANAN HADDELEME İŞLEMİNİN İÇ SERTLİK DEĞİŞİMİNE ETKİSİNİN MATEMATİKSEL OLARAK MODELLENMESİ

ÖZ

Bu çalışmada, sürtünme karıştırma kaynak yöntemi ile birleştirilmiş, Al-7075 malzemelerin kaynak merkezinin üst yüzeyinden içeriye doğru gösterdiği mikro sertlik değişimi ile haddeleme işleminin bu değişime etkisi incelenmiştir. Bu sebeple farklı deney şartları uygulanan malzemelerin en üst yüzeyinden başlayarak 0.8mm derinliğe kadar sertlik ölçümleri yapılmıştır. Bu malzemelerden gerek haddelenmiş olanlar gerek se haddeleme işlemine tabi tutulmamış olan malzemelerden alınan ölçüm sonuçları, matematiksel olarak modellenmiştir. Farklı matematiksel modellemeler ile yapılan analizlerde haddelenmiş malzemelerde 0,98 R^2 değeri elde edilmiştir. Sonuç olarak iç sertlik ölçümlerinin matematiksel olarak modellendiği bu çalışmada başarılı tahminlerin elde edildiği görülmüştür.

Anahtar Kelimeler: Sürtünme Karıştırma Kaynağı, Haddeleme, Matematiksel Modelleme, Al-7075, Kaynak

MATHEMATICAL MODELING OF INTERNAL HARDNESS CHANGE IN THE PARTS OF THE BURNISHING PROCESS AFTER THE FRICTION STIR WELDING OPERATION

ABSTRACT

In this study, this change effect of the rolling process was investigated by the change of microhardness of the Al-7075 material, which was combined with the Friction Stir Welding method, from the upper surface of the weld center to the inside. For this reason, hardness measurements were made from the top surface of the materials subjected to different test conditions to a depth of 0.8 mm. The measurement results from materials that have not been burnished, or burnished, have been modeled mathematically. In the analyzes made with different mathematical models, 0,98 R^2 values were obtained in the burnished materials. As a result, it is seen that the internal hardness measurements are mathematically modeled and that successful estimates are obtained in this study.

Keywords: Friction Stir Welding, Burnishing, Mathematical Modeling, Al-7075, Welding

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YAKIT PİLİ TEKNOLOJİSİ

ÖZ

Son yıllarda artan sanayileşme ve teknolojik gelişmeler enerji tüketim hızını arttırmaktadır. Sanayi sektörünün, insanoğlunun enerji ihtiyacının büyük bir kısmını karşılayan petrol, doğalgaz gibi fosil enerji kaynaklarının gün geçtikçe azalıp tükenme noktasına doğru ilerlemesi ve enerji üretiminde kullanılan kaynakların çevreye verdiği zararın giderek artması bilim adamlarını alternatif enerji kaynaklarına yönlendirmektedir. Bu alternatif enerji kaynaklarından biri olan yakıt pili uygulaması dikkatleri üzerine çekmektedir. Yakıt hücrelerinin sınıflandırılması genellikle hücrelerinde kullanılan elektrolit tipine göre yapılmaktadır. Bu çalışmada yakıt pili çeşitleri, kullanım alanları, grafik şekil ve tablolarla anlatılmıştır.

Anahtar Kelimeler: Yakıt Pili, Yakıt Pili Çeşitleri, Yakıt Pili Kullanım Alanları, Teknoloji, Sanayi Sektörü

FUEL CELL TECHNOLOGY

ABSTRACT

Increasing industrialization and technological developments in recent years increase the consumption rate. The fact that the industrial factor progresses to the point where the fossil energy sources such as petroleum natural gas, which constitute a large part of human's energy needs, move to the point of decreasing and exhausting day by day, and the increasing damage caused by the resources used for energy production leads the scientists to alternative energy sources. Fuel oil application, one of these alternative energy sources, attracts attention. The classification of the fuel cells is usually made according to the type to the electrolyte used in their cells. In this study, to the types of fuel cell, usage areas, graphic figures and tables are explained.

Keywords: Fuel Cell, Kind Of Fuel Cell, Usage Areas of Fuel Cell, Technology, Industry Sector

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MECHANICAL PROPERTIES OF AA5754 SHEETS WELDED BY COLD METAL TRANSFER METHOD

ABSTRACT

In present study, 2mm thick AA5754 sheets were joined with cold metal transfer welding using ER5356 (AlMg5) filler wire. The effect of heat input on the weld quality was investigated. Microstructural examinations were executed by optical microscope and SEM. Mechanical properties of joints were determined by tensile and bending tests. It was found that increasing heat input did not have a significant effect on tensile strength of AA5754-AA5754 joints, while it corrupted the bending strength.

Keywords: AA5754, ER5356, Cold Metal Transfer Welding, SEM, Welding

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THE EFFECT OF Cr/C RATIO ON THE WEAR RESISTANCE OF HARDFACING COATINGS

ABSTRACT

In this study, AISI 4140 steel was coated with Elhard 350 and Hardcor 63-O hardfacing filler wires which have different Cr/C ratios. The effect of Cr/C ratio on microstructure, hardness and wear resistance were determined. Optical microscope was used for microstructural investigations. Macro Vickers hardness measurements were applied under 10 kgf load. Ball on disc abrasion tests were executed under 10 N load for 1000 m. Volume and mass changes were calculated after wear test. The effect of hardness and microstructure on wear resistance was discussed.

Keywords: Wear, Hardfacing, Carbide, AISI 4140, Cr/C Ratio

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THE EFFECT OF DOPED GRAPHENE ON ELECTRICAL AND OPTICAL PROPERTIES OF COMMERCIAL ZnO

ABSTRACT

In this study, graphene nano-sheets were doped into zinc oxide (ZnO) and the changes in their properties were investigated. Graphene nano-sheets were synthesized by using liquid phase exfoliation method. The obtained nano-sheets were then doped into ZnO at the rate of 0.1, 0.5, and 1 wt %. The obtained samples were pelleted and then sintered. The changes in the electrical conductivity depending on the amount of graphene nano-sheets doped into ZnO and temperature were investigated. Increases were observed in the electrical conductivities at both higher temperatures and room temperature with increase in the amount of graphene-nano sheets. The room temperature electrical conductivity of the 1% graphene-nano-sheet doped sample showed an increase of 100% compared to pure ZnO. Electrical conductivity of the sample doped with 0.1% graphene nano-sheets increased at 401 K the rate of approximately 110% compared to the its electrical conductivity at room temperature. As the dope amount of Graphene nano-sheets increased, the reflection properties of ZnO decreased. While optical bandgap value increased in the samples doped with 0.1 and 0.5% graphene nano-sheets, a decrease of 2% was observed in the sample doped with 1% graphene.

Keywords: ZnO, Graphene Nano-Sheets, Doped, Optical Properties, Zinc

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VELOCITY VECTOR CONTROLLED S-CURVE MOTION PROFILE IN PERMANENT MAGNET SYNCHRONOUS MACHINE (PMSM)

ABSTRACT

In this paper, velocity vector control of the space vector pulse width modulation technique of the field oriented controlled(FOC) permanent magnet brushless synchronous motor(PMSM) will be provided according to asymmetric S-curve motion profile. The equations of S-curve motion profiles and their models are obtained in MATLAB/ Simulink. The flow-chart of the algorithms and their implementations are proposed and they are compared. In order to realize high precision control at high speed, the acceleration and deceleration control are discussed in detail and adopted. The experimental results are presented based on TMS320x28xxx. The control becomes more flexible. Simulation and experimental results show that the proposed approach of asymmetric S-curve profile method is more useful for fast, less jerk, vibration-less and smooth motion. So that the best dynamical performance of the motor is achieved.

Keywords: Permanent Magnet Synchronous Machine, Vector Control, Speed Control, S-Curve, Asymmetric S-Curve, TMS320x28xxx

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EFFECT OF TIN ADDITION ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES OF PM STEELS

ABSTRACT

In this work, the effects of TIN additions on the microstructures and tensile behaviors of microalloyed powder metallurgy (PM) steels were investigated. The microstructure of the microalloyed PM steels was characterized by optic microscope, SEM and EDS. Results indicated that the addition of TIN in the percentage of 0.1, 0.2 or 0.5 increases the yield strength (YS) and ultimate tensile strength (UTS) of the PM steels in the sintered conditions. Elongation also tends to improve with increasing TIN content. In addition, TIN prevented grain growth during sintering prior to cooling.

Keywords: Powder Metallurgy, Microalloyed Steel, Tensile Strength, SEM, EDS

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MATRIS/BASKI PLAKA AÇILI HIDROMEKANIK DERIN ÇEKME YÖNTEMI

ÖZ

Bu çalışma da, matris/baskı plaka açılı hidromekanik derin çekme yönteminde DIN EN 1030-1999 sac malzeme kullanılarak, matris/baskı plaka açısı ve hazne basıncının, limit çekme oranına ve kap et kalınlığı değişimine etkisini belirlemek için yapılmıştır. Bu çalışmada matris açılı hidromekanik derin çekmenin diğer yöntemlere göre üstünlüklerini daha net bir şekilde ortaya koymak için, 6 farklı (0^0; $2,5^0$; 5^0; 10^0; $12,5^0$ ve 15^0) matris/baskı plaka açısı kullanılarak deneyler yapılmıştır. Deneylerde üç farklı kalıp içi hazne basıncı (6 Mpa, 8 Mpa, 10 Mpa) değişken olarak kullanılmıştır. Sonuç olarak matris/baskı plaka açılı hidromekanik derin çekme yönteminde, geleneksel açılı derin çekme ve hidromekanik derin çekme yöntemlerine göre daha yüksek çekme oranı (β) ve ihmal edilebilecek düzeyde kap kalınlık değişimi gözlenmiştir.

Anahtar Kelimeler: Matris/Baskı Plaka Açılı Derin Çekme, Hidromekanik Derin Çekme, DIN EN 1030-1999, Hidromekanik, Çekme Yöntemi

DIE/PRESSURE PLATE ANGLED HYDROMECHANICAL DEEP DRAWING METHOD

ABSTRACT

This study was conducted in order to determine the effect of die/pressure plate angle and container pressure on limit drawing rate and change in wall thickness of cup by using DIN EN 1030-1999 sheet material in die/ pressure plate angled hydromechanical deep drawing process. In the present study, experiments were carried out using 6 different die/blank holder angles (0^0; 2.5^0; 5^0; 10^0; 12.5^0, and 15^0) to more clearly reveal the superiorities of die angled hydromechanical deep drawing process compared to other methods. Three different intra-mould chamber pressure (6 Mpa, 8 Mpa, 10 Mpa) were used as variable in the experiments. Consequently, higher drawing rate (β) and negligible cup thickness change were observed in die/ pressure plate angled hydromechanical deep drawing method compared to conventional angled deep drawing and hydromechanical deep drawing methods.

Keywords: Die/Pressure Plate Angled Deep Drawing Process, Hydromechanical Deep Drawing, DIN EN 1030-1999, Hydromechanics, Pulling Method

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KOROZYON VE MEKANİZMASI

ÖZ

Korozyon metal ve alaşımların çevreleri ile kimyasal ve elektrokimyasal etkileşmeleri sonucu bozunmalarıdır. Korozyonun bilinen en yaygın örneği demir üzerinde oluşan pastır. Korozyon bilimsel olduğu kadar ekonomik yönüyle de önemli bir olaydır. Korozyon istenmeyen bir olaydır; kaynaklarımızı ve ürünlerimizi boşa harcar, üretimde önemli kayıplara neden olur. Korozyon elektrokimyasal bir olaydır ve mekanizması metal yüzeyinde oluşan elektrokimyasal koşulların farklı olmasına dayanır. Korozyon, elektrolit olarak adlandırılan ve elektrik akımını geçirebilen bir çözelti aracılığıyla metal yüzeyinin bazı bölgeleri arasında veya elektrolit çözeltisine daldırılmış iki ayrı metal arasında da oluşabilir. Her iki durumda da elektriğin iki bölge veya iki elektrot arasından akmasına neden olan bir potansiyel farkı olmalıdır. Anot yükseltgenmenin olduğu bölge veya elektrot, katot ise indirgenmenin olduğu bölge veya elektrottur. Anottaki yükseltgenme sonucu çözünme olur ve korozyon burada meydana gelir. Anottan çıkan elektronlar ise iletken bir tel aracılığıyla katoda giderek katot metalini indirgerler.

Anahtar Kelimeler: Metal, Korozyon, Korozyonun Önemi, Elektrokimya, Alışımlar

CORROSION AND ITS MECHANISM

ABSTRACT

Corrosion is the deteoration of metals and alloys as a result of their chemical and electrochemical interactions with the environment. The most common example of corrosion is known as rust on iron. Corrosion is an important event in terms of economy as well as science. Corrosion is undesirable phenomenon, wasting our resources and our products, causing significant less in production. Corrosion is an electrochemical process and its mechanism is based on different electrochemical conditions that occur on the metal surface. Corrosion can take place between in a solution called an electrolyte, which can pass the electric current, at certain regions of the metal surface or between two separate metals submerged in the electrolyte solution. The anode is the region on electrode that oxidation occurs whereas at cathode reduction occurs. The anode oxidizes by losing electrons, which results in ion formation and corrosion. The electrons that exit the anode and transfer to the cathode through a conductive wire reduce the cathode metal.

Keywords: Metal, Corrosion, Importance of Corrosion, Electrochemistry, Alloys

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AL_{12}Si TOZU ÜRETİMİNE GAZ ATOMİZASYONU PARAMETRELERİNİN ETKİSİNİN İNCELENMESİ

ÖZ

Bu çalışmada, gaz atomizasyonu yöntemi ile üretilen $Al_{12}Si$ alaşım tozunun şekli ve boyutu üzerine sabit sıcaklıkta, farklı nozul çaplarında ve farklı gaz basınçlarında deneysel çalışmalar yapılmıştır. Deneyler Karabük Üniversitesi Teknoloji Fakültesi İmalat Mühendisliği Laboratuvarında bulunan Gaz Atomizasyon Ünitesi'nde yapılmıştır. Deneyler 770°C sabit sıcaklık, 2 ve 4mm nozul çaplarında ve 6 farklı gaz basıncı (5-10-15-20-30-35 bar) uygulanarak yapılmıştır. Ergiyiği atomize etmek için argon gazı kullanılmıştır. Üretilen $Al_{12}Si$ tozlarının boyut ve şeklini belirleyebilmek için taramalı elektron mikroskobu (SEM) görüntüleri ve Elek analizi yöntemiyle toz boyut analizleri yapılmıştır. Yapılan analizler sonucunda, gaz basıncının artmasıyla toz boyutunun küçüldüğü ve toz şeklinde küreselleşme olduğu tespit edilmiştir. Elde edilen en ince tozların 2mm nozul çapında 35 bar gaz basıncı ile olduğu gözlemlenmiştir.

Anahtar Kelimeler: Gaz Atomizasyonu, $Al_{12}Si$ Alaşım Tozu, Nozul, Gaz Basıncı, Alaşım

INVESTIGATION OF THE EFFECT OF GAS ATOMIZATION PARAMETERS ON $AL_{12}SI$ POWDER PRODUCTION

ABSTRACT

In this study, experimental studies have been carried out on the shape and size of $Al_{12}Si$ alloy powder produced by gas atomization method at constant temperature, different nozzle diameters and different gas pressures. Experiments were carried out at the Gas Atomization Unit at Karabük University Faculty of Technology Manufacturing Engineering Laboratory. Experiments were carried out at 770°C constant temperature, 2 and 4mm nozzle diameters and 6 different gas pressures (5-10-15-20-30-35 bar). Argon gas was used to atomize the melt. Scanning electron microscope (SEM) images and powder size analysis were performed by sieve analysis to determine the size and shape of the $Al_{12}Si$ powders produced. Because of the analyzes made, it was determined that as the gas pressure increased, the size of the powder decreased and spheroidization occurred in the form of powder. It was observed that the thinnest powders obtained were 2mm diameter with 35 bar gas pressure.

Keywords: Gas Atomization, $Al_{12}Si$ Alloy Powder, Nozzle, Gas Pressure, Alloy

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CHARACTERIZATION OF AZ91 POWDER PRODUCTION BY GAS ATOMIZATION METHOD AND INVESTIGATION OF PRODUCTION PARAMETERS

ABSTRACT

In this study, the effects of nozzle diameter and gas pressures on the shape and size of AZ91 magnesium alloy powder produced by gas atomization method at a constant temperature were experimentally investigated. The experiments were carried out at the Gas Atomization Unit. Experiments were carried out at 820°C using two different nozzle diameters (2-3mm) and 4 different gas pressures (5-15-25-35 bar). Argon gas was used to atomize the melt. Scanning electron microscope (SEM) images were used to determine the shape of the produced AZ91 powders and particle size analyzes were performed to determine powder size analyzes. As a result of the analyzes made, it was found that the powder size decreased significantly at the same time as the gas pressure increased and at the same time the diameter of the nozzle decreased, and the powder shape changed from ligament and droplet to spherical. It has been observed that the finest powders obtained are at 820°C with a 35 bar gas pressure at a diameter of 2mm and that the overall shape of the powders is complex.

Keywords: Gas Atomization, AZ91 Alloy Powder, Nozzle, Gas Pressure, Alloy

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2013-2015 YILLARI ARASINDA TUNCELİ İLİNDEKİ TRAFİK KAZASI ORANLARININ İNCELENMESİ

ÖZ

Bu çalışmada, 2013'den başlayan ve 2015 yılı sonuna kadar meydana gelen trafik kazalarının sayısı, bu kazalardaki ölü ve yaralıların sayısına odaklandık. Tunceli ilinde 2013-2015 yılları arasında meydana gelen kaza oranları Türkiye'deki kaza oranlarıyla karşılaştırılmıştır. İncelenen yıllarda araç başına düşen kaza, ölüm ve yaralı yüzdeleri belirlenmiştir. Bu üç parametre ile değerlendirme yapabilmek için yüzdelerin ortalaması alınmıştır. Tunceli ve Türkiye'deki araç başına düşen kaza yüzdelik ortalamaları sırasıyla %3.69 ve %6.55 olarak bulunmuştur. Tunceli'nin araç başına düşen kaza yüzdelik ortalaması Türkiye geneline göre yaklaşık 2 kat düşük olmasına rağmen, araç başına düşen ölüm ve yaralı yüzdelik ortalamalarının yaklaşık 3 kat büyük olduğu görülmüştür. Tunceli'deki kaza oranının Türkiye ortalamasının altında olmasına rağmen, ölüm ve yaralı oranlarındaki bu büyük farkın nedenleri araç cinsleri (otomobil, otobüs, minibüs) ve oranları yönünden incelendiğinde; Tunceli'deki toplu taşım araç (otobüs, minibüs) oranlarının Türkiye ortalamasından çok fazla olduğu görülmüştür. Tunceli'deki ölüm ve yaralı yüzdelik oranlarının büyük olmasının sebebi toplu taşım araçlarıyla yapılan kazalara atfedilebilir.

Anahtar Kelimeler: Trafik kazası, Kaza oranları, Yüzdelik ortalaması, Tunceli

INVESTIGATION OF TRAFFIC ACCIDENT RATES IN PROVINCE TUNCELİ BETWEEN 2013-2015 YEARS

ABSTRACT

In this study, we focused on the number of traffic accidents starting from 2013 until the end of 2015, the number of dead and injury in these accidents. The accident rates in Tunceli between 2013 and 2015 are compared with the accident rates in Turkey. Accidents, deaths and injury rates per vehicle were determined in the years taken into account. In order to evaluate with these three parameters, averages of the percentages were calculated carefully. The average percentage of accidents per vehicle in Tunceli and Turkey was found to be 3.69% and 6.55%, respectively. Although average accident rate per vehicle in Tunceli is about 2 times lower than the rate in all over Turkey, it is concluded that the average death and injury rate per vehicle is about 3 times bigger than that in Turkey. Though the accident rate in Tunceli is below the average in Turkey, it is seen that the rates of public transport vehicles (buses, minibuses) in Tunceli are much higher than the average of Turkey and it takes important role in this investigation when the reasons for this significant difference in death and injury rates are examined in terms of vehicle types (cars, buses, minibuses) and ratios. The large percentage of death and injury percentages in Tunceli can be attributed to the accident caused by public transport vehicles.

Keywords: Traffic Accidents, Accident Rates, Average Percentage, Tunceli

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DETERMINING POSITIVE CANCER RESCUE MUTATIONS IN P53 BASED CANCERS BY USING ARTIFICIAL INTELLIGENCE

ABSTRACT

A mutation in a protein-coding gene in DNA can alter the protein structure coded by the same gene. Structurally altered proteins usually lose their functions and sometimes gain an undesirable function instead. These types of mutations and their effects can result in genetic diseases or antibiotic resistant bacteria, among other health issues. Important curing methods have been developed by detecting mutations against AIDS as well as genetic diseases. Another example is the influenza virus. The reasons why a vaccination developed to fight against influenza does not work the following year are the mutation of its DNA and the outbreak of the virus after it has been mutated especially if it is a virus that escaped the vaccinations target. Due to such reasons it is highly important to know in advance the location of a potential mutation in a protein as well as the problems it might cause the medical sciences. In this study we have used artificial neural networks, which are one of the latest artificial intelligence technologies, to determine the effects of cancer mutations. The model we developed has given more successful results compared to other methods. We foresee that our model will bring a new dimension to medical research and the medicine industry.

Keywords: P53 Protein, Mutation, Genetic Diseases, Artificial Intelligence, Machine Learning Techniques

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WETTINGBEHAVIORAND INTERFACIAL PROPERTIES OF SAC300, SAC305 AND SAC0307 Pb-FREESOLDER ALLOYS ON Cu SUBSTRATE

ABSTRACT

Sn-Ag-Cu (SAC) Pb-free solder alloys are increasingly used for soldering and have potential to fully replace Sn-Pb solders in modern electronics. The wetting behaviour and interfacial properties of molten SAC300, SAC305 and SAC0307 (Sn-Ag-Cu) Pb-free solder alloys were investigated by sessile drop method at various temperatures (250, 280 and 310 °C) on Cu substrate in Ar atmosphere, as well as its dependence on time. The contact angles of the Pb-free solder alloys on Cu substrate do not decrease sharply with increasing temperature but change with time. The highest wettability was found for SAC305 and this was followed by SAC300 and SAC0307. The contact angles for SAC305, SAC300 and SAC0307 were 41.90, 47.70 and 53.36°, respectively, at 310 °C. The formation of intermetallic compounds (IMCs) between the Pb-free solder alloys and the Cu substrate was examined. The Sn in the molten Pb-free solder alloys reacts with Cu to occur intermetallic compounds (IMCs) on the interface.

Keywords: Pb-free Solder Alloy, Contact Angle, Sessile Drop Method, IMC's

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PRODUCTION OF OPEN CELL ALUMINUM FOAM BY VACUUM CASTING METHOD

ABSTRACT

The properties like low density, hardness and impact resistance have been found attractive by the researchers and the studies in this field have been started. There are various methods for production of metal foams were presented and discussed. The casting of metals and alloys around space holder material is very economical way to obtain metallic foams or cellular parts. In this study, vacuum-gas infiltration setup was used to produce aluminum foam. The mentioned method involves addition of space holder materials and a dissolution technique to remove them after solidification of the metal. As space holder materials NaCl particles were selected for two different dimensions to produce two different A360 (AlSi10Mg) aluminum foams. By changing the NaCl particle size, the alteration of the properties such as density and porosity was investigated. Additionally, computed tomography views were obtained to see and interpret the section views of the alloy and composite foam.

Keywords: Aluminum Foam, Vacuum Casting, Space Holder Technique, Density-Strength Relation, A360

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DETERMINING OF TEACHER VIEWS RELATED TO TEACHING PRACTISE COURSE

ABSTRACT

Practice teacher is one of the basic components at providing environments opportunities for practicing information, abilities, and values, at real environments related to their jobs, they got school practice. In the context of combination of theory and practice at the teaching practices, prospective teachers find chance to progress vocational knowledge's and abilities both by watching experienced teachers and by giving test course. This research is planned with the aim of determining views of teachers related to teaching practice course. Research is made with 112 men, 138 women a total of 250 practice teachers work at primary secondary and high schools at the Centre of Sivas. In this research, developed by Çevik and Alat (2012) Teaching practice course attitude scale is used. 141 (56%) people to the teaching practice is not important at developing vocational attitude question, 167 (42.8%) people to the I don't want to be practice teacher question, 145 (58%) people to the I do teaching practice with the press of manager question, 134 (53.6%), people to the I do teaching practice with the press of manager question, 112 (44.8%) people to the practice teacher shouldn't have compulsory attendance question, 106 (42.4%) people to the practice teacher doesn't need to have a good contact with prospective teacher question have given answer as I don't agree. 156 (62.4%) people to the practice teacher should have knowledge and equipment about teaching practice question, 166 (66.4%) people to the practice teacher should be sample to his environment with his personal and vocational behaviors question, 143 (57.2%) people to the teaching practice is important for practice teacher in terms of vocational progress question, 100 (40%) people to the practice teacher can learn vocational innovations from prospective teacher question, 132 (48.8%) people to the practice teacher treat tolerantly to prospective teacher question, 116 (%46.4) people to the practice instructor at faculty should visit our school question, 132 (52.8%) people to the practice teacher should treat to all prospective teacher equally question, 125 (50.0%) people to the practice teacher should always be sample to prospective teachers question have given answer as I certainly agree. According to the results, teaching practice is necessary, contact between teaching practice, faculty and school is important and teachers care about this course.

Keywords: Teaching Practise Course, Practise Teacher, Teacher Views, Education, Sivas

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EXAMINING OPINIONS OF PROSPECTIVE TEACHERS ABOUT SCHOOL EXPERIENCE COURSE

ABSTRACT

During the preparation of prospective teachers to the being teacher, they should do application study in the classroom environment with teachers and students. One of the application studies, school experience is formed by activities and planned observation aimed to introduce many duties form teaching profession to the prospective teachers. This study is planned with the aim of determining views of students at teaching area and graduated from this department and have school experience course. Working group research is formed by 3. and 4. class students at school of physical education and sports and faculty of education and graduated students have same qualifications. Working group is done with 303 (60.6%) woman and 197 (39.4%) man 500 prospective teachers. At research, attitude scale intended to school experience course developed by Kılınç and Salman (2007). 246 (42%) people to the school experience course is necessary question and 195 (39%) people to the observations of course teacher and student is useful question, 152 (30%) people to the there is disconnection between faculty and school question, 181 (36.2%) people to the I like teaching profession thanks to school experience courses question, 194 (38.8%) people to the I believe I have learned teaching experience question, 218 (43.6%) people to the I have met good samples at school experience courses, 198 (29.6%) people to the I have beaten my excitement thanks to school experience courses question, 186 (37.2%) people to the school teachers are supportive and encouraging question, 210 (42%) people to the Im living happiness of transferring my knowledge's question, 190 (38%) people to the I have learned that field knowledge isn't enough question, 206 (41.2%) people to the I have benefited proposes and criticism of school management and teacher about activities question, have given answer as I agree. And 213 (42.6%) people to the I am looking for going away from courses of internship schools question, 217 (43.4%) people to the I have disliked teaching profession because of school experience course question, 241 (48.2%) people to the I think school experience course is unnecessary question, have given answer as I don't agree. Thanks to these courses teachers at application school, can renew their knowledge's. From this point of view it can be said that school experience courses reach at their aim.

Keywords: Prospective Teachers, School Experience Course, Students, Teacher, Course

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EFFECT OF TIME DEPENDENT SINUSOIDAL MAGNETIC FIELD ON MIXED SPIN (1, 5/2) ISING FERROMAGNETIC BLUME-CAPEL MODEL: AN EFFECTIVE-FIELD THEORY ANALYSIS

ABSTRACT

Non-equilibrium magnetic properties in a two-dimensional mixed spin-1 and spin-5/2 ising system under the influence sinusoidal magnetic fields have been analyzed within the framework of effective-field theory based on a decoupling approximation. A dynamic equation of motion has been solved for a square lattice by utilizing a Glauber-type stochastic process. We study the thermal behavior of the dynamic order parameters to characterize the nature (continuous or discontinuous) of the phase transitions and to obtain the dynamic phase transition (DPT) points. Dynamic phase diagrams are presented in the reduced magnetic field amplitude-reduced temperature plane (h-T). The influences of the temperature, single-ion anisotropy and frequency on dynamic phase diagram are investigated in detail. Characteristic behaviors such as the presence of critical points are somewhat found. We also observed that only the dynamic second order phase transition occurs at higher values of frequency.

Keywords: Spin-1-5/2 Blume-Capel Kinetic Ising Model, Dynamic Effective-Field Theory, Dynamic Phase Transitions, Dynamic Phase Diagrams

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ANTINEUTRINO DETECTOR DESIGN FOR AKKUYU NUCLEAR POWER PLANT

ABSTRACT

In this presentation, we discuss the potential application of antineutrino for monitoring Akkuyu Nuclear Power Plant which will be operated in 2023 at Akkuyu, in Mersin province. Taking advantage of Geant4 simulation toolkit, we can design an antineutrino detector and perform optimization study. (A simulation based study) With an antineutrino detector we can observe reactor fissile inventories for safeguard application.

Keywords: Antineutrino detector, Akkuyu Nuclear, Geant4, Simulation, Mersin

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INVESTIGATION OF IN VITRO ANTIOXIDANT ACTIVITY OF 5,5'-butane-1,4-diylbis{2-[(4-benzylpiperazin-1-yl)methyl]-4-allyl-2,4-dihydro-3H-1,2,4-triazole-3-thione] COMPOUND

ABSTRACT

The 1,2,4-triazole along with its derivatives were reported to exhibit various pharmacological activities. 1,2,4-triazole moieties have been incorporated into a wide variety of therapeutically interesting drug candidates, including anti-inflammatories, CNS stimulants, sedatives, anti-anxiety compounds, antimicrobial agents, as well as anti-mycotic ones such as fluconazole, intraconazole andvoriconazole. In this study, new bis-1,2,4-triazole aminomethyl derivative compound *5,5'-butane-1,4-diylbis{2-[(4-benzylpiperazin-1-yl)methyl]-4-allyl-2,4-dihydro-3H-1,2,4-triazole-3-thione]*is investigated for in vitro antioxidant activity. Evaluated in vitro parameters are as follows: reducing power capacity; metal chelating activity; H_2O_2 scavenging activity; superoxide anion radicals scavenging activity; hydroxyl radical scavenging via deoxyribose degradatiton and MDA results in Saccharomyces cerevisiae cells. Interrelations of results between control and compound are evaluated using SPSS software. As a result, compound has been shown antioxidant activity when compared to standart antioxidants such as Ascorbic acid, Butylated hydroxytoluene (Bht) and alpha-tocoferol. The compound showed satisfactory performance when compared to the control group.

Keywords: 1,2,4-Triazole, Aminomethyl Derivative, Antioxidant, Radical Scavenging, Biological Activities

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IN VITRO ANTIOXIDANT EVALUATION of 5,5'-butane-1,4-diylbis{4-allyl-2-[(dipropylamino)methyl]-2,4-dihydro-3H-1,2,4-triazole-3-thione COMPOUND

ABSTRACT

The 1,2,4-triazole and its derivatives were reported to exhibit various pharmacological activities. 1,2,4-triazole possess potent biological advantages due to being antibacterial, antifungal, anti-inflammatory, antimalarial and. They also have pesticide properties. This study aims to examine the antioxidant effects of newly synthesized a aminomethyl derivative compound which contain bis-1,2,4- triazole. The antioxidant activities of the *of 5,5'-butane-1,4-diylbis{4-allyl-2-[(dipropylamino)methyl]-2,4-dihydro-3H-1,2,4 triazole-3-thione* compound was measured using different methods in this study, including reducing power capacity; metal chelating activity; H_2O_2 scavenging activity; superoxide anion radicals scavenging activity; hydroxyl radical scavenging via deoxyribose degradatiton and MDA results in Saccharomyces cerevisiae cells. As a result, new compound had efficient antioxidant activity when compared to ascorbic acid, BHT and α-tocopherol as associated antioxidants.

Keywords: 1,2,4-Triazole, Aminomethyl Derivative, Scavenging Activity, Saccharomyces Cerevisiae, Malondialdehyde (MDA)

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ON A CLASS OF DIRAC OPERATORS WITH EIGENVALUE NONLINEARLY DEPENDENT TO BOUNDARY CONDITION

ABSTRACT

We consider the boundary value problem L for the equation:

$$\ell[y(x)] := A(\sigma y)'(x) + C(x)y(x) = \lambda y(x),\ x \in I = (0,\pi) \qquad (1)$$

with the boundary conditions

$$(\sigma y_1)(0)\sin\alpha + (\sigma y_2)(0)\cos\alpha = 0,$$
$$b(\lambda)(\sigma y_1)(\pi) + c(\lambda)(\sigma y_2)(\pi) = 0$$

and with the jump conditions

$$[(\sigma y_1)(x)]_{x=d+0} = \beta[(\sigma y_1)(x)]_{x=d-0},$$
$$[(\sigma y_2)(x)]_{x=d+0} = \beta^{-1}[(\sigma y_2)(x)]_{x=d-0}$$

where $A = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}, C(x) = \begin{pmatrix} p(x) & q(x) \\ q(x) & r(x) \end{pmatrix}, y(x) = \begin{pmatrix} y_1(x) \\ y_2(x) \end{pmatrix}$, $p(x), q(x), r(x), \sigma(x), \frac{1}{\sigma(x)}$, real valued bounded function in $\sigma(x) > 0, \gamma(x) = \int_0^x \frac{dt}{\sigma(t)}$, $b(\lambda)$ and $c(\lambda)$ are polynomial with real cofficients and no common zeros, $\alpha \in [0,\pi), \beta \in R^+, d \in (0,\pi)$.

If , $\sigma(x) \equiv 1$ the function $y(x) = \begin{pmatrix} y_1(x) \\ y_2(x) \end{pmatrix}$ is differentiable and also $\ell[y(x)] \in L_2(0,\pi)$. However when $\sigma(x) \neq 1$, the function $(\sigma y)(x)$must be differentiable and $\ell[y(x)] \in L_2(0,\pi)$. It is clear that in that case the function $y(x)$may or may not be differentiable function. However the function $(\sigma y)(x)$has to be differentiable. Therefore, in this study the solution set of given system consists of more general functions, which is different from the classic case. Hence, this problem has importance mathematical and also application sense. In this study, we consider operator (1) with jump conditions inside a finite interval. Also eigenparameter appears not only in the differential equation but also in the boundary conditions. Also it is nonlinearly case in boundary conditions. Properties of spectrum are investigated in the second part. The Prüfer's angle, the Weyl function for considering operator have been defined in the third part. In the fourth part, the inverse problem of the reconstruction of a boundary value problem L from the Prüfer's angle, the Weyl function and two different eigenvalues sequences are investigated. Then the uniqueness theorem of inverse problem according to these functions and two different eigenvalues sets has been proved.

Keywords: Inverse Problem, Dirac Operator, Boundary Value, Function, Math

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STABILITY ANALYSIS OF AN HOST-PARASITOID MODEL WITH IMMIGRATION

ABSTRACT

In mathematical biology, host-parasitoid interactions are very popular subjects since they are important in pest control. Parasitoids are insect which laid eggs in the larvae of the host and kill their host. Host that are not parasitizied give rise to their own progency. One of the most commonly used host-harasitoid model is introduced by Nacholson-Bailey in 1935. This model assumes that parasitoid female is able to examine area a ("area of discovery") during its life time. When a host is found, parasitoid lays only one egg in it. However, the same host can be found again later and then the parasite will lay another egg in it because we assume that parasites do not distinguish between healthy hosts and already parasitized hosts. In this work we study a host-parasitoid model with and without immigration parameter. By adding the host-parasitoid model migration parameter we have investigated how this parameter affects the model's dynamic. We showed local stability criterias and existence of equilibrium point of the models.

Keywords: Host-parasitoid Model, Equilibrium Point, Stability, Mathematical Biology, Parasitoids

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THE EFFECT OF SMALL SUBSTITUTIONS OF *GD* ON THE MAGNETIC PROPERTIES OF SYSTEM $Y(Co_{1-x}A\ell_x)_2$

ABSTRACT

It is shown that, when the content of Gd increases, there occurs a transition from paramagnetism to ferromagnetism. The behavior of studied compounds in the field depends on the degree of magnetization of cobalt M_{Co} and gadolinium M_{Gd} subsystems. If M_{Co} in a weak field is greater than M_{Gd}, gadolinium impurities shift the metamagnetic transition field towards weak fields, as the molecular field acting on cobalt from the gadolinium subsystem H_m is summed with the external magnetic field H. In case M_{Co} in a weak field is smaller than M_{Gd}, H and H_m are directed antiparallel to each other, and the magnetization process proceeds without jumps. The results are qualitatively interpreted in a simple model, which takes into consideration the metamagnetic character of magnetization of the cobalt subsystem and also a possibility of emergence of extracolinear systems in the field.

Keywords: Paramagnetism, Ferromagnetism, Metamagnetic, Transition, Magnetization

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EXACT SOLUTIONS OF SOME NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS IN MATHEMATICAL PHYSICS

ABSTRACT

In this work, we establish travelling wave solutions for some nonlinear partial differential equations in mathematical physics. The (G'/G)-expansion method was used to construct travelling wave solutions of the nonlinear partial differential equations. These travelling wave solutions were expressed in terms of hyperbolic functions and trigonometric functions and rational functions. It was shown that the proposed method was elementary and effective mathematical tool for solving nonlinear partial differential equations in mathematical physics. All calculations were done with Maple package program.

Keywords: Travelling Wave Solutions, Exact Solutions, (G'/G)-Expansion Method, Partial Differential Equation, Math

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EXACT SOLUTIONS TO SOME NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS

ABSTRACT

A general theory to solve nonlinear partial differential equations does not seem to exist. However, there are certain nonlinear partial differential equations, usually first order in time, for which the corresponding initial value problems can be solved by the inverse scattering transform method. Such nonlinear partial differential equations are sometimes referred to as integrable evolution equations. Some exact solutions to such equations may be available in terms of elementary functions, and such solutions are important to understand nonlinearity better and they may also be useful in testing accuracy of numerical methods to solve such nonlinear partial differential equations. We have considered the some nonlinear partial differential equations and obtained some exact solutions to those equations in terms of a triplet of constant matrices. To obtain such solutions in terms of a matrix triplet A, B, C we have improved an algorithm. Here and overdo indicates the derivative with respect to t and the dagger denotes the matrix adjoint. The subscript runs over all integers. We worked on to obtain formulas for certain exact solutions to those nonlinear partial differential equations, and such solutions are constructed in terms of a triplet of constant matrices A, B, C whose size are $p \times p, p \times 1$ and $1 \times p$ for any positive integer p.

Keywords: Exact Solutions, Nonlinear Partial Differential Equations, Math, Integrable Evolution Equations, The Inverse Scattering Transform Method

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PROTEAZ ENZİMİNİN RÖLAKSASYON MEKANİZMASINI MODÜLE EDEN İLGİ ZAMANININ 1.5 TESLA MR SPEKTROMETRESİ İLE BELİRLENMESİ

ÖZ

Proteaz enzimi, proteinlerin peptit bağlarını koparark yıkılmasından sorumlu olan enzimlerden biridir. Bu çalışmada, Proteaz enziminin H2O' daki çözeltisinin 1/T1 (spin-örgü) ve 1/T2 (spin-spin) rölaksasyon oranları 64 MHz (1.5 Tesla) MR spektrometresi kullanılarak oda sıcaklığında konsantrasyona karşı incelendi. 64 MHz' deki 1/T1 ve 1/T2 rölaksasyon oranlarının, enzim konsantrasyonuyla lineer olarak arttığı gözlenmiştir. Rölaksasyon mekanizmasını modüle eden ilgi zamanı (τ) bu çalışmada türetilen teori kullanılarak düşük manyetik alan (1.5 Tesla) için hesaplandı ve nanosaniye mertebesinde bulundu. Bu çalışmada elde edilen veriler; küresel simetrik kabul edilen enzimler için, T1/T2 rölaksasyon oranlarının τ değerlerinin doğru hesabı için kullanılabileceğini göstermiştir. Proteaz enzimi için elde edilen sonuç; rölaksasyon oranlarına moleküler takla tarafından modüle edilen dipolar etkileşmenin neden olduğunu önermektedir. Serbest ve bağlı su arasındaki protonların hızlı kimyasal değiş tokuşu da sürece katılmaktadır.

Anahtar Kelimeler: Proteaz, 1.5 Tesla MR Spektrometresi, τ İlgi Zamanı, Dipolar Etkileşme, Rölaksasyon Oranları

DETERMINATION OF THE CORRELATION TIME MODULATING RELAXATION MECHANISM OF PROTEASE ENZYMES BY 1.5 TESLA MR SPECTROMETER

ABSTRACT

Protease enzyme is one of the enzymes which is responsible for breaking down the peptide bonds of proteins. In this work, the rates of 1/T1 (spin-spin) and 1/T2 (spin-spin) of protease enzyme in H2O solution were studied against the concentration at room temperature using 64 MHz (1.5 Tesla) MR spectrometer. It has been observed that the 1/T1 and 1/T2 relaxation rates at 64 MHz increase linearly with the enzyme concentration. The correlation time (τ) modulating the reaction mechanism was calculated for the low magnetic field (1.5 Tesla) using the derived theory in this study and found to be in the order of nanoseconds. The data obtained in this study showed that the τ values of the T1/T2 relaxation rates for spherically symmetric enzymes could be used for correct calculation. The result obtained for the protease enzyme suggests that the dipolar interaction modulated by the molecular tumble is responsible for the rate of relaxation. Rapid chemical exchange of protons between free and bound water also participates in the process.

Keywords: Protease, 1.5 Tesla MR Spectrometer, τ Correlation Time, Dipolar Interaction, Relaxation Rates

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DISTRIBUTION OF NATURAL AND ARTIFICAL RADIOACTIVITY LEVELS OF SOIL SAMPLES IN THE COASTAL AREA OF SINOP PROVINCE, TURKEY

ABSTRACT

In this study, radionuclide concentrations have been determined in soil samples. Samples have been collected from a total of seventeen different stations of Sinop province, Turkey. The analysis was carried out to determine ^{226}Ra, ^{232}Th, ^{40}K and ^{137}Cs radioisothopes using a coaxial HPGe detector of 55% relative efficiency and a resolution of 1.9 keV at the 1332 keV gamma of ^{60}Co (Ortec, GEM55P4-95 model). The activity concentrations obtained for ^{226}Ra, ^{232}Th, ^{40}K and ^{137}Cs are given in the unit of Bq/kg. Activity concentration range of ^{226}Ra, ^{232}Th, ^{40}K and ^{137}Cs varied from 8.68±0.48 to 41.07±2.09, from 11.11±0.53 to 30.93±1.79, from 118.5±4.6 to 362.7±17.8 and from 0.51±0.02 to 15.60±0.65, respectively. The activity concentration results of radionuclides were compared with the international limit values and other studies in the literature.

Keywords: Radioactivity, Soil, HPGe, Sinop, Cs-137

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ASSESSMENT OF Cu, Zn, As AND Pb CONCENTRATIONS IN SOIL SAMPLES IN THE COASTAL AREA OF SINOP PROVINCE, TURKEY

ABSTRACT

In this work, heavy metal pollution was determined in soil samples. Samples have been collected from a total of seventeen different stations of Sinop province, Turkey. The metal concentrations of the samples were determined by EDXRF spectrometer (Epsilon5, PANalytical, Almelo, the Netherlands). From the results of metal analyzes of all samples it was tried to determine the elemental concentrations of Cu, Zn, As and Pb. The heavy metal concentrations are given in the unit of ppm. Metal concentration range of Cu, Zn, As and Pb varied from 17.782±0.783 to 99.753±0.940, from 45.117±0.222 to 170.306±4.833, from 2.149±0.909 to 19.964±0.546 and from 14.467±0.495 to 62.202±2.479, respectively. The heavy metal concentration results were compared with the international limit values and other studies in the literature.

Keywords: Heavy Metal, Soil, EDXRF, Sinop, Pollution

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EXPERIMENTAL STUDY ON THE BIOKINETICS OF ^{137}Cs IN SEA SNAIL (*Rapana venosa*)

ABSTRACT

In this study, uptake and depuration kinetics of radiocesium by the sea snail after contamination via the sea water pathway have been studied in controlled laboratory conditions. The uptake and loss kinetics for sea snails were followed for 49 and 59 days, respectively. Radiocesium concentrations of the samples obtained during the experiment have been measured employing a germanium (HPGe) detector with high resolution and purity. The steady state concentration factor (CF_{ss}) values of ^{137}Cs in the all soft tissue of the large and small size snails were found to be 16.34±0.70 and 14.31±0.63, respectively. The loss kinetics of radiocesium was described by a two- component exponential model. Biological half-life values of ^{137}Cs in the all soft tissue of the large and small size snails were found to be 49.50 and 57.75 days, respectively. The obtained results were compared with other studies in the literature.

Keywords: Uptake, Depuration, Sea snail, ^{137}Cs, Biological half-life

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DETERMINATION OF THE COPPER UPTAKE CAPACITY OF BABY CLAM (*Chamelea gallina Linnaeus*, 1758)

ABSTRACT

In this study, copper uptake capacity of the baby clam is determined experimentally by EDXRF spectrometer. For this purpose, two different groups were formed. In the first, control and six different concentrations of Cu (0.12; 0.36; 0.60; 1.21; 3.60; 6mgL^{-1}) were added to the tanks and called as daily treatment groups (chronic). Changes at the Cu concentration in the soft tissue of clams was measured at the end of five days. It was observed that the amount of Cu in soft tissues was increased with the increased Cu concentration in the experimental groups. In the second experiment, sea water was fixed to 0.36 mg L^{-1} (acute) Cu level and Cu concentration was observed in the soft tissue of the mussels daily (5 days). As a result, it has been determined that the baby clam is a useful bioindicator organism for monitoring metal pollution in the marine environment.

Keywords: Baby clam (*Chamelea gallina*), Copper, EDXRF, Acut, Chronic

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DE SİTTER-3 UZAYINDA SABİT TİMELİKE AÇILI YÜZEYLER ÜZERİNE BİR ARAŞTIRMA

ÖZ

Bu çalımada de Sitter uzayında yüzeylerin özel bir sınıfı olan sabit timelike açılı spacelike eksenli timelike yüzeyler ele alınmıştır. $U \subset IR^2$ bir açık küme, $x:U \to S_1^3$ embedding ve $M = x(U), S_1^3$ uzayında timelike yüzey olsun. ξ, M üzerinde spacelike birim normal vektör alanı olmak üzere eğer M üzerinde $\theta(\xi, W)$ timelike açısı sabit olacak şekilde bir W sabit spacelike doğrultusu varsa M ye S_1^3 de sabit timelike açılı spacelike eksenli timelike yüzey denilmektedir. Burada Desitter uzayında sabit açılı yüzeylerin parametrizasyonu elde edilerek bu uzayda sabit açılı yüzey olma koşulları verilmiştir.

Anahtar Kelimeler: Sabit Açı Yüzeyi, De Sitter Uzayı, Sabit Timelike Açısı, Timelike Yüzeyleri, Birim Normal Vektör Alanı

A RESEARCH ON THE CONSTANT TIMELIKE ANGLE SURFACES IN DE SITTER 3-SPACE

ABSTRACT

In this study, timelike surfaces with constant timelike angle and spacelike axis are studied in de Sitter space. Let $U \subset IR^2$ be an open subset, $x:U \to S_1^3$ be an embedding and $\mathrm{M} = \mathrm{x(U)}$ be a timelike surface in S_1^3. M is called a timelike surface with constant timelike angle and spacelike axis in S_1^3 if there exists a constant spacelike direction W on M such that timelike angle $\theta(\xi, W)$ is constant, where ξ is the spacelike unit normal vector field on M. Conditions to be a constant angle surface are given in de Sitter space by obtaining the parametrization of this surfaces.

Keywords: Constant Angle Surface, de Sitter Space, Constant Timelike Angle, Timelike Surfaces, Unit Normal Vector Field

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FROM SKEW LINES TO A HYPERBOLOID OF ONE SHEET

ABSTRACT

In mathematics, as in any scientific research, we find two tendencies present. On the one hand the tendency toward abstraction seeks to crystallize the logical relations inherent in the maze of material that is being studied, and to correlate the material in a systematic and orderly manner. On the other hand, the tendency toward intuitive understanding fosters a more immediate grasp of the objects one studies, a live rapport with them, so to speak, which stresses the concrete meaning of their relations. As to geometry, in particular, the abstract tendency has led to the magnificent systematic theories of Algebraic Geometry, of Riemannian geometry, and of Topology; these theories make extensive use of abstract reasoning and symbolic calculation in the sense of algebra. Notwithstanding this, it is still as true today as it ever was that intuitive understanding plays a major role in geometry. And such concrete intuition is of great value not only for the research worker, but also for anyone who wishes to study and appreciate the results of research in geometry. In this poster, two interesting problems are discussed. In the first problem, the author presents a proof for the fact that given any 3 skew straight lines in space which are not parallel to a common plane, there always exists a hyperboloid of one sheet containing these three lines. The basic idea of the author's proof is to find some strain transformations that can transform the given 3 lines into positions such that a known hyperboloid of one sheet contains all 3 of them. Due to the arbitrariness and ambiguity of the positions of the three given straight lines, it proved difficult to determine such strain transformations. In the author's method of finding the desired transformations, a very special space hexagon is constructed from the three given straight lines, and from this, the author finishes the rest of the proof using properties of strain transformations. In the proof of the first problem in this poster, the author has a close look at the structure of the regular octahedron, and discovers that the structure of the regular octahedron can be used to visualize the connections between the face-centered cubic lattice packing and the face-centered hexagonal lattice packing when constructing the closest regular packing of spheres in space.

Keywords: Hyperboloid, Hyperboloid Of One Sheet, Lines, Skew Lines, Mathematics

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SOME HERMITTE-HADAMARD TYPE INEQUALITIES VIA MIDPOINT FORMULA FOR s-CONVEX FUNCTIONS

ABSTRACT

In this paper, using a general class of fractional integral operators, we establish new fractional integral inequalities of Hermitte-Hadamard type for s-convex functions. The main results are used to derive Hermitte-Hadamard type inequalities involving the familiar Riemann-Liouville fractional integral operators for s-convex functions.

Keywords: Hermite-Hadamard Inequality, Fractional Integral Operators, s-Convex Functions, Integral

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ON GENERALIZED (k,s)-FRACTIONAL CALCULUS

ABSTRACT

In this paper, we establish the the generalized (k,s)-fractional integral and differantial operators for k-Mittag-Leffler function. The results presented here would provide extensions of those given in earlier works.

Keywords: Fractional Integral, k-Fractional Integral Operatör, (k,s)-Fractional Integral, Integral

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MİLLİ MÜCADELEDE DÖNEMİ SAVAŞLARININ EN KÜÇÜK ÖRTEN AĞAÇ YÖNTEMİ İLE İNCELENMESİ

ÖZ

Birinci Dünya Savaşı sonrasında imzalanan Mondros Mütarekesi ve Sevr Antlaşması, Batılı devletlerin Osmanlı üzerinden Anadolu topraklarını parçalama girişimidir. Yapılan bu müzakereler ile Anadolu, farklı ülkelerin güdümünde etnik parçalara ayrılarak yönetime tabi tutulmak istenmiştir. Ancak, özellikle Sevr'i imzalatmak isteyen Batılı devletlere karşı yapılan Türk Milli Mücadelesi, bu antlaşmanın resmiyete tabi tutulmasına engel olmuştur. Bu çalışmada Batılı devletlerin Anadolu'yu ele geçirme girişimine karşılık, Anadolu'da oluşturulan cephe savaşlarının önemi ve savaşların birbirleriyle olan ilişkilerinin görsel olarak sunulmasına imkân veren, minimum örten ağaç yöntemi kullanılmıştır.

Anahtar Kelimeler: Milli Mücadele, Tarih, Minimum Örten Ağaç, Hiyerarşik Sınıflama, Osmanlı İmparatorluğu

INVESTIGATION OF THE WARS IN THE NATIONAL STRUGGLE PERIOD WITH MINIMUM SPANNING TREE METHOD

ABSTRACT

The Armistice of Mudros and Treaty of Sèvres signed after a World War I is the Western countries' break-up attempt on Anatolian territories. With these negotiations, it was aimed to govern Anatolia dividing it into ethnic groups by several countries. However, the Turkish National Struggle, which was especially against Western countries that wanted the Ottoman Empire to sign the Treaty of Sèvres, prevented this treaty from becoming official. In the current study, the minimum spanning tree method was used to visualize the importance of the multi-front war, which broke out as a conclusion of the attempt of Western countries to conquer Anatolia, and the relationship of these wars with each other.

Keywords: National Struggle, History, Minimum Spanning Tree, Hierarchical clustering, Ottoman Empire

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4-((2,4-DİCHLOROBENZYL)OXY)BENZONİTRİLE BİLEŞİĞİNİN SENTEZİ, DENEYSEL VE TEORİK OLARAK YAPISININ AYDINLATILMASI VE MOLEKÜLER DOKİNG ÇALIŞMASI

ÖZ

Bu çalışmada 4-((2,4-dichlorobenzyl)oxy)benzonitrile bileşiği X-Ray, ^{1}H ve ^{13}C NMR spektral teknikleri kullanılarak karakterize edilerek yapısı aydınlatılmıştır. Deneysel verilere destek olmak amacıyla teoriksel olarak da ^{1}H NMR ve ^{13}C NMR kimyasal kayma değerleri ve frontier moleküler orbital değerleri (FMO), 6-31G(d) temel setli Becke-3-Lee-Yang-Parr (B3LYP) metodu kullanarak incelendi. Ayrıca bu molekülün, 2RKV protein yapısına inhibitör adayı olabilmesi yönünde moleküler doking çalışmaları yapılmıştır. Elde edilen teorik ve deneysel sonuçlar birbirleriyle ve literatür değerleri ile karşılaştırılmıştır.

Anahtar Kelimeler: Dichlorobenzyl, NMR, B3LYP, FMO, Doking

SYNTHESIS OF 4-((2,4-DICHLOROBENZYL) OXY) BENZONITRILE COMPOUND, ELUCIDATION OF ITS EXPERIMENTAL AND THEORETICAL STRUCTURE AND MOLECULAR DOCKING STUDY

ABSTRACT

In this study, the structure of 4-((2,4-dichlorobenzyl) oxy) benzonitrile compound was characterized by using X-Ray, 1H and 13C NMR spectral techniques. In order to support the experimental data, the theoretical ^{1}H NMR and ^{13}C NMR chemical shift values and frontiermolecular orbital values (FMO) of the molecule were analyzed by using Becke-3-Lee-Yang-Parr (B3LYP) method with 6-31G(d) basis set. In addition, This molecule has been subjected to molecular doking studies in order to be an inhibitor candidate for 2RKV protein structure. The theoretical and experimental results obtained are compared with each other and with literature values.

Keywords: Dichlorobenzyl, NMR, B3LYP, FMO, Docking

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INVERSE NODAL PROBLEMS FOR CONVOLUTION TYPE INTEGRO-DIFFERENTIAL EQUATION

ABSTRACT

In this work, the Sturm--Liouville problem perturbated by a convolution type integro-differential operator is studied. We give a uniqueness theorem and algorithm to reconstruct the potential of the problem from nodal points (zeros of eigenfunctions).

Keywords: Sturm-liouville Equation, Eigenvalues, Eigenfunctions, Inverse Nodal Problem, Integro-Differential Equation

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RECONSTRUCTION OF DIRAC-TYPE INTEGRO-DIFFERENTIAL OPERATORS BY NODAL DATA

ABSTRACT

In this work the inverse nodal problem for Dirac differential operator is studied. Firstly, We have obtained a new approach for asymptotic expressions of the integral equations of the solutions of such discussed problems. Then, more accurate estimates of eigenvalues and nodal points have been calculated with the help of these asymptotic. Lastly, We have proved that the operator can be reconstructed by nodal points.

Keywords: Dirac Operator, Igenvalues, Eigenfunctions, Inverse Nodal Problem, Integro-Differential Equation

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THE SPECTRA FOR CESARO TYPE OPERATORS ON c , c_0 AND $l^r\,(1<r<\infty)$

ABSTRACT

Spectral theory is one of the main branches of modern functional analysis and its applications. Roughly speaking, it is concerned with certain inverse operators, their general properties and their relations to the original operators. Such inverse operators arise quite naturally in connection with the problem of solving equations (systems of linear algebraic equations, differential equations, integral equations). For instance, the investigations of boundary value problems by Sturm and Liou- ville and Fredholm's famous theory of integral equations were important to the development of the field. Compact linear operators are very important in applications. For instance, they play a central role in the theory of integral equations and in various problems of mathematical physics. Their properties closely resemble those of operators on finite dimensional spaces. The spectrum of some compact operators has been determined on various sequence spaces. In 1989 Rhaly determined the spectrum and eigenvalues of p-Cesaro operator on the Hilbert space l_2 of square summable sequences. In 1992, Coşkun identified the spectrum of the p-Cesaro operator on l^r for $1<r<\infty$. In 2011, Durna and colleagues first gave a non-discrete spectral decomposition (defect spectrum, approximation point spectrum, and compression spectrum) of an infinitive matrix. In this work, we will determine the spectrum of Cesaro type operators on c, c_0 and $l^r\,(1<r<\infty)$.

Keywords: Cesaro Operator, Spectrum, Fine Spectrum, The Subdivision of The Spectrum, Mathematics

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ŞANLIURFA İLİNDE SATIŞA SUNULAN FERMENTE SUCUKLARIN HİSTOLOJİK MUAYENESİ

ÖZ

Et ürünlerinden olan sucuğun standartlara uygun olarak imal edilip edilmediklerinin kontrolü ve kalitelerinin sınıflandırılmasında; kimyasal, mikrobiyolojik ve organoleptik muayenelere ilaveten histolojik muayenelerin de yapılmasının yararlı ve etkin olacağı yapılan araştırmalarda tespit edilmiştir. Bu çalışmada, Şanlıurfa ilinde perakende olarak satılan sucukların bileşiminde iç organ ve dokuların histolojik tanı yöntemi ile belirlenmesi amaçlanmıştır. Perakende olarak satılan 32 adet sucuk şehir merkezindeki kasap ve marketlerden temin edilmiştir ve histolojik analizi Crossman'ın üçlü boyama yöntemi ile yapılmıştır. Fermente sucuk örneklerinde kıkırdak doku, lenf dokusu, bağ dokusu, deri ve iç organ belirlenmiştir. Analiz edilen sucuk ulusal standartların belirlediği özellikleri taşımadığı tespit edilmiştir. Bu çalışmada Şanlıurfa ilinden toplanan numunelerde et ürünlerine kas dokusu haricinde farklı birçok hayvansal dokunun da karıştırıldığı tespit edilmiş, bu dokuların sucuklarda histolojik analizle güvenilir olarak tespit edilebildiği belirlenmiştir. Böylelikle et ürünlerinin standartlara uygunluğunun belirlenmesi ve tüketici sağlığının korunması açısından histolojik analizlerin diğer analizlere ilave olarak sistemli ve kontrollü bir şekilde uygulanmasının güvenli gıda üretiminde faydalı olacağı kanaatine varılmıştır.

Anahtar Kelimeler: Sucuk, Boyama, Histolojik Muayene, Doku, Şanlıurfa

HISTOLOGICAL EXAMINATION OF FERMENTED SAUSAGES SERVED IN SANLIURFA

ABSTRACT

Meat sausage products, the standard for the classification of control and whether they are manufactured in accordance with quality; chemical, microbiological and organoleptic beneficial in addition to the examination of histological examination and have been identified in studies to be effective. This study was conducted for identifying the histological aspects of quality criteria in sausages obtained retail sold from local markets in the province of Şanlıurfa. All samples (32 Fermented Turkish Soudjouk) were obtained from markets and grocery stores in the city center. Histological analysis of the samples was performed by Crossmann's triple staining method. Among examinated Sausage samples contained cartilage, lenfoid tissue, connective tissue, bone tissue, skin tissue and glandular epithelial tissue that were mostly seromucous in the nature. In this study, except Erzurum meat products into the muscle tissue in the samples collected from the provinces were identified as many different animal tissue in mixed sausages of these tissues and are determined can be measured reliably histological analysis in sausages. Thus, the determination of compliance with the standards of meat products and consumer health protection for histological analysis in addition to other analysis and control system is concluded to be useful in the implementation in a manner safe food production.

Keywords: Fermented Sausage, Sausage, Histological Examination, Tissue, Şanlıurfa

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KAZLARDA (Anser anser) NAZAL KONKA MUKOZASININ HİSTOLOJİK VE HİSTOKİMYASAL YAPISI

ÖZ

Ön konkanın giriş bölümünün çok katlı yassı keratinize epitel ile örtülmüş, orta konkaya doğru epitelin dip kısımları tubuler bez yapılarına açılan, modifiye çok katlı yassı keratinize epitele dönüşmüştü. Giriş bölümünün propriyasında çok sayıda grandry ve herbst korpusküllerine rastlanırken, orta konkaya geçişte lamina propriyada soliter lenf folliküllleri ve lenfosit infiltrasyonları gözlendi. Orta konkadaki kıkırdaklar, iki tam bir yarım halka şeklinde, spiral yapılı yalancı çok katlı prizmatik epitelle örtüldüğü belirlendi. Memelilerden farklı olarak kadeh hücreleri yerine epitelde çoğunlukla intraepitelyal alveolar bezler bulunuyordu. Spiralin içteki konkav bölgesinde agregat lenf folliküllleri yerleşmişti. Arka konka bölümü orta konkaya benziyordu daha az kıvrımlıydı ve olfaktorik epitel ile örtülüydü. Propriyada seröz Bowman bezlerine ait korpus glandulelere ve olfaktorik sinir teli demetlerine rastlandı. Histokimyasal olarak konkada kıkırdak dışında sülfatlı müsine rastlanmazken, ön ve orta konkadaki intraepitelyal bezlerin karboksilli asit müsin çoğunlukta olmak üzere daha az miktarda nötral müsin içeren mikst özellikteydi. Orta konkadaki spiralin en dış halkasında az periodat reaktif müsinler bulunuyordu. Orta konkadaki tubulo-alveoler bezlerde asit müsinler, iç bükey olan kısımlarındaki sığ intraepithelial alveolar bezlerde ise nötral müsinler daha yoğundu. Nazal konkada müsin içeren bezlerdeki PAS reaktivitesinde farklılık gözlenmezken, hiçbir nazal konka bölümünde glikojen bulunmadığı, arka konka bölgesinde bulunan Bowman bezlerinin ise müsin içermediği belirlendi.

Anahtar Kelimeler: Kaz (Anser anser), Nazal Konka, Histoloji, Histokimya, Fonksiyon

THE HISTOLOGICAL AND HISTOCHEMICAL STRUCTURE OF THE MUCOSA OF THE NASAL CONCHAE IN GEESE (*Anser anser*)

ABSTRACT

Histological examination showed that while the rostral concha was lined by squamous epithelium at its entrance, towards the middle concha it was lined by modified keratinized squamous epithelium, the deep layer of which opened into tubular glandular structures containing secretory epithelium. The lamina propria of the rostral concha contained Grandry's and Herbst corpuscles. The cartilaginous rings in the middle concha displayed a highly convoluted structure. These scrolls were lined by pseudostratified columnar epithelium. Aggregated lymphoid follicles were observed in the innermost concave part of this spiral. The caudal concha was similar to the middle concha in structure. Furthermore, its lamina propria contained the corpus glandulae of serous Bowman's glands. Histochemical while none of the conchae contained sulphated mucin. The outermost scroll of the spiral, which constituted the middle concha. Of the glands localised to the mucosa of the middle concha. In the nasal conchae of geese PAS reaction did not vary in the mucin-containing glands.

Keywords: Function, Goose (Anser anser), Histology, Histochemistry, Nasal Concha

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PRODUCTION OF TRADITIONAL YOGHURT USING STARTER CULTURE OBTAINED FROM KOUMISS

ABSTRACT

The objective of this study is to use *Lactobacillus paraplantarum* and *Leuconostoc mesenteroides subs. cremoris* to obtain koumiss and practice them in preparation of yoghurt. Twenty five samples of koumiss bought from different places of Kyrgyzstan were used to obtain *Lactobacillus paraplantarum* and *Leuconostoc mesenteroides subs. cremoris*. Standard microbiological methods were conducted for isolation of starter culture microorganisms. Identification process was performed with characterizing by MALDI-TOF MS. The obtained starter culture microorganisms were used in preparation of yoghurt according to the traditional method of yoghurt production. Produced yoghurt samples and control group were exposed to sensorial analysis. Sensorial and physical properties of yoghurt prepared by using the isolated strains from koumiss were not found to be significantly different from commercial yogurt in statistical analyses. In conclusion, it was seen that starter culture obtained from koumiss can be used in production of yoghurt and also received results can be used as a base for investigations on using culture microorganisms obtained from koumiss in production of different types of dairy products.

Keywords: Koumiss, Leuconostoc mesenteroides subs. cremoris, Lactobacillus paraplantarum, Lactobacillus ssp., Yoghurt

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ARSENIC LEVELS IN CHICKEN MEAT AND GIBLETS RETAILED IN KAYSERİ

ABSTRACT

Arsenic is commonly present in the nature and could be introduced into the food chain by many different food groups. This study was carried out to determine the arsenic levels of chicken meat and giblets consumed in Kayseri, Turkey. The arsenic residues of a total of 21 samples (10 fresh chicken meat and 11 chicken giblets) obtained randomly from different retail markets were analyzed with Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The mean arsenic levels in chicken meat were determined as 0.081±0.035µg/g whereas in chicken giblet the average was found to be 0.055±0.012 µg/g. No statistically significant differences were observed between the arsenic levels of chicken meat and giblets analyzed ($p>0.05$). Therefore it is needed to monitor Turkish people expose to arsenic and other toxic trace elements by large scale total diet studies and take measures as regularly done in the USA, Japan and Europe.

Keywords: Arsenic, Chicken Giblets, Chicken Meat, ICP-MS, Kayseri

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AFLATOXIN M1 LEVELS IN RAW SHEEP, GOAT AND COW MILKS IN NIGDE PROVINCE

ABSTRACT

In this study, it was aimed to investigate the presence of AFM1 in raw cow, sheep and goat milk produced in Niğde and to evaluate whether it poses a risk for public health when compared legal limits and to compare the toxin levels in milk from different species. In the study, 90 milk samples from different animal species were collected and analyzed by ELISA.AFM1 contents of all sheep and goat milk samples were below the legal limits, however 3 of the raw cow milk samples (10%) exceeded the limits (50ng/mL). Statistically significant differences were observed between AFM1 levels in milk of different species ($p<0.05$).In conclusion, it was observed that no AFM1 exposure risk is of concern in case of sheep and goat milk consumption in Niğde. However, presence of AFM1 in 10% of cow milk samples should not be ignored for public health. Systematic control of milk and feeding stuff is needed.

Keywords: Aflatoxin M1, Raw Milk, ELISA, Public Health, Niğde

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SÜT SIĞIRCILIĞI İŞLETMELERİNDE BUZAĞI KAYIPLARI

ÖZ

Kars ili ekonomisi, kırsal ekonomi karakteri göstermektedir. İl kalkınmasında lokomotif sektör konumunda olan hayvancılık sektöründen yeterince yararlanamamaktadır. İldeki hayvancılık faaliyetlerinde beklenen üretim ve verim artışının sağlanamamasına neden olan sorunların başında buzağı hastalıkları gelmektedir. Bu çalışmada Türkiye'de canlı sığır varlığı açısından ilk beş il içerisinde yer alan Kars ilindeki süt sığırcılık işletmelerindeki buzağı bakım-besleme uygulamalarının ve bilgi düzeyindeki farklılıkların tespit edilmesi amaçlanmıştır. Çalışmada 2015-2016 yıllarında doğan buzağılar ile ilgili olarak işletme sahiplerine anket uygulanmış olup, hasta ve ölen buzağılara ilişkin bilgiler elde edilmiştir. İşletme sahiplerinin %89.0'u buzağılar için ayrı bir bölme olduğu ve %68.5'i buzağı doğduktan sonra ilk 6 saat içinde yavruya kolostrum verildiği ifade etmiştir. Ancak hasta buzağıların sağlıklı buzağılardan ayrılması ve doğumdan hemen sonra buzağının göbek kordonunu temizleme oranının sırasıyla %57.4 ile %55.6 oranında olduğu belirlenmiştir. Çalışmada buzağılarda; en fazla ishal, solunum yolu enfeksiyonları daha az sıklıkta ise göbek enfeksiyonu, timpani, menenjit ve diğer nedenlere bağlı hastalıkların görüldüğü belirlenmiştir. Sonuç olarak uygun bakım-besleme ile buzağı kayıpları en aza indirilebilir ve işletmeler daha rantable hale gelebilir.

Anahtar Kelimeler: Buzağı Kayıpları, Ekonomik Kayıp, Hayvan Hastalıkları, Süt Sığırcılık İşletmeleri, Türkiye

LOSS OF CALVES IN DAIRY CATTLE ENTERPRISES

ABSTRACT

The economic character of Kars sets an example of rural economy. Livestock industry, which is a key factor for economic development of the city, is not used to great effect adequately. The most important reason for not providing expected production and increase in productivity in livestock activities in Kars is calves illnesses. In this study, it is aimed to identify the differences on knowledge level and animal care and feeding practices in dairy cattle enterprises in Kars, which is one the five cities having the most livestock in Turkey. In the study, the proprietors were conducted a survey about calves born in 2015-2016 and data about ill and dead calves were obtained. %89.0 of the proprietors stated that they had a separate place for calves. In addition, %68.5 of the proprietors pointed out that calves are given colostrum in six hours after being born. However, it has been determined that the rates of separating ill calves from healthy calves and cleaning umbilical cords of calves just after the birth are respectively %57.4 and %55.6. In the study, it has been stated that for calves, diarrhoea and respiratory tract infections cause illnesses more often than umbilical cords infections, tympani, meningitis and other reasons do. Consequently, loss of calves can be minimized by appropriate animal care and feeding practices and the enterprises can be more lucrative.

Keywords: Animal Illnesses, Dairy Cattle Enterprises, Economic Loss, Loss Of Calves, Turkey

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AFYONKARAHİSAR'DA SATIŞA SUNULAN TAVUK İÇ ORGANLARINDAN *SALMONELLA* SPP. VE *LISTERIA MONOCYTOGENES*'İN İMMONOMAGNETİK SEPERASYON YÖNTEMİYLE İZOLASYONU VE İZOLATLARIN ANTİBİYOTİK DİRENÇLİLİĞİNİN BELİRLENMESİ

ÖZ

Bu çalışmada, Ağustos 2013-Şubat 2015 tarihleri arasında Afyonkarahisar'da taze olarak tüketime sunulan 100 yürek, 100 taşlık ve 100 ciğerden oluşan toplam 300 tavuk iç organ ürününde *L. monocytogenes* ve *Salmonella* türlerinin, İmmuno Magnetik Seperasyon tekniği (İMS) ile saptanması ve izolatların antibiyotik duyarlılık profillerinin disk difüzyon metoduyla belirlenmesi amaçlanmıştır. İç organ örneklerinden %13 (39/300) *Salmonella* spp., %2.6 düzeyinde (300/8) *Listeria monocytogenes* (*L. monocytogenes*) saptandı. *Salmonella* spp. izolatlarının %100'ünün tetrasiklin, klortetrasiklin ve oksitetrasiklin'e, %64.1'inin penisilin'e, %48.7'si ampisilin'e, %46.1'inin florfenikol'e, %43.5'inin amoksisilin'e, %26'sının streptomisin'e, %15.3'ünün enrofloksasin'e, %7.6'sının trimetoprim/sülfadiazin'e dirençli olduğu saptanırken, gentamisin dirençliliği gözlenmedi. *L. monocytogenes* izolatlarının (8) %62.5'inin tetrasiklin, klortetrasiklin, oksitetrasiklin ve trimetoprim/sülfadiazin'e, %50'sinin amoksisilin'e, florfenikol'e, %37.5'inin enrofloksasin'e, %25'inin ampisilin ve penisilin'e, %12.5'inin streptomisin'e dirençli olduğu belirlendi. *Salmonella* spp. ve *L. monocytogenes* izolatlarının hiçbirinin gentamisin'e direnç geliştirmediği saptandı.

Anahtar Kelimeler: Tavuk, İç organ, Antibiyotik Dirençlilik, *Listeria* spp., *Salmonella* spp

ISOLATION OF *SALMONELLA* SPP. AND *LISTERIA MONOCYTOGENES* BY IMMONOMAGNETIC SEPERATION METHOD AND DETECTION OF ANTIBIOTIC RESISTANCE OF ISOLATES FROM INTERNAL ORGANS OF CHICKEN SOLD IN AFYONKARAHİSAR

ABSTRACT

In this study, for a total of 300 chicken organ including 100 heart, 100 gizzard and 100 heart products freshly served for consumption was aimed to determine *L. monocytogenes* and *Salmonella* spp., by Immuno Magnetic Seperation technique (IMS) and antibiotic susceptibility profiles of isolates by disc diffusion method between August 2013 and February 2015 in Afyonkarahisar. *Salmonella* spp. and *L. monocytogenes* were detected in 13% (39/300) and 2.6% (300/8) of internal organs, respectively. *Salmonella* spp. isolates were found to be resistant to 100% tetracycline, chlortetracycline and oxytetracycline, 64.1% to penicillin, 48.7% to ampicillin, 46.1% to florfenicol, 43.5% to amoxicillin, 26% to streptomycin, 15.3% to enrofloxacin, 7.6% to trimethoprim / sulfadiazine while gentamicin resistance was not observed. *L. monocytogenes* isolates were determined %62.5 (8) resistance to tetracycline, chlortetracycline, oxytetracycline and trimethoprim / sulfadiazine, 50% to amoxicillin, florfenicol, 37.5% to enrofloxacin, 25% to ampicillin and penicillin and 12.5% to streptomycin. *Salmonella* spp. and *L. monocytogenes* isolates did not develop resistance to gentamicin.

Keywords: Chicken, Internal Organ, Antibiotic Resistant, *Listeria* spp., *Salmonella* spp

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INVESTIGATION OF ANTIMICROBIAL EFFECT OF SOME PLANT EXTRACTS

ABSTRACT

In this study, we investigated anti-microbial effects of ethanol extracts of *Punica granatum* L. hibiscus, *Capsella bursa-pastoris*, *Teucrium polium*, *Vitis vinifera* L. CV., *Vitis vinifera* L. and *Rosemary officinalis*; and n-hexane extract of *Lupinus albus* L. seed extract on various microorganisms. *Punica granatum* L. extract was found to have much more antimicrobial activity (7/9; 77.8%) than the other extracts examined in this study. All microorganisms except *Enterococcus faecalis* and *Enterococcus durans* were quite susceptible to this substance, with *S. aureus* as the most susceptible species. *Capsella bursa-pastoris* showed antimicrobial activity against *V. vulnificus*, *S. aureus*, *L. monocytogenes*, *K. pneumoniae*, and *E. coli* O157H7. *Teucrium polium* was effective against to *V. vulnificus*, *S. aureus*, *S. paucimobilis K. pneumoniae*, *E. durans*, and *E. coli* O157H7; *Vitis vinifera* L. CV was effective against all studied bacteria except *E. faecalis* and *E. durans*. Among all studied extracts, only the *Punica granatum* L. showed the profound antifungal effect on yeasts.

Keywords: Plant Extract, Antimicrobial Activity, Pathogen, Yeast, *Lupinus albus* L.

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MICROBIOLOGICAL AND CHEMICAL PROPERTIES OF KISHK (KURUT) SAMPLES COLLECTED FROM IRANIAN

ABSTRACT

In this study, we aimed to investigate microbiological and chemical properties of kishk samples obtained from Maku city of Iran. For this purpose, we examined 42 conventional kishk, 15 conventional liquid kishk and 29 industrial liquid kishk samples with regard to their microbiological and chemical properties. In kishk samples, total mesophilic aerophilic bacteria, yeast-mold, *Lactococcus*, *Lactobacillus*, *Enterococcus*, *Enterobacteriaceae*, *Staphylococcus aureus*, *Escherichia coli* and coliform bacteria were determined. pH, water activity, acidity (% lactic acid), salt, fat, protein, ash, moisture, were detected in the kishk samples. As kishk has low microorganism load and high protein content, we believe increased consumption of kishk will have favorable outcomes in terms of public health.

Keywords: Traditional Kurut, Traditional Liquid Kurut, Industrial Liquid Kurut, Chemical Quality, Microbiological Quality

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THE EFFECTS OF *TARAXACUM OFFICINALE* L. AND *HYPERICUM SCABRUM* L. EXTRACT ON MEAT QUALİTY OF BROİLERS SUBJECTED TO HEAT STRESS

ABSTRACT

Due to the recent prohibition of antibiotic use in the poultry industry, use of vegetable extracts and volatile fatty acids in the prevention of infections and decreasing negative effects of heat stress has been gradually increased. The aim of this study was to determine the effects of addition of ethanol extracts of vegetables named *Taraxacum officinale* L. and Hypericum *scabrum* L. to broiler rations growth under heat stress on the quality of meat. A hundred and eight Ross 308 broiler chicks were used as the animal material. Broiler chicks were randomly divided into 6 groups and each group contained 18 chicks. The first group was a control group in which animals were fed additive-free. The second group (TOE) received bait with the addition of 0.1% T. *officinale* L. extract and the third group (HSE) received bait with the addition of 0,1% *H. scabrum* L. extract. The fourth group was stress group (S) and were applied a heat of 38-39°C and were fed with standart bait without additives. The fifth group (STOE) received bait added 0,1% *T. officinale* L. extract in addition to the heat of 38-39°C and the sixth group (SHSE) received bait added 0.1% *H. scabrum* L. Extract in addition to the heat of 38-39°C. Adaptation of broilers to the circumstances was provided in 7 days. The vegetable extract was applied in the TOE, HSE, STOE and SHSE groups. Heat stress was applied in S, STOE, and SHSE in order that the heat stress was 38-39°C between 15th day and 30th day. The animals were cut on the 45th day of the research and they were stored at +4°C following cleaning of feathers and visceral organs. Microbiological and chemical analyses were performed in the chicken meats on days 1, 4, 7, 10 and 13 of storage. The duration of storage was found to be significantly effective on the microbiological quality of the drumstick and chicken breasts in conclusion of the study. Application of STOE was found to be effective on the number of total aerobic mesophilic bacteria, lactic acid bacteria, coliform *bacteria*, *Staphylococcus/Micrococcus* and *Pseudomonas spp.* in the breast meat. A significant effect, especially after the 7th day of storage, was found in the numbers of total aero bicpsychrophilic bacteria, oliform, *Staphylococcus/Micrococcus* and *Pseudomonas spp.* in the drumstick meat of both STOE and SHSE groups. STOE and SHSE applied on breast meta was found to be effective on L* value and STOE was found to be effective on a* value among color parameters. SHSE, especially when applied to breast meat was found to be effective on b* value starting from the 4th day of storage. The a* value of drumsticks that had been applied STOE were found to be higher compared to other groups starting from the 7th day of storage. In conclusion, application of *T. officinale* L. extracts in combination with heat stress was found to be effective on the quality of meat.

Keywords: *Taraxacum officinale L.*, *Hypericum scabrum L.*, Plant Extract, Meat Quality, Broyler

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SODYUM NİTRİT İLE RATLARDA OLUŞTURULAN HEPATOTOKSİSİTE ÜZERİNE *TRİGONELLA FOENUM-GRAECUM* L. TOHUM EKSTRAKTININ ETKİLERİ

ÖZ

İnsanlar sürekli gıda katkı maddeleri gibi farklı kimyasallara maruz kalmaktadır. Günümüzde birçok kronik hastalık ve beslenme arasındaki bağlantılar araştırıldığı gibi hastalıkların tedavisi ve kontrol altında tutulmasında etkili olabileceği düşünülen bitkisel doğal kaynaklar ve bunların etken maddelerinin araştırılmasına yönelim artmaktadır. Yapılan çalışmada sodyum nitrit ile indüklenen hepatotoksisite üzerine *Trigonella foenum-graecum* L. ekstraktının (TFG) etkilerinin araştırılması amaçlandı. 3 aylık deneysel uygulamadan sonra serum AST ve ALT düzeylerinin, sadece sodyum nitrit verilen grupta kontrol grubuna kıyasla önemli düzeyde arttığı ($p<0.001$, $p<0.05$), TFG+sodyum nitrit uygulan grupta ise sodyum nitrit grubuna göre önemli düzeyde azaldığı belirlendi ($p<0.001$, $p<0.05$). Karaciğer dokusunda IL-6 ve TNF-α düzeylerinde sodyum nitrit grubunda önemli düzeyde artış ($p<0.001$, $p<0.05$), TFG+sodyum nitrit uygulan grupta ise IL-6 seviyesinde önemli düzeyde azalış belirlendi ($p<0.01$). Yapılan histopatolojik incelemelerde sodyum nitrit grubunda tüm deneklerde, değişken şiddet ve yaygınlıkta hepatosit hasarı izlendi. TFG+sodyum nitrit verilen grupta ise deneklerin yarısında hepatosit hasarı görüldü. Sonuç olarak; sodyum nitrit hepatotoksisitesindeki etkilerin hafifletilmesinde eksojen olarak kullanılan TFG'nin faydalı olabileceği kanaatine varıldı.

Anahtar Kelimeler: Sodyum Nitrit, *Trigonella foenum-graecum* L., Hepatotoksisite, IL-6, TNF-α, AST

EFFECTS OF *TRIGONELLA FOENUM-GRAECUM* L. SEED EXTRACTS ON HEPATOTOXICITY INDUCED BY SODIUM NITRITE IN RATS

ABSTRACT

People are constantly exposed to different chemicals such as food additives. Nowadays, as the links between many chronic diseases and nutrition are being investigated, as well as increases the tend to research for herbal natural resources and their active substances which are thought to be effective in the treatment and control of diseases. In the present study, it was aimed to investigate the effects of *Trigonella foenum-graecum* L. extract (TFG) on sodium nitrite-induced hepatotoxicity. After 3 months of experimental application, serum AST and ALT levels were found to be significantly increased ($p<0.001$, $p<0.05$) only in the sodium nitrite group compared to the control group and significantly decreased in the TFG + sodium nitrite group compared to the sodium nitrite group ($p<0.001$, $p<0.05$). In the liver tissue was determined significant increase in the level of IL-6 and TNF-α in the sodium nitrite group ($p<0.001$, $p<0.05$) and in the level of IL-6 decreased significantly in the TFG + sodium nitrite group ($p<0.01$). Histopathological examinations showed hepatocyte damage in variable intensity and prevalence in all subjects in the sodium nitrite group. Hepatocyte damage was observed in half of the subjects in the group given TFG + sodium nitrite. As a result; It was concluded that TFG, which is used exogenously in alleviating the effects of sodium nitrite hepatotoxicity, may be beneficial.

Keywords: Sodium Nitrite, *Trigonella foenum-graecum* L., Hepatotoxicity, IL-6, TNF-a, AST

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İSTANBUL, EYÜPSULTAN CAFER PAŞA TÜRBESİNDEKİ MEZAR TAŞLARININ YELEK TASARIMLARINDA KULLANILMASI

ÖZ

Dünya milletlerinin çeşitli kültürleri vardır. Bunlar arasında Türk milletinin kendine özgü, köklü ve zengin milli kültürü büyük önem taşır. Bu kültür Türklüğün doğuşu ile başlamış, zamanla gelişerek binlerce yıl, Türk toplumlarını "millet olarak ayakta tutmuş onlara "Türklük" damgasını vurmuştur. Osmanlı mezar taşları da, büyük bir kültürü yansıtan açık hava müzesi gibidir. İstanbul Eyüp Sultan Cafer Paşa türbesindeki mezar taşları da özgün sanatsal şahane tasarım unsurlarındandır. İstanbul'un fethinden başlayarak Osmanlı İmparatorluk dönemi taş işçiliğinde önemli bir yere sahip olan Eyüpsultan türbe hazire ve mezarlıklarının Türk sanat tarihinde önemli bir yeri vardır. Bu mezarlıkları bezeyen taşlar giderek bir atelyeye dönüşen ve örnekleri İstanbul dışında oluşan parçalarıyla Eyüp Sultan'da ki ustaların hem fonetik hem plastik sanatçılar alanlarında ustalaştıkları düzeyin belgeleridir. Bu mezar taşları Osmanlı İmparatorluk dönemi kültürünü yansıtan farklı görsellerdir. Bu görsellerle giysi tasarımlarında ilginç yenilikler yaratılabilir. Bu çalışmanın amacı, Osmanlı İmparatorluğu'nun önemli taş işçiliğini yansıtan bu mezar taşlarındaki yok olmaya yüz tutmuş, Türk kültürünün devamını sağlayan geleneksel sanatlarımızı incelemek ve bunu giysi tasarımlarına aktarmaktır. Araştırma kültürel mirasımızın korunması tanınması ve gelecek kuşaklara aktarılmasını; bezeme teknikleri ve kompozisyon özelliklerini yelek tasarımlarında kullanarak belgeleyip kaynak oluşturması açısından önemlidir.

Anahtar Kelimeler: Mezar Taşı, Tasarım, Yelek Kültürü, Bezeme, İstanbul

THE USE OF ISTANBUL EYÜP SULTAN CAFER PAŞA TOMBSTONES IN VEST DESIGN

ABSTRACT

World nations have diverse cultures. Among them, the Turkish nation's unique, rooted and rich national culture is of great importance. This culture began with the birth of Turkishness, developed over time and struck Turkish society as a "nation" for thousands of years. The Ottoman tombs are like open-air museums that reflect a great culture. The tombstones in İstanbul, Eyüp Sultan Cafer Paşa Turbine are also original artistic of elements. Having an important place in the stone work of the Ottoman Empire starting from the conquest of İstanbul, Eyüp Sultan has an important place in the history of Turkish art of tombs and cemeteries. The gravestones of these cemeteries gradually become a workshop and the masterpieces of Eyüpsultan, whose pieces are made out of İstanbul, are the documents that they have mastered both in the fields of phonetics and plastic artists. These tombstones are different images reflecting the ottoman imperial culture. With these visual, interesting innovations can be created in the design of clothes. The aim of work is to examine our traditional arts, which provide the continuation of Turkish culture, and to transfer it to the designs of the garments, which have become obsolete in these tombstones that reflect the important stone workings of the Ottoman Empire. The study suggests that protection of our culture heritage should be recognized and passed on to future generations; it is important in terms of documenting and creating resources using veneer techniques and composition properties in vest designs.

Keywords: Tombstone, Design, Vest Culture, Embellishment, Istanbul

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MUHASEBE VE VERGİ UYGULAMALARI ÖĞRENCİLERİNİN MUHASEBE MESLEK ALGISI

ÖZ

İster gelişmiş olsun, ister gelişmekte olan bir ülke olsun mali sisteminin düzenli işleyebilmesinde muhasebe standartları ve işleyişinin düzenliliği de önemlidir. Teknik olarak ülkedeki muhasebe uygulaması kanunlarla şekillendirilmiş olsa bile bu sistemi uygulayan elemanlarında mesleki eğitimlerinin iyi verilmiş olması gerekir. Ayrıca insanlar mesleklerini icra ederken kendilerini mesleğe aidiyet duygusuyla bağlı hisseder, bir meslek mensubu olarak görürlerse yapılan iş ve sonucunda alınan iş tatmini de fazla olacaktır. Türkiye'de Muhasebe ve Vergi Uygulamaları Programı Yükseköğrenim içerisinde yer almaktadır. Muhasebe ve Vergi Programında okuyan öğrencilerin eğitim hayatı içerisinde mesleki algılarında bir değişim olup olmadığı önemli bir konudur. Mesleki algılarında meydana gelen olumlu bir değişim hem verilen eğitimin öğrenciler tarafından daha iyi algılanmasına, hem de ileride icra edeceği meslekte iş tatmini oluşmasını kolaylaştıracaktır. Araştırmada yöntem olarak; Balıkesir ili ile Bigadiç, Sındırgı, Bandırma, Burhaniye, Savaştepe ve Havran ilçeleri Meslek Yüksekokullarında okuyan Muhasebe ve Vergi uygulamaları öğrencilerine birinci sınıfa geldiklerinde ve daha sonra mezun aşamasına geldiklerinde aynı anket uygulanmıştır. Anket "Likert Ölçeğine" göre hazırlanmış olup, 10 sorudan oluşmaktadır. Araştırmaya göre birinci sınıfta öğrencilerin mesleki algıları yüksek iken ikinci sınıfta bu algılarını düştüğünü görmekteyiz.

Anahtar Kelimeler: Muhasebe, Vergi, Meslek, Mesleki Eğitim, Meslek Algısı

ACCOUNTNG AND TAX APPLICATIONS PERCEPTIONS OF STUDENTS TO ACCOUNTING PROFESSION

ABSTRACT

Whether developed or it is a developing country and its ability to handle the financial system regularly the regularity of the accounting standards and the operation is also important. Technically accounting practices in the country even though shaped by the laws of vocational training in implementing this system, elements must be given completely. In addition, people feel connected with the sense of belonging to the profession themselves while performing their profession, do they see business as a member of a profession and job satisfaction as well received as the result will be. Accounting and Taxation Program in Turkey is included in Higher Education. It is an important issue whether there is a change in the professional perceptions of the students studying in the Accounting and Tax Program within the educational life. A positive change in the professional perceptions will facilitate both the perception of the given education by the students and the formation of job satisfaction in the profession to be carried out in the future. Study found that as a method: Balıkesir province with district of Bigadiç, Sındırgı, Bandırma Burhaniye, Savaştepe and Havran. The same questionnaire was applied when the accounting and tax practices in Vocational Schools came to the students in the first class and later in the graduation stage. Survey has been prepared by "Likert Scale", consists of 10 questions. According to the survey, while the perceptions of the students in the first grade are high, we see that these perceptions are falling in the second grade.

Keywords: Accounting, Tax, Profession, Vocational Training, Occupational Perception

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KAMU HARCAMALARININ BİLEŞENLERİ-EKONOMİK BÜYÜME İLİŞKİSİ: TÜRKİYE 1988-2016

ÖZ

Ekonomik büyüme ve kamu harcamaları arasındaki ilişki iktisat literatüründe sıkça tartışılan konulardan biridir. Özellikle 1960'lı yıllardan sonra hız kazanan bu tartışmaların temelinde ise Wagner ve Keynes tarafından geliştirilen teoriler yer almaktadır. Wagner ekonomik büyümenin kamu harcamalarını artırdığını savunurken Keynes, kamu harcamalarındaki artışın ekonomik büyümeyi hızlandırdığını öne sürmektedir. Türkiye'de 1988-2016 döneminde ekonomik büyüme ve kamu harcamaları arasındaki ilişkinin her iki teori açısından değerlendirildiği bu çalışmada, kamu harcamalarının bileşenleri ile ekonomik büyüme arasındaki etkileşimler araştırılmıştır. Kamu harcamaları ekonomik ve fonksiyonel sınıflandırma açısından ayrıştırılarak, büyüme ile aralarındaki ilişki VAR ve Granger nedensellik analizleri ile tespit edilmiştir. VAR analizinden elde edilen bulgular, ekonomik sınıflandırma kapsamında cari ve transfer harcamaları ile büyüme, fonksiyonel sınıflandırma kapsamında ise savunma ve sosyal güvenlik harcamaları ile büyüme arasında ilişki bulunduğuna işaret etmektedir. Granger nedensellik testi sonuçları ise ekonomik sınıflandırma için Keynesyen yaklaşımı, fonksiyonel sınıflandırma için Wagner kuramını desteklemektedir. Kısaca, kamu harcamalarının ekonomik sınıflandırmasında yer alan cari harcamalarından büyümeye, fonksiyonel sınıflandırma kapsamında ise büyümeden eğitim harcamalarına doğru bir nedensellik söz konusudur.

Anahtar Kelimeler: Kamu Harcamaları, Büyüme, VAR ve Granger Nedensellik, Wagner Teoremi, Keynesyen Yaklaşım, Ekonomik ve Fonksiyonel Kamu Harcamaları Sınıflandırması

COMPONENTS OF GOVERNMENT EXPENDITURES-ECONOMIC GROWTH RELATIONSHIP: TURKEY 1988-2016

ABSTRACT

The relationship between economic growth and government expenditure is one of the frequently discussed issues in the economic literature. This debate, which gathered pace especially after the 1960s, had originated from the theories of Wagner and Keynes. While Wagner argues that economic growth promotes government expenditures, according to Keynes government expenditures give rise to economic growth. This study analyzes the relationship between government expenditures and economic growth for the period of 1988-2016 in the Turkey, in the context of both theories. Government expenditures are disaggregated subject to economic and functional classification and relationship between the disaggregated government expenditures and economic growth is analyzed by using VAR technique and Granger Causality tests. Findings of VAR analysis illustrate that there is a relationship between transfer payments (component of economic classification of government expenditures) and current expenditures with growth, and also between defense and social security spending (components of functional classification of government expenditures) and growth. Granger Causality tests support the Keynesian theory for economic classification and the Wagner hypothesis for functional classification of government expenditures. In substance, there is causality from current expenditures economic classification) to growth and from growth to education expenditures (functional classification) in Turkey.

Keywords: Government Expenditures, Growth, VAR and Granger Causality, Wagner Theory, Keynesian Theory, Economic and Functional Classification of Government Expenditures

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ÜÇ TRAJEDİ ÜÇ ŞAİR ÜÇ MERSİYE: ÜÇ SULTANA YAZILAN MODERN MERSİYELER

ÖZ

Mersiye, klasik Türk şiirinde ölenin ardından duyulan üzüntünün dile getirildiği şiir türüdür. Bu şiir türü edebiyat tarihimizde en çok sultanlara ve şehzadelere yazılmıştır. Bu şiirlerde bir yandan ölümden kaynaklanan acılar dile getirilip feleğe sitem edilirken diğer yandan ise ölenlerin olumlu vasıfları anlatılırdı. Bu çalışmada biri-genelde devrik sultanlara- ancak göndermelerinden ötürü II. Osman'a, ikisi şehzade (Şehzade Cem ve Şehzade Bayezid), hanedandan üç kişiye yazılan günümüzün üç şairinin (Muhsin Macit, Ahmet Efe ve Ali Ural) modern mersiyeleri, mersiye geleneğinin devamı açısından ele alınacaktır. Hanedandan üç isim de trajik şekilde can vermiş, ecelleriyle ölmemişlerdir. Üçü de şair olan bu sultan ve şehzade şairlerin trajik ölümleriyle ilgili kısa tarihi bilgiler bağlamında haklarında yazılan diğer şiirlere, geleneksel mersiyelere ve kendi şiirlerinden örneklere de yer verilecektir. Böylelikle hem klasik şiir geleneğinin modern şiir üzerindeki etkisine kısaca değinilecek hem de gelenekten yararlanan şairlerin şiirleri üzerinden mersiye türünün gelenekten moderne evrilen özelliği üzerinde durulacaktır. Çalışmamızda Necip Fazıl Kısakürek ve Bülent Ecevit gibi şairlerin de hanedandan isimlerin yaşanan trajedilerine yönelik telmihleri de aynı bağlamda dikkate sunulacaktır.

Anahtar Kelimeler: Mersiye, Gelenek, Cem Sultan, Bayezid, Genç Osman

THREE TRAGEDIES, THREE POETS, THREE ELEGIES: MODERN ELEGIES THAT ARE WROTTEN FOR THREE SULTANS

ABSTRACT

Elegies are the verses of classical Turkish poetry in which sadness are expressed for dead people. Most of these poems are written for sultans and princes. While sorrow of death and reproach of fate were told in this verse on the other hand good sides of deceased were expressed. In this study three elegies of three poets of today (Muhsin Macit, Ahmet Efe and Ali Ural) will be evaluated with the aspect of continuing tradition of elegy.. One of these poems is –for usually overturned sultans- just for his mentions written for II. Osman and two of them are written for princes (Prince Cem and Prince Bayezid). The three names from dynasty are died tragically and didnt die with a natural death. Tragically deaths, written poems about their short-history, traditional elegies of these names who are poets will be handled. Thus effect of classical poetry on modern poetry will be dealed with and the characteristic of elegy that evolved from traditional to modern will be emphasized. In this study reminding elements of tragedies of dynastic people on poets like Necip Fazıl Kısakürek and Bülent Ecevit will be presented with same attention.

Keywords: Elegy, Tradation, Cem Sultan, Bayezid, Gench Osman

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VADELİ İŞLEM VE OPSİYON BORSASININ/PİYASASININ GELİŞİMİ/DÖNÜŞÜMÜ ÜZERİNE BİR DEĞERLENDİRME

ÖZ

Ülkemizde Vadeli İşlem ve Opsiyon Borsası (VOB) 2005 yılında ilk özel borsa olarak faaliyete geçmiştir. 2013 yılına kadar faaliyetine devam eden borsa 2013 yılında Borsa İstanbul (BİST) çatısı altında yer alan Vadeli İşlem ve Opsiyon Piyasası (VİOP) ile birleşmiştir. Bu çalışma 2013 yılından itibariyle BİST çatısı altında faaliyetlerini sürdüren VİOP'ta, futures ve opsiyon sözleşmelerindeki gelişimleri/değişimleri incelemek amacıyla yapılmıştır. Çalışmada, Vadeli İşlem ve Opsiyon Piyasasının işlem hacimleri incelenmiş, bu işlem hacimlerindeki değişimlerde VOB'un Vadeli İşlem ve Opsiyon Piyasası olarak dönüşümünün ve ülke büyüme rakamlarının etkisi araştırılmıştır. 2012 yılında Futures Sözleşmeleri ve Opsiyon Sözleşmelerin VOB çatısı altında toplam işlem hacmi 403.9 milyar TL iken İstanbul'da Borsa İstanbul çatısı altında faaliyetini yürütmesi ve ülkemizin büyüme potansiyeli ile birlikte 2013 yılında toplam 416.6 milyar TL olduğu görülmüştür. Bunun devamında 2016 yılı verilerine baktığımızda işlem hacminin 580.6 milyar TL'ye ulaştığı görülmektedir. Bu itibar ile elde edilen bu verilerin Gayri Safi Yurtiçi Hasıla büyüme rakamları ile karşılaştırılması yapılmış olup, aynı zamanda bu değişimlerde Borsa İstanbul'un etkileri incelenmiştir.

Anahtar Kelimeler: Borsa İstanbul, Vadeli İşlem ve Opsiyon Piyasası, Futures Sözleşmeleri, Opsiyon Sözleşmeleri

EVALUATION ON DEVELOPMENT/TRANSFORMATION OF TURKISH FUTURES AND OPTIONS EXCHANGE/MARKET

ABSTRACT

Futures and Options Exchance (VOB) has been launched as the first private stock exchange in 2005 in our country. The stock exchange which has continued to operate until 2013 has merged with Futures and Options Market (VIOP) operating under the roof of Borsa Istanbul (BIST). This study was conducted with an eye to examine the developments/changes in futures and options contracts in VIOP, which currently continues the operations thereof under the roof of BIST as from 2013. Transaction volumes of the Futures and Options Market were examined and the impact of conversion of Futures and Options Exchange (VOB) into Futures and Options Market (VIOP) on changes of these transaction volumes as well as country growth figures were investigated in the study. It is observed that the while total transaction volume under Futures Contracts and Option Contracts under the roof of Futures and Options Exchange (VOB) was 403.9 billion TL in 2012 it achieved the total amount of 416.6 billion TL in 2013 after it began to operate at the Borsa Istanbul within Istanbul province and in line with the growth potential of our country. Subsequently if we examine the year 2016, it is observed that transaction volume has reached 580.6 billion TL. Comparison of these data obtained on this date was made with the Gross Domestic Product (GDP) figures and the impacts of Borsa Istanbul were examined at the same time.

Keywords: Keywords: Borsa Istanbul, Futures and Options Market, Futures Contracts, Option Contracts

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TAM TASDİK DENETİMİ VE RAPORUNUN MUHASEBE VE VERGİ UYGULAMALARI AÇISINDAN ÖNEMİNİN ÖRNEK OLAY ANALİZİ İLE DEĞERLENDİRİLMESİ

ÖZ

Tam tasdik denetimi ve raporu Yeminli Mali Müşavirler (YMM) tarafından yürütülmektedir. Tam tasdik kapsamında YMM'lerin sorumlulukları ve görevleri, 3568 sayılı kanun, bu kanun ile ilgili yayınlanmış tebliğler ve Maliye Bakanlığı'nın yayınlamış olduğu yönetmelikler ile düzenlenmektedir. Düzenlenmiş olan bu mevzuat hükümleri YMM'lerin tam tasdik dolayısıyla sorumluluklarını oldukça geniş tutmaktadır. Bu çalışma Yeminli Mali Müşavirlerin sorumlulukları arasında yer alan tam tasdik raporu ve bu kapsamda yapılan denetim faaliyetlerini incelemeyi amaçlamaktadır. Bu doğrultuda, denetim fonksiyonları belirtilmekte ve tam tasdik kapsamında incelenen konular ile örnek vakalar incelenerek ortaya çıkabilecek muhasebe hataları değerlendirilmektedir. YMM'lerin tam tasdik raporunun yazımına kadar olan bölümde, yapılan muhasebe ve vergi denetimleri sonucunda mevzuata aykırı hususlar ile muvazaalı konuların tespit edilmesi ve bunların düzeltilmesi, sonrasında da tam tasdik raporunun yazımı çalışmamızda açıklanmıştır. Çalışmamızda yer alan vaka çalışmasında, tam tasdik denetimi sırasında tespit edilen, işletme tarafından sehven yapılmış olan mevzuata aykırı hatalı işlemler tespit edilmiş, bu işlemlerin muhteviyatı incelenmiştir. Bu hususların vergi matrahına ve dolayısıyla ödenecek olan vergiye etkisi araştırılmış, sonrasında ise işletmenin yapması gereken düzeltme işlemleri incelenmiştir.

Anahtar Kelimeler: Tam Tasdik, Tam Tasdik Raporu, Tam Tasdik Denetimi, Muhasebe, Vergi Uygulamaları

EVALUATION OF FULL CERTIFICATION AUDIT AND REPORT THROUGH CASE STUDY ANALYSIS IN TERMS OF ACCOUNTING AND TAX APPLICATIONS

ABSTRACT

The full certification audit and the report are performed through Certified Public Accountants (CPAs). Responsibilities and tasks of the CPAs within the purview of full certification are governed through Law No. 3568 as well as communiqués published associated with this law and regulations published by the Ministry of Finance. The provisions of these governed regulations comprise responsibilities as regards the full certification of the CPAs in a quiet broad manner. This study is intended to examine the full certification report which is among the responsibilities of Certified Public Accountants in addition to activities performed within this context. Accordingly, audit functions are specified and accounting errors to arise are evaluated through examination of subjects within full certification in addition to sample cases. Detection of issues against the regulation as well as the controversial matters following the accounting and tax audits and correction thereof have been explained in the section until the preparation of the full certification report by the CPAs while writing of the full certification report after this stage has been represented in our study. Proceedings detected during the full certification audit which have been made by mistake against the legislation through the business have been detected in the case study provided within our study and the nature of these proceedings has been examined. The effects of these issues on the tax base and subsequently to the tax to be paid have been searched, and the corrective actions to be carried out by the business have been examined.

Keywords: Full Certification, Full Certification Report, Full Certification Audit, Accounting, Tax Principles

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TÜRKİYE'DE HİSSE SENETLERİ PİYASASI-EKONOMİK BÜYÜME İLİŞKİSİ (2006-2016)

ÖZ

Hisse senedi piyasası ile reel ekonomi arasında çeşitli kanallardan gerçekleşen çok yakın bir etkileşim olduğu bilinen bir gerçektir. Hisse senedi piyasaları, hem yurtiçi tasarrufları hem de yatırımların miktar ve kalitesini artırarak ekonomik büyümeye ivme kazandırmaktadır. Ancak teori, bu iki değişken arasındaki ilişkinin yönünü kesin olarak tanımlayamamaktadır. Bu çalışmada, 2006:1-2016:10 dönemi için Türkiye'de hisse senedi piyasası ile ekonomik büyüme arasındaki ilişki ARDL (Auto-Regressive Distributed Lag) yaklaşımı ile analiz edilmiştir. Hisse senedi piyasası ile ekonomik büyümenin göstergesi olarak sırasıyla BIST ve SÜE (sanayi üretim) endeksinin kullanıldığı analiz sonucunda değişkenler arasında istatistiksel olarak anlamlı bir eşbütünleşme ilişkisi bulunduğu tespit edilmiştir. Uzun dönemde BIST endeksinden SÜE'ye doğru güçlü ve pozitif bir nedensellik söz konusu iken kısa dönemde bu değişkenler arasında çift yönlü bir nedensellik ilişkisi olduğu sonucuna ulaşılmıştır. Bu durum, Borsa İstanbul'un kendisine atfedilen fonksiyonu yerine getirerek ekonomik büyümeyi teşvik ettiğini göstermektedir.

Anahtar Kelimeler: Hisse Senetleri Piyasası, Ekonomik Büyüme, Eşbütünleşme, ARDL, BIST

STOCK MARKET-ECONOMIC GROWTH RELATIONSHIP IN TURKEY (2006-2016)

ABSTRACT

It is the fact that there is a relationship between stock return market and economic growth which occurs from different channels. The stock market accelerates economic growth by encouraging domestic savings and increasing the quantity and the quality of investment. However, the existing theory fails to explain the direction of causality between these two variables. This paper investigates the causal relationship between stock market and economic growth in Turkey for the period 2006:1-2016:10 using an ARDL (Auto-Regressive Distributed Lag) model. Findings of the analysis, in which BIST and SUE (industrial production) are used as measures of stock market performance and economic growth respectively, imply that a statistically significant co-integration relationship runs between these variables. Although, there is a strong and positive causality from BIST to SUE in the long run, in short run causality is bi-directional. This finding illustrates that the Istanbul Stock Exchange accelerates economic growth by fulfilling the function attributed to it.

Keywords: Stock Exchange Market, Economic Growth, Co-Integration, ARDL, BIST

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1950-1970 SÜRECİNDE TÜRKİYE'DE AÇILAN MİMARLIK OKULLARI: ODTÜ VE KTÜ MİMARLIK BÖLÜMLERİ MEKAN ORGANİZASYONLARI ÖZELİNDE BİR İNCELEME

ÖZ

1950-1970 aralığı Türkiye siyasi, sosyal ve mimarlık tarihi bağlamında önemli dönüm noktalarından birini oluşturmaktadır. Siyasal, toplumsal, ekonomik pek çok alanda değişimin gözlemlendiği bu süreçte; mimarlık eyleminde de doğru orantılı izler görüldüğü söylenebilmektedir. Sürecin eğitim yapılarının önemli örneklerinden ikisini oluşturan Orta Doğu Teknik Üniversitesi ve Karadeniz Teknik Üniversitesi Mimarlık Bölümleri ise, Türkiye bağlamında mimarlık eğitiminin Anadolu'ya uzanmasına öncülük eden ilk iki örnek olmaları bakımından değerlidirler. Çalışmada, 1950-1970 sürecinin mimarlık ve mimarlık okulları bağlamında irdelemesi yapıldıktan sonra, söz konusu okulların mimarlık bölümü plan şemaları; temel geometrileri, mekan tipolojileri ve sirkülasyon şemaları başlıkları altında incelenmiştir. Çalışma sonunda öncelikle hedeflenen; 1950-70 yılları arasında kurulan ve Türkiye mimarlık eğitiminin Anadolu ayağını oluşturan ilk iki mimarlık okulunun, dönemin mimari pratiğini ne derece yansıttığını ortaya koymaktır. Çalışmanın ikinci hedefi ise, başkent ve periferide kurulan bu iki mimarlık bölümünün mekan organizasyonları arasındaki anlamlı bir benzerliğin ya da farklılığın varlığını sorgulamaktır.

Anahtar Kelimeler: 1950-1970 Süreci, Mimarlık, Mimarlık Bölümleri, Mekan Organizasyonu, Türkiye

ARCHITECTURAL SCHOOLS OPENED IN TURKEY IN THE 1950-1970 PERIOD: AN EXAMINATION OF SPACE ORGANIZATIONS IN METU AND KTU ARCHITECTURE DEPARTMENTS

ABSTRACT

The period of 1950-1970 constitutes one of the most important milestones in the political, social and architectural history of Turkey. In this period, in which many changes in the political, social and economic fields are observed, it can be said that the directly proportional traces are seen in the architectural practice as well. The Architecture Departments of The Middle East Technical University and the Karadeniz Technical University, which constitute two of the most important examples of this period, are valuable in terms of being the first two examples leading to the extension of architectural education to Anatolia in Turkey. After studying the 1950-1970 period in the context of architecture and architecture schools, the architectural departments of the schools are examined by the plan schemes; basic geometries, space typologies and circulation diagrams. At the end of the study, it is aimed to show to what extent the period reflects architectural practice of the first two architectural schools opened between 1950-70, which constitute the Anatolian pillar of Turkish architecture. The second aim of the study is to interrogate the existence of a significant similarity or difference between the space organizations of the two architectural departments that are opened in the capital and in the periphery.

Keywords: 1950-1970 Period, The Architecture, The Departments of Architecture, Space Organisation, Turkiye

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EVALUATION OF SEED AND OIL YIELD WITH SOME YIELD COMPONENTS OF SOYBEAN VARIETIES IN KAHRAMANMARAS (TURKEY) CONDITIONS

ABSTRACT

Soybeans are a global commodity used as feed for livestock, as a source of protein and oil for people, and in the industrial manufacturing of thousands of products. This research was conducted to determine the seed and oil yield with some yield components of soybean (*Glycine max* L. Merr.) varieties in Kahramanmaraş (Turkey) conditions using a randomized complete block design with four replications in 2016. In the study, Umut, Arısoy, Türksoy, Cinsoy, Çetinbey, Ataem-7, Nova, Atakişi, May 53/12, May 54/14 and Sa-88 soybean varieties were used as the plant material. These eleven soybean varieties were evaluated for plant height, number of branches per plant, first pod height, number of pods per plant, 1000-seed weight, crude oil and protein percent and seed yield. The results showed that plant height, number of branches per plant, first pod height, number of pods per plant, 1000-seed weight, crude oil and protein percent and seed yield for eleven soybean cultivars ranged between 71.27-86.50cm, 1.22-2.80, 9.17-14.76cm, 41.50-51.77, 123.88-180.35g, 18.00-21.86%, 35.24-39.12% and 1718.8-3279.8kgha^{-1}, respectively. The highest seed yield (3279.8kgha-1), oil (21.86%) and protein (39.12%) content were obtained from the varieties Arısoy, May 53/12 and Sa-88, respectively.

Keywords: Soybean, Seed Yield, Crude Oil and Protein Percent, Broad Bean, Kahramanmaraş

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FARKLI EKİM ZAMANLARININ KİNOA (*Chenopodium quinoa*) BİTKİSİNİN KALİTE ÖZELLİKLERİ ÜZERİNE ETKİSİNİN ARAŞTIRILMASI

ÖZ

Kinoa (*Chenopodium quinoa* W.) bitkisinin tohumları, besin kalitesi ve yüksek lif içeriğiyle açısından sağlıklı bir gıda ürünü olarak kullanılmaktadır. Ayrıca yetiştiriciliğinin kolay olması ve stres faktörlerine karşı toleranslı olması bakımından çiftçiler için alternatif bir bitki olarak yer almaya başlamıştır. Kinoa bitkisinin agronomik ve kalite özellikleri üzerine ekim zamanının etkilerinin belirlenmesi amacıyla, Q-52 kinoa çeşidine 2016 yılı Kahramanmaraş koşullarında iki farklı ekim zamanı uygulanmıştır. Deneme, tesadüf parselleri deneme desenine göre üç tekerrürlü olarak yürütülmüştür. Denemede generatif döneme geçiş süresi (gün), dane dolum süresi (gün), bitki ağırlığı (g/bitki), salkım ağırlığı (g), salkımda tane ağırlığı (g), 100 tane ağırlığı (g), tanede nişasta oranı (%), protein oranı (%) ve yağ oranı (%) gibi özellikler incelenmiştir. Ekim zamanları arasındaki farklılıkların incelenen özelliklerden dane dolum süresi (-6.36), generatif döneme geçiş süresi (-4.24), salkımda tane ağırlığı (-3.64) ve nişasta oranı (-3.17) özellikleri yönünden istatistikî olarak negatif ve önemli olduğu kaydedilmiştir. Diğer özelliklerin ekim zamanı yönünden gözlemlenen farklılıklar ise istatistikî açıdan önemsiz bulunmuştur.

Anahtar Kelimeler: Kinoa, Ekim Zamanı, Kalite Özellikleri, Besin Kalitesi, Kahramanmaraş

THE INVESTIGATION OF EFFECTS ON QUALITY CHARACTERISTICS OF THE QUINO (*Chenopodium quinoa*) PLANT OF DIFFERENT SOWING TIMES

ABSTRACT

The seed of the kinoa (*Chenopodium quinoa W.)* plant is used as a healthy food product, in terms of food quality and high fiber content. Also, it has begun to take place as an alternative plant for farmers because it is easy to grow and tolerates stress factors. In order to determine the effects of sowing time on the agronomic and quality characteristics of the kinoa plant, two different sowing times were applied to Q-52 kinoa variety in the conditions of Kahramanmaraş in 2016. The experiment was carried out in three replications according to the design of randomized parcels. The properties were examined as generation turnaround time (days), grain filling time (days), plant weight (g/plant), bunch weight (g), grain weight in bunch (g), the weight of 100 grain (g), starch ratio in the grain (%), protein ratio in the grain (%) and fat ratio in the grain (%) at the trial. The differences between the sowing times were statistically negative and significant in terms of the characteristics of the grain filling time (-6.36), generation turnaround time (-4.24), grain weight in bunch (-3.64) and starch ratio in the grain (-3.17). Differences observed other features in terms of sowing time are statistically insignificant.

Keywords: Kinoa, Sowing Time, Quality Features, Food Quality, Kahramanmaraş

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INFLUENCE OF STIMUFUNG ON BIOLOGICALLY ACTIVE SUBSTANCES OF FRUITS OF ORANGE WASHINGTON-NAVEL

ABSTRACT

Mineral fertilizers, that contain impurities in the form of toxic elements and heavy natural radionuclides, are used in order to increase citrus crop. There is no doubt that using mineral fertilizers is associated with environmental pollution, which can be led by wrong agrotechnical measures. At the same time, it is extremely hard to conserve the fruit for a long time. So today it is very important to use organic products as fertilizers. Such is the "Stimufung" - liquid organic fertilizer for feeding plants not from roots. Stimufung is an organic substance that contains amines, amides, oligopeptides, phytohormones, minerals, micro and macro elements. It does not contain heavy metals, nitrates and other xenobiotics and is not dangerous for the environment. An influence of Stimufung on biochemical indicators of citrus fruits has been studied for the first time in this research. Due to its goal, biochemical indicators (Acidity, Common Sugar, Vitamin C, Common Phenolic Compounds, Flavonoid Glycosides) and storage ability of orange fruits after processing orange trees with Stimufung have been studied. Analysis was carried out on newly picked orange fruits, as well as on stored ones. As a result, processing orange trees with Stimufung raises its storage ability by maintaining good chemical indicators.

Keywords: Stimufung, Bioproduct, Ecology, Storageability, Washington-navel

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Cordulegaster mzymtae (Cordulegastridae, Odonata)'NİN TÜRKİYE'DEKİ DURUMU VE TAKSONOMİK POZİSYONU

ÖZ

Türkiye'de *Cordulegaster* cinsi 3 tane tür (*C.insignis*, *C.mzymtae* ve *C. picta*) ile temsil edilmektedir. *C.mzymtae* Bartenef tarafından 1929 yılında batı-kafkaslardan (Gürcistan) tanımlanmıştır. Türkiye'de ise bu tür Doğu Karadeniz Bölgesi'nde yayılış göstermektedir. Bazı araştırıcılar tarafından bu takson *C.insignis*'in alttürü olarak verilmektedir. *C. insignis* Türkiye'de geniş bir yayılıma ve oldukça karmaşık bir taksonomiye sahiptir. Bu çalışmada, *mzymtae* taksonunun taksonomik pozisyonuna bir katkı sağlanması amaçlanmıştır. Özellikle dağılış alanının kesiştiği *C.insignis charpentieri* ile olan ilişkisine değinilmiştir. Bu çalışma kapsamında Doğu Karadeniz Bölgesi Artvin ilinden *C.mzymtae* ve *C.i.charpentieri* örnekleri toplanmıştır. Toplanan örneklerin teşhis işlemleri yapıldıktan sonra örneklerin fotoğrafları çekilip karşılaştırmaları yapılmıştır. Arazi çalışması yapılan alanda iki taksona ait bireylerin aynı lokalite bulunduğu ve dağılım alanlarının kesiştiği tespit edilmiştir. Aynı zamanda bu bölgeden hibrit örneklerde toplanmıştır. Her iki taksonun aynı bölgede beraber bulunması ve hibrit örneklerin tespit edilmesi bu iki taksonun bu bölgede çiftleşebilme potansiyelinin olduğunu göstermektedir. Eldeki bu verilere göre; *mzymtae*'nin tür kategorisinde değil de alttür kategorisinde değerlendirilmesinin daha doğru olacağı düşünülmektedir.

Anahtar Kelimeler: Odonata, *Cordulegaster mzymtae*, Türkiye, *C.insignis*, *C.mzymtae* ve *C. picta*

THE STATUS AND TAXONOMIC POSıTION OF *Cordulegaster mzymtae* (Cordulegastridae, Odonata) IN TURKEY

ABSTRACT

In Turkey, The genus *Cordulegaster* is represented by three species (*C.insignis*, *C.mzymtae* and *C. picta*). *C. mzymtae* was described by Bartenef in 1929 from Western-Caucasus (Georgia). This species is found the Eastern Black Sea Region in Turkey. According to some authors, this species is given as subspecies of *C.insignis*. *C. insignis* has a widespread distribution in Turkey and a very complex taxonomy. In this study, it is aimed to contribute to the taxonomic position of the *mzymtae* taxa. At the same time, It has been mentioned on relations between *C.mzymtae* and *C.insignis charpentieri*. In this study, *C.mzymtae* and *C.insignis charpentieri* specimens were collected from Artvin province of Eastern Black Sea Region. After the diagnosis of the collected specimens was made, the photographs of the specimens were taken and compared. Two taxa (*mzymtae* and *charpentieri*) specimens was found the same locality in the study area and determined that the distribution areas cross. Furthermore, it was collected in hybrid specimens in the locality. The coexistence of both taxa in the same locality and the identification of hybrid specimens indicate that these two taxa have the potential to mate in the study area. According to these results, it was thought that it would be more accurate to evaluate *mzymtae* in the subspecies, not the species rank.

Keywords: Odonata, *Cordulegaster mzymtae*, Turkey, *C.insignis*, *C.mzymtae* ve *C. Picta*

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RUSSULA DELICA FR.'NİN SİTOTOKSİTE, APOPTİK VE NEKROTİK ETKİLERİ

ÖZ

Çalışmada, *Russula delica*'nın sitotoksite, apoptik ve nekrotik etkileri incelenmiştir. Basidiokarplardan alınan parçalar malt ekstrakt agarda doku kültürüyle geliştirildi. Sırasıyla primer ve sekonder miseller 27°C'de, karanlıkta,10 gün süreyle inkübe edilerek elde edildi. Sekonder nutrient broth'da 27°C'de, 140 rpm'de 7 günde gelişimini tamamladı. Numuneler soxlet cihazında 80°C, etil alkolde ekstraksiyon edilerek sitoksite, apoptik, nekrotik çalışmalar için hazırlandı. Sitoksite çalışmalarında, ekstrakt MCF-7 ve L929 Fibroblast hücrelere örnek konsantrasyonları 5mg/ml, 2.5mg/ml, 1.25mg/ml, 0.625mg/ml, 0.315mg/ml olarak uygulandı. WST-1 solüsyonu eklenerek inkübasyon sonucunda 440nm dalga boyunda mikroplate okuyucuda absorbans ölçümü yapıldı. İkili boyama deneyi ile aynı hücre hattında apoptoz ve nekroz belirlendi. İkili boyama solüsyonu hazırlanarak MCF-7 ve L929 Fibroblast hücrelere aynı konsantrasyonlarda uygulandı. İnkübasyon sonucunda florasan ataçmanlı mikroskop FITC ve DAPI filtresinde 20X büyütmede ölçüm yapıldı. Toksite, konsantrasyonlara bağlı olarak değişmektedir. 5mg/ml de hazırlanan örnekte toksite oranı yüksektir. 2.5mg/ml altında hazırlanan miktarlar arasında bir fark yoktur. Kanser ve normal hücrelerin canlılık değerleri arasında anlamlı bir fark gözlemlenmemiştir. Örneklerde herhangi bir apoptik ve nekrotik etki gözlemlenmemiştir.

Anahtar Kelimeler: *Russula delica*, Kanser, Sitotoksite, Apoptik Etki, Nekrotik Etki

THE CYTOTOXIC, APOPTIC AND NECROTIC EFFECTS OF *RUSSULA DELICA* FR.

ABSTRACT

In the study, cytotoxicity, apoptotic, necrotic effects of *Russula delica* were investigated. Taken parts from the basidiocarps in the laboratory were developed with tissue culture on malt extract agar. The primary and the secondary mycelium were obtained by incubation at 27°C in the dark for 10 days. Three pellets were taken from the secondary mycelium and were completed their growth in 7 days at 140 rpm at 27°C in nutrient broth. The samples were prepared for cytoksite, apoptotic, necrotic studies by extracting at 80°C and 1 hour in ethyl alcohol at soxlet device. In cytotoxic studies, sample concentrations for extract MCF-7 and L929 fibroblast cells were applied as 5mg/ml, 2.5mg/ml, 1.25mg/ml, 0.625mg/ml, 0.315mg/ml respectively. The WST-1 solution was added and the absorbance was measured in a microplate reader at a wavelength of 440 nm at the end of the incubation. Apoptosis and necrosis were detected in the same cell line as the double staining experiment. Binary staining solution was prepared and MCF-7 and L929 Fibroblast cells were applied at the same concentrations. As a result of incubation, the measurement was done at fluorescence microscopy at 20X magnification in FITC and DAPI filters. Toksite varies depending on concentrations. The sample prepared at 5mg/mL has a high toxicity ratio. There is no difference between the amounts prepared under 2.5mg/mL. There was no significant difference between the viability values of cancer and normal cells. No apoptotic and necrotic effects were observed in the samples.

Keywords: *Russula delica*, Cytotoxicity, Apoptotic Effects, Necrotic Effects

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SUILLUS COLLINITUS (FR.) KUNTZE'UN SİTOTOKSİTE, APOPTİK VE NEKROTİK ETKİLERİ

ÖZ

Çalışmada, *Suillus collinitus*'un sitotoksite, apoptik, nekrotik etkileri incelenmiştir. Laboratuvardaki basidiokarplardan alınan parçalar malt ekstrakt agarda doku kültürüyle geliştirildi. Primer ve sekonder miseller 27°C'de, karanlıkta, 10 gün süreyle inkübe edilerek elde edildi. Sekonder misellerden 5'er pelet nutrient broth'da 27°C'de, 140 rpm'de 7 günde gelişimini tamamladı. Numuneler soxlet cihazında 80°C, %70'lik etil alkolde 1 saat ekstraksiyon edilerek sitoksite, apoptik ve nekrotik çalışmalar için hazırlandı. Sitoksite çalışmalarında, ekstrakt MCF-7 ve L929 Fibroblast hücrelere örnek konsantrasyonları 1mg/ml, 0.5mg/ml, 0.25mg/ml olarak uygulandı. WST-1 solüsyonu eklenerek inkübasyon sonucunda 440 nm dalga boyunda mikroplate okuyucuda absorbans ölçümü yapıldı. İkili boyama deneyi ile aynı hücre hattında apoptoz ve nekroz belirlendi. İkili boyama solüsyonu hazırlanarak MCF-7 ve L929 Fibroblast hücrelere aynı konsantrasyonlarda uygulandı. İnkübasyon sonucunda florasan ataçmanlı mikroskop FITC ve DAPI filtresinde 20X ölçüm yapıldı. Toksite, konsantrasyonlara bağlı olarak değişmektedir. 0.5 mg/ml konsantrasyonda %86 oranında toksik etki göstermiştir. Konsantrasyon azaldıkça toksite de azalmıştır. Fibroblastlara yapılan uygulamada ise uygulanan tüm konsantrsyonlarda toksik etki göstermediği tespit edilmiştir.

Anahtar Kelimeler: *Suillus collinitus*, Kanser, Sitotoksite, Apoptik Etki, Nekrotik Etki

THE CYTOTOXIC, APOPTIC AND NECROTIC EFFECTS OF *SUILLUS COLLINITUS*(FR.) KUNTZE

ABSTRACT

In the study, cytotoxicity, apoptotic, necrotic effects of *Suillus collinitus* were investigated. Taken parts from the basidiocarps in the laboratory were developed with tissue culture on malt extract agar. The primary and the secondary mycelium were obtained by incubation at 27 °C in the dark for 10 days. Three pellets were taken from the secondary mycelium and were completed their growth in 7 days at 140 rpm at 27°C in nutrient broth. The samples were prepared for cytoksite, apoptotic, necrotic studies by extracting at 80°C and 1 hour in ethyl alcohol at soxlet device. In cytotoxic studies, sample concentrations for extract MCF-7 and L929 fibroblast cells were applied as 1mg/ml, 0.5mg/ml, 0.25mg/ml respectively. The WST-1 solution was added and the absorbance was measured in a microplate reader at a wavelength of 440 nm at the end of the incubation. Apoptosis and necrosis were detected in the same cell line as the double staining experiment. Binary staining solution was prepared and MCF-7 and L929 Fibroblast cells were applied at the same concentrations. As a result of incubation, the measurement was done at fluorescence microscopy at 20X magnification in FITC and DAPI filters. Toksite varies depending on concentrations. At the concentration of 0.5 mg / ml, it showed 86% toxic effect. As concentration decreases, toxicity decreases. In the case of application to fibroblasts, it was determined that they did not show toxic effect at all applied concentrations.

Keywords: *Suillus collinitus*, Cancer, Cytotoxicity, Apoptotic Effects, Necrotic Effects

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LAETIPORUS SULPHUREUS (BULL.) MURRILL'UN SİTOTOKSİTE, APOPTİK VE NEKROTİK ETKİLERİ

ÖZ

Çalışmada, *Laetiporus sulphureus*'un sitotoksite, apoptik, nekrotik etkileri incelenmiştir. Laboratuvardaki basidiokarplardan alınan parçalar malt ekstrakt agarda doku kültürüyle geliştirildi. Primer ve sekonder miseller 27°C'de, karanlıkta,10 gün süreyle inkübe edilerek elde edildi. Sekonder misellerden 3 pelet alındı ve nutrient broth'da 27°C'de, 140 rpm'de 7 günde gelişimini tamamladı. Numuneler soxlet cihazında 80°C, etil alkolde 1 saat ekstraksiyon edilerek sitoksite, apoptik, nekrotik çalışmalar için hazırlandı. Sitoksite çalışmalarında, ekstrakt MCF-7 ve L929 Fibroblast hücrelere örnek konsantrasyonları 0.5mg/ml, 0.25mg/ml, 0.125mg/ml, 0.0625mg/ml, 0.03125mg/ml olarak uygulandı. WST-1 solüsyonu eklenerek inkübasyon sonucunda 440nm dalga boyunda mikroplate okuyucuda absorbans ölçümü yapıldı. İkili boyama deneyi ile aynı hücre hattında apoptoz ve nekroz belirlendi. İkili boyama solüsyonu hazırlanarak MCF-7 ve L929 Fibroblast hücrelere aynı konsantrasyonlarda uygulandı. İnkübasyon sonucunda florasan ataçmanlı mikroskop FITC ve DAPI filtresinde 20X büyütmede ölçüm yapıldı. Toksite, konsantrasyonlara bağlı olarak değişmektedir. Kullanılan farklı dozajlarda dikkate değer toksite yoktur. Kanser ve normal hücrelerin canlılık değerleri arasında anlamlı bir fark gözlenmemiştir. Örneklerde herhangi bir apoptik ve nekrotik etki gözlenmemiştir.

Anahtar Kelimeler: *Laetiporus sulphureus*, Kanser, Sitotoksite, Apoptik Etki, Nekrotik Etki

THE CYTOTOXIC, APOPTIC AND NECROTIC EFFECTS OF *LAETIPORUS SULPHUREUS* (BULL.) MURRILL

ABSTRACT

In the study, cytotoxicity, apoptotic, necrotic effects of *Laetiporus sulphureus* were investigated. Taken parts from the basidiocarps in the laboratory were developed with tissue culture on malt extract agar. The primary and the secondary mycelium were obtained by incubation at 27°C in the dark for 10 days. Three pellets were taken from the secondary mycelium and were completed their growth in 7 days at 140 rpm at 27°C in nutrient broth. The samples were prepared for cytoksite, apoptotic, necrotic studies by extracting at 80°C and 1 hour in ethyl alcohol at soxlet device. In cytotoxic studies, sample concentrations for extract MCF-7 and L929 fibroblast cells were applied as 0.5mg/ml, 0.25mg/ml, 0.125mg/ml, 0.0625mg/ml and 0.03125mg/ml, respectively. The WST-1 solution was added and the absorbance was measured in a microplate reader at a wavelength of 440nm at the end of the incubation. Apoptosis and necrosis were detected in the same cell line as the double staining experiment. Binary staining solution was prepared and MCF-7 and L929 Fibroblast cells were applied at the same concentrations. As a result of incubation, the measurement was done at fluorescence microscopy at 20X magnification in FITC and DAPI filters. Toksite varies depending on concentrations. There are no significant toxicities at different dosages used. There was no significant difference between the viability values of cancer and normal cells. No apoptotic and necrotic effects were observed in the samples.

Keywords: *Laetiporus sulphureus*, Cytotoxicity, Apoptotic Effects, Necrotic Effects

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GİRESUN İLİNDE YAŞAYAN İNSANLARDA TRİTYUM DÜZEYLERİ

ÖZ

Trityum, hidrojenin radyoaktif bir izotopudur ve fiziksel yarı ömrü 12.3 yıldır. İnsan vücudundaki trityum konsantrasyonu, idrardaki trityum konsantrasyonunun ölçülmesi suretiyle belirlenir. İdrar örneklerindeki trityum aktivite konsantrasyonları sıvı sintilasyon sayacı (LSC)ile belirlendi. İdrar örnekleri, Giresun ilinde yaşayan ve Türkiye İstatistik Enstitüsü tarafından belirlenen 102 yetişkin katılımcıdan alındı. Katılımcıların yaşları 18 ile 65 arasında değişmekte olup katılımcıların 63'ü (%61.8) kadındır. Alınan idrar örneklerindeki ortalama trityum konsantrasyonu 14.35±2.17Bq/L ve maksimum konsantrasyon 45.96 Bq/L olarak bulundu. Uygulanan yöntemin MDA'sı 2.59Bq/L'dir. 21 örneğin (%20.6) trityum konsantrasyonu MDA'nın altında bulundu. İdrar örneklerinde ortalama trityum konsantrasyonları kadınlar için 14.82±2.28Bq/L, erkekler için ise 13.63±2.06Bq/L olarak bulundu. Ayrıca, kadınlar ve erkekler için yıllık etkin doz değerleri hesaplandı ve bulunan değerler uluslararası doz limit değerleriyle karşılaştırıldı.

Anahtar Kelimeler: Trityum, İdrar, Giresun, Türkiye, Sintilasyon Sayacı (LSC)

TRITIUM LEVELS IN PEOPLE LIVING IN GIRESUN PROVINCE OF TURKEY

ABSTRACT

Tritium is a radioactive isotope of hydrogen and its physical half-life is 12.3 years. The tritium concentration in the human body can be estimated by measuring the activity concentration of tritium in urine. Tritium activity concentrations in the urine samples were determined by the liquid scintillation counter (LSC). Urine samples were taken from 102 adult participants determined by Turkish Statistical Institute living in Giresun, and analyzed. The participants' ages ranged from 18 to 65, and 63 (61.8%) of them were female. The mean tritium concentration in collected urine samples was 14.35±2.17Bq/L and the maximum 45.96Bq/L. The MDA for this method was 2.59Bq/L. The tritium concentrations of 21 samples (20.6%) were found below of the MDA. The mean tritium concentrations in urine samples of males and females were found as 13.63±2.06 Bq/L, 14.82±2.28Bq/L, respectively. The annual effective doses for males and females were also evaluated and the results compared with international dose limits.

Keywords: Tritium, Urine, Giresun, Turkey, Scintillation Counter(LSC)

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PSATHYRELLA CANDOLLEANA VE *PSATHYRELLA SPADICEOGRISEA*'NIN *ASPERGILLUS* TÜRLERİ ÜZERİNE ANTİFUNGAL AKTİVİTESİ

ÖZ

Çalışmada *Psathyrella* türleri (*P.candolleana, P.spadiceogrisea*) *Aspergillus* (*A.niger, A.versicolor*) üzerine antifungal etkileri incelenmiştir. *A.niger, A.versicolor, P.candolleana, P. spadiceogrisea* sırasıyla malt ekstrakt agar ve nutrient broth besiyerlerinde ayrı ayrı olacak şekilde üretildi. Çalışmada çözgen olarak etanol ve metanol kullanıldı. *A.niger, A.versicolor*'dan ayrı ayrı olacak şekilde 1000 mikrolitre örnekler alınarak malt ekstrakt agar üzerine yayılarak kuruması beklendi. Üzerlerine disk difüzyon yöntemi ile steril distile su, etanol ve metanolde 48 saat muamele edilen *P.candolleana, P.spadiceogrisea* emdirilmiş diskler su-etanol ve su-metanol şeklinde 2cm aralıkla bırakıldı. Karanlıkta, 27˚C'de, 48 saat inkübe edildi. *Psathyrella candolleana*'nın her iki çözgeninin her iki *Aspergillus* türüne karşı antifungal etkisi görülmedi. *Psathyrella spadiceogrisea*'nın her iki çözgeninin her iki *Aspergillus* türüne karşı antifungal etkisi olduğu belirlendi.

Anahtar Kelimeler: *Psathyrella candolleana, Psathyrella spadiceogrisea, Aspergillus niger, Aspergillus versicolor*, Antifungal Etki

ANTIFUNGAL ACTIVITIES of *PSATHYRELLA CANDOLLEANA* and *PSATHYRELLA SPADICEOGRISEA* on *ASPERGILLUS* SPECIES

ABSTRACT

Antifungal effects *Psathyrella* species (*P.candolleana, P.spadiceogrisea*) *Aspergillus* (*A.niger, A.versicolor*) were investigated in the study. *A. niger, A.versicolor, P.candolleana* and *P.spadiceogrisea* were produced, respectively, in malt extract agar and nutrient broth media separately. Ethanol and methanol were used as solvents in the study. A sample of 1000 microliters of from *A. niger* and *A.versicolor* separately, were collected and spread on malt extract agar then was dried. Discs of *P.candolleana* and *P.spadiceogrisea* which were treated with sterile distilled water, ethanol and methanol for 48 hours by disc diffusion method were inoculated at 2 cm intervals in the form of water-ethanol and water-methanol. In the dark, at 27 ˚C, it was incubated for 48 hours. The antifungal effects of both two solvents of *Psathyrella candolleana* against both *Aspergillus* species were not observed. It has been determined that both two solvents of *Psathyrella spadiceogrisea* have antifungal activity against both two *Aspergillus* species.

Keywords: *Psathyrella candolleana, Psathyrella spadiceogrisea, Aspergillus niger, Aspergillus versicolor*, Antifungal effects

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PHELLINUS LUNDELLII VE PHELLINUS IGNIARIUS'UN ASPERGILLUS TÜRLERİ ÜZERİNE ANTİFUNGAL AKTİVİTESİ

ÖZ

Çalışmada *Phellinus* türleri (*P.lundellii, P.igniarius*)'nin *Aspergillus* (*A.niger, A.ochraceus*) üzerine antifungal etkileri incelenmiştir. *A.niger, A.ochraceus, Phellinus lundellii ve Phellinus igniarius* sırasıyla malt ekstrakt agar ve nutrient broth besiyerlerinde ayrı ayrı olacak şekilde üretildi. Çalışmada çözgen olarak etanol ve metanol kullanıldı. *A.niger, A. ochraceus*'dan ayrı ayrı olacak şekilde 1000 mikrolitre örnekler alınarak malt ekstrakt agar üzerine yayılarak kuruması beklendi. Üzerlerine disk difüzyon yöntemi ile steril distile su, etanol ve metanolde 48 saat muamele edilen *P.lundellii, P.igniarius* emdirilmiş diskler su-etanol ve su-metanol şeklinde 2cm aralıkla bırakıldı. Karanlıkta, 27˚C'de, 48 saat inkübe edildi. *P.igniarius*'un *A.niger* için her iki çözgende de antifungal etkisi görülürken *A.ochraceus*'da antifungal etki belirlenmedi. *P.lundellii*'nin her iki çözgeninin hem *A.niger* hem de *A.ochraceus* üzerinde antifungal etki yaptığı görüldü.

Anahtar Kelimeler: *Phellinus lundellii, Phellinus igniarius, Aspergillus niger, Aspergillus ochraceus*, Antifungal Etki

ANTIFUNGAL ACTIVITIES OF *PHELLINUS LUNDELLII* AND *PHELLINUS IGNIARIUS* ON *ASPERGILLUS* SPECIES

ABSTRACT

Antifungal effects of *Phellinus* species (*P. lundellii, P.igniarius*) on *Aspergillus* (*A. niger, A.ochraceus*) were investigated in the study. *A. niger, A.ochraceus, P.lundellii* and *P.igniarius* were produced, respectively, in malt extract agar and nutrient broth media separately. Ethanol and methanol were used as solvents in the study. A sample of 1000 microliters of from *A. niger* and *A. ochraceus* separately, were collected and spread on malt extract agar then were dried. Discs of *P. lundellii* and *P.igniarius* which were treated with sterile distilled water, ethanol and methanol for 48 hours by disc diffusion method were inoculated at 2 cm intervals in the form of water-ethanol and water-methanol. In the dark, at 27˚C, it was incubated for 48 hours. The antifungal effects of both two solvents of *P.igniarius* were observed on *A. niger*, but no antifungal effect was detected in *A.ochraceus*. It was seen that two solvents of *P. lundellii* had antifungal activity on both *A. niger* and *A.ochraceus.*

Keywords: *Phellinus lundellii, Phellinus igniarius, Aspergillus niger, Aspergillus ochraceus*, Antifungal Effects

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A RANDOMIZED CONTROLLED STUDY ON ANALYSIS OF EFFECT OF HOSPITAL BASED BREAST-FEEDING GROUP TRAINING PROVIDED IN EARLY POSTPARTUM PERIOD ABOUT BREAST-FEEDING SELF-EFFICACY AND BREAST-FEEDING STATUS OF MATERNALS

ABSTRACT

This study has been conducted in order to analyze the effect of hospital based breast-feeding group training provided to maternals giving birth to before being discharged on increasing breast-feeding self-efficacy and the ratio of feeding only with breast-milk of maternals. This randomized controlled educational survey has been applied in Department of Gynecology and Obstetrics, Faculty of Medicine, Ege University. The maternals residing in İzmir, having given a healthy birth and not having any obstacle to breastfeeding have been included to the research. Power analysis has been held to determine the sample of the research and the sample size has been indicated as 90 persons with 80% power. However, the study has been completed as being 40 persons in training group and 40 persons in control group since there has been some data loss in the research. Survey forms have been gathered with face-to-face interview method by the researcher. Breast-feeding training that lasts between 30 min-1 hour has been applied to maternals. The maternals have been followed by calling up on the 1st, fourth and twelfth weeks after discharge. In the analysis of the data, with descriptive statistics; chi square, t test in dependent and independent groups, ANOWA and logstic regression analysis has been held. The age average of women is 28.61±5.00 (min=18, max=43). 27% of the maternals work and over 80% of them live in nuclear families. 63% of them are multiparous and over 50% of them have two and above children. The institution they take regular follow-up is substantially university/public hospital, and over 50% of them give birth to by caesarean section. One of two maternals have breasfeeding experience and 55% of them have taken breast-feeding training. 67% of maternals have breastfed their babies in the first hour after delivery. Before the training, preliminary test point in the training group that is 71.12% has risen to 85.63 in the last test, and in the control group, point average that is 68.65 in preliminary test has risen to 73.12 in the last test. The points gained from Breast-feeding Self-efficacy Scale and IOWA Infant Feding and Attitude Scale have been obtained higher in training group than control group in all follow-ups. There is a statistically significant difference with regard to the points gained between two groups. Accordingly the case of feeding only with breast-milk has been in rise in trainig group in comparison to control group. In the twelfth week while this rate has been 80.0% in training group, it has fallen down 47.5% in control group. In the research, the ratio of the maternals took training who feed their babies only breast-milk is higher than control group. Nevertheless, perception of self-efficacy and attitude of feeding their babies only with breast-milk in training group is more affirmative in comparison to control group. These results show that breast-feeding training provided by the method of postpartum group training and follow-up counseling is effective. It is crucial that the studies to be carried out in this scope should include healthcare staff, training and consultancy service should be performed in a sustainable way, and policies and strategies that are specific to this issue should be developed.

Keywords: Breast-feeding, Self-sufficiency, Group Training, Early Postpartum Period, Mother

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EFFECTS OF DIFFERENT THERMAL SHOCKS APPLICATIONS ON SURVIVAL AND GROWTH OF RAINBOW TROUT (Oncorhynchus mykiss, W. 1792) EGGS

ABSTRACT

In this research, the effects of three different thermal shocks (15, 20 and 25°C) on survival and growth of rainbow trout eggs have been investigated. Survival ratios of eggs have been determined as control>15°C>20°C>25°C ($p<0.05$). The best growth ratios among the groups (average increase in wet weight, gain absolute growth rate, feed conversion rate, specific growth rate and condition factor) have been determined to be 15°C>20°C>K>25°C ($p>0.05$). The gain relative growth rations among the groups have been determined to be 15°C>20°C>25°C>K, respectively ($p>0.05$). This study showed that the optimum shock temperature for rainbow trout have been indicated to be between 15 and 20°C (except the survival rations).

Keywords: *Oncorhynchus mykiss*, Rainbow Trout, Thermal Shock, Survival, Growth

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EFFECTS OF EDUCATION GIVEN IN ANTENATAL EDUCATION COURSES ON THE LEVELS OF CHILDBIRTH FEAR IN PREGNANT WOMEN

ABSTRACT

An important component of antenatal care services is providing pregnant women with information and counseling services about health and preventive issues related to pregnancy and postnatal period. In Turkey, antenatal education courses have been given in hospitals since 2014. In these courses, training on antenatal, intranatal, and postnatal periods is provided for the pregnant women that require them. The aim of these trainings is to help pregnant women acquire knowledge and skills about childbirth and pain management so that they can adopt parenting roles. In this study, the effects of education given in antenatal education courses on the levels of childbirth fear in pregnant women were evaluated. The study is an educational intervention study. The study included 78 pregnant women who participated in the antenatal education courses given in a state hospital in Aydın, a province in the western region of Turkey. The data were collected between June 2016 and October 2016. To collect the study data, a questionnaire and the Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) version A were used. The minimum and maximum possible scores to be obtained from the scale were 0 and 165 respectively. The levels of fear of childbirth were categorized as low (scores≤37), moderate (scores between 38 and 65), severe (scores between 66 and 84), and requiring clinical intervention (scores≥85). In data analysis, numbers, percent distributions and mean values were calculated with the SPSS 16.0 statistical program, and the dependent sample T-Test was administered. To conduct the study, approvals of the relevant institutions, and consent of the pregnant women to participate in the study were obtained. The mean age of the participants was 23.85 ± 3.34. The mean number of pregnancies was 1.55±0.59. Of the participants, 74.4% had their first pregnancy between the ages of 19 and 24 years, 23% gave their previous birth vaginally, and 17.9% gave their previous birth by cesarean section. The pre- and post-training mean scores the participants obtained from the questionnaire were 61.34±23.92 and 31.17±10.41 respectively. While the pre-training fear levels of the participants were low (17.9%), moderate (24.4%), severe (46.2%) and requiring clinical intervention (11.5%), their post-training fear levels were low (62.8%) and moderate (37.2%). There was a significant decrease in the fear levels of the participants after the training ($p<0.05$). The training given to the participating pregnant women proved to be effective in reducing the fear of childbirth. The training and counseling to be provided by health personnel particularly by midwives who observe pregnant women may help these women to have vaginal and positive childbirth experiences. Encouragement of giving vaginal birth will reduce unnecessary medical interventions.

Keywords: Fear of Childbirth, Education, Prenatal, Women, Pregnancy

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ANNELERİN DOĞUMDAN MEMNUNİYETİNE VE DOĞUM EYLEMİNDE DESTEKLEYİCİ BAKIMINA ETKİ EDEN FAKTÖRLERİN İNCELENMESİ

ÖZ

Bu çalışma ile annelerin doğumdan memnuniyetine ve doğum eyleminde destekleyici bakımına etki eden faktörlerin değerlendirilmesi amaçlanmıştır. Çalışmanın veri toplama aşamasında literatür taraması ve önceden yapılmış çalışmalar incelenerek oluşturulan anket soruları, Normal Doğumda Anne Memnuniyetini Değerlendirme Ölçeği ve Doğumda Hemşirelik Desteği Ölçeği kullanılmıştır. Araştırmanın örneklemini bir üniversite hastanesinde vajinal doğum yapmış 352 kadın oluşturmuştur. Araştırma bulgularına göre; annelerin %33.5'inin 20-24 yaş grubunda ve %33.5'inin primiparlar olduğu saptanmıştır. Annelerin Normal Doğumda Anne Memnuniyetini Değerlendirme Ölçeği toplam puanı 153.15 olup, annelerin%64.2'sinin doğumlarında verilen destekten memnun oldukları belirlenmiştir. Ayrıca, annelerin Doğumda Hemşirelik Desteği Ölçeği toplam puanı 65.69 olarak saptanmıştır. Doğumda Hemşirelik Desteği Ölçeği ile Normal Doğumda Anne Memnuniyetini Değerlendirme Ölçeği arasında yapılan korelasyonda pozitif yönde anlamlı ilişki saptanmıştır ($p<0.05$). Sonuç olarak; Annelerin doğum eyleminde aldıkları hemşirelik/ebelik desteği arttıkça doğumdan memnuniyet düzeylerinin arttığı belirlenmiştir. Bu nedenle doğum eylemi sırasında bakım ve desteklerin arttırılması ve doğumda memnuniyete etki eden diğer faktörlerin belirleneceği başka araştırmaların da yapılması önerilmektedir.

Anahtar Kelimeler: Doğum, Doğumda Destekleyici Bakım, Anne, Doğum Desteği, Doğum Memnuniyeti

THE SATISFACTION OF MOTHERS GIVING BIRTH AND SUPPORTIVE CARE IN LABOR INVESTIGATION OF FACTORS AFFECTING

ABSTRACT

In this study the aim is to the satisfaction of mothers giving birth and supportive care in labor ınvestigation of factors affecting. Questionnaires were used to determine the data collection stage of the study. The questionnaire included the Questionnaire on Normal Maternal Satisfaction and the Questionnaire on Nursing Support at Birth. The University Training and Research Hospital's sample of the research was composed of 352 women who had vaginal delivery. According to experiment results; determined that 33.5% of the mothers were in the 20-24 age group and 33.5% were the primiparas. Mothers Satisfaction Rating Scale for vaginal birth was 153.15 and 64.2% of the mothers were satisfied with the support given at birth. Additionally, the total score of the Mothers' Nursing Support Scale at birth was 65.69. There was a significant positive correlation between the Nursing Support at Birth Scale and the Maternal Satisfaction Rating Scale at Normal Birth ($p<0.05$). As a result; It was determined that maternal satisfaction levels increased as nursing/midwifery support increased during birth. For this reason, increasing the amount of care and support during labor and It is suggested to perform other investigations to determine other factors affecting the child's satisfaction at birth.

Keywords: Labour, Supportive Care in Labour, Mother, Labour Support, Satisfaction of Labour

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COMPENSATORY GROWTH OF BROWN TROUT *Salmo trutta fario* UNDER DIFFERENT FEED REGIMES

ABSTRACT

The purpose of this study is to investigate the effects of short-term starvation and refeeding on growth and feeding performances of brown trout (*Salmo trutta fario*) with an average initial weight of 200±2 g. After the adaptation of brown trout, 60 fish were randomly distributed in 4 fiberglass tanks (3 replication). The fish were exposed to different feed diets (control: fed two times daily; T1: 1 day of starvation and 2 day of refeeding; T2: 2 days of starvation and 3 days of refeeding; T3: 3 days of starvation and 4 days of refeeding). At the end of the experiment, final weight, SGR (specific growth rate) WG (weight gain), feed conversion ratio (FCR) and feed efficiency ratio (FER) were detected between control and fasting groups. The highest values were observed in the control group. The lowest values were observed in the T3. The differences among Final weight, SGR, WG, FCR and FER were statistically insignificant ($p>0.05$). As a result, brown trout, *Salmo trutta* has been showed partial compensatory growth under different feed regimes.

Keywords: Brown Trout, *salmo trutta fario*, Growth, Feeding Regime, Fish

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ONTIC OBSESSION AND REAL MEANING OF BELIEF IN GOD

ABSTRACT

The philosophical proofs based on the reason regarding God's existence claim that God has an ontic or existential essence, that the concept of God corresponds to a real existence, and that we could know this by means of our reason. However, is it reasonable, or can it be seen to be reasonable to rely upon the so-called power of reason on this topic? Why the presumed high confidence in reason not be a delusion which is itself unreasonable? Since the human reason is at work in relation to how the reason works best, the reason can question its own ability and strength. This study argues that the value and meaning of belief in God, not the real existence of God, is what deserves to be analyzed and investigated philosophically, if the concept of God is expected to have a real effect on our lives as well as on our intellects.

Keywords: God, Ontic, Obsession, Belief, Meaning

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KARADENİZ'İN GÜNEY-DOĞU KIYILARINDA BARBUNYA, *MULLUS BARBATUS*, BALIĞININ BÜYÜKLÜK DAĞILIMI ÜZERİNE DERİNLİĞİN ETKİSİ

ÖZ

Karadeniz'in güney-doğu kıyılarında yürütülen bu çalışmada, barbunya balığının büyüklük dağılımı üzerine derinliğin etkisi araştırılmıştır. Bu amaçla, Mart 2013 ile Şubat 2014 tarihleri arasında aylık olarak göz açıklığı 32, 34, 36 ve 38mm olan galsama ağları ile dört farklı derinlik katmanından (0-14, 15-29, 30-49 ve ≥50m) örnekler yakalanmıştır. Farklı derinlik katmanlarından yakalanan örneklerin ortalama boyları ve ağırlıkları ile boy ve ağırlık dağılımları karşılaştırılmıştır. Araştırma sonuçları, yakalanan barbunya balıklarında ortalama boyun ve ağırlığın derinlik artışıyla tedrici olarak azaldığını göstermiştir. Derinliği 30m'den daha fazla olan sularda yaşayan bireylerin büyüklük dağılımı 30m'den daha sığ sularda yaşayanlara göre daha sınırlı bulunmuştur.

Anahtar Kelimeler: Karadeniz, Barbunya balığı, *Mullus barbatus*, Derinlik, Boy ve Ağırlık

EFFECT OF DEPTH ON BODY SIZE DISTRIBUTION OF RED MULLET, *MULLUS BARBATUS*, IN THE SOUTH-EASTERN COAST OF BLACK SEA

ABSTRACT

In this study conducted in the south-eastern coast of Black Sea was investigated effect of depth on body size distribution of the red mullet, *Mullus barbatus*. Whit this aim, the red mullet samples were collected using multifilament gillnets with mesh sizes of 32, 34, 36 and 38mm in the four different depth layers (0-14, 15-29, 30-49 and ≥50m) from March 2013 to February 2014. Average length and weight of the red mullets collected from depth layers and their length and weight distributions were compared. The results showed that the average length and weight of the red mullets decreased gradually with increasing water depth. Body size distribution of individuals living in waters deeper than 30m were more limited than those of shallower than 30m.

Keywords: Black Sea, Red Mullet, *Mullus barbatus*, Depth, Length and Weight

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LENGTH-WEIGHT RELATIONSHIP OF *Streaked gurnard* (*Trigloporus lastoviza* (Bonnaterre, 1788)) CAUGHT FROM NORTH-EASTERN MEDITERRANEAN

ABSTRACT

In this study was carried out to determine the length-weight relationships of streaked gurnard *Trigloporus lastoviza* caught from northeastern Mediterranean. Length-weight relationships of streaked gurnard were examined detailed for each sex in a population of the North-eastern Mediterranean Sea. *T. lastoviza* individuals were captured by commercial bottom trawler at a depth of 155 to 212m off the Iskenderun Bay. A total of 84 specimens (52 females and 32 males) were collected. Minimum-maximum length and weight of caught fishes were determined as 10.5-26.1cm and 5.92-163.8g for females and 6.41-22.0cm and 4.91-92.96g for males respectively. Length-weight relationships of *T. lastoviza* were found as W=0.0055*L3.104, r2=0.793, SEb=0.175 for all individuals, W=0.0076*L2.972, r2=0.84, SEb=0. 258 for females and W=0.0076*L2.972, r2=0.75, SEb=0.245 for males. 95% Confidence intervals of b=2.65175-3.34825, t-test P<0.05. The type of growth for all inviduals, females and males were isometric growth (b=3).

Keywords: Streaked gurnard, Trigloporus lastoviza, Length-Weight Relationships, Northeastern Mediterranean, North East Mediterranean

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BİYOGAZIN ÜRETİMİNE ETKİ EDEN FAKTÖRLER

ÖZ

Biyogaz organik menşeili atık ve artıkların oksijensiz ortamda fermantasyonu sonucunda açığa çıkan bir gazdır. Biyogaz ucuz, çevre dostu ve yenilenebilir bir enerji kaynağıdır. Sıcaklığın biyolojik sistem üzerinde çok büyük etkileri vardır. Biyogaz üretiminde kullanılan atıkların birbirleriyle ve karışımla tam olarak temas etmesi için karıştırma işlemi yapılmaktadır. Metan bakterilerinin metobolik etkinlikleri karbon/azot oranıyla değiştiği için C/N oranı biyogaz oluşumunu önemli ölçüde etkilemektedir. C/N oranı 23/1 düzeyinden fazla 10/1 oranından az olmalıdır. Bu çalışmamızda biyogaza etki eden faktörler, yükleme oranı, bekletme süresi, C/N oranı ortam çalışma sıcaklığı, Ph, karıştırma ele alınmıştır. Bu faktörlerin oranları, hızları ve çalışma koşulları incelenmiş olup biyogaz üretiminde avantaj ve dezavantajları ortaya konulmuştur. Verilerin çoğu tablo ve grafiklerde gösterilmiştir. Bu çalışmayla, biyogazın önemi ve biyogaz üretimine etki eden faktörler vurgulanarak, biyogaz konusunda genel bilinçlenmeye katkı sağlanması amaçlanmıştır.

Anahtar Kelimeler: Biyogaz, Biyogaz Üretimi, Biyogaz Üretimine Etki Eden Faktörler, Karbon/Azot Oranı

FACTORS AFFECTING THE PRODUCTİON OF BIOGAS

ABSTRACT

Biogas is a gas resulting from anaerobic fermantation of wastes and organic wastes. Biogas is cheap, environmentally friendly and a renewable energy source. Temperature has a very large impact on biological systems. The metabolic activities of methane bacteria change according to carbon/nitrogen so this ratio is important in producing biogas. C/N ratio should be less than 10/1 or more than 23/1. While producing biogas, it is essential to mix slurry and wastes to react with each other. In this study, factors affecting biogas, loading rate, retention time, C/N ratio of the ambient operating temperature, pH, mixing is discussed. The proportion of these factors speeds and operating conditions have been examined and advantages disadvantages of biogas production have been demonstrated. Most of the data is shown in tables and graphs. In this study, emphasis on the importance of biogas and the biogas production factors is intended to contribute to public awareness about biogas.

Keywords: Biogas, Biogas Production, Factors Affecting The Production of Biogas, Carbon/Nitrogen Ratio

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TÜRKİYE'DE BİYOGAZ ÜRETİMİ VE BİYOGAZ ÜRETİMİ İSTATİSTİK BİLGİLERİ

ÖZ

Gün geçtikçe gelişen teknoloji ve nüfus yoğunluğu ile birlikte artan enerji açığı yenilenebilir enerji kaynakların önemini artırmıştır. Bu yenilenebilir enerji kaynaklarından birisi de, hayvansal ve evsel atıkların işlenmesiyle üretilen biyogazdır. Hayvan, bitki ve çöp artıklarından biyogaz üretiminde son zamanlarda üzerinde en fazla durulan ve araştırma yapılan konular arasındadır. Bu çalışmada, Türkiye'de üretim yapan biyogaz tesislerinin yıllık üretim miktarları ve bu üretilen biyogaz'dan, elde edilen elektrik enerji miktarı tespit edilmiştir. Biyogazdan elde edilen elektrik enerjisinin Türkiye'de tüketilen toplam enerji miktarına oranı tespit edilmiş, tablo ve grafik haline getirilmiştir. Biyogaz üretiminin arttırılması ülke şartlarında mümkün olmakla beraber, biyogaz üretimi açısından gerekli olan hayvan, bitki ve çöp atıklarının daha etkin bir şekilde kullanılması gerekmektedir. Türkiye'de biyogaz üretiminin artırılması, tüketilen elektrik enerjisinin yenilenebilir enerjilerden sağlanması açısından önem arz etmektedir.

Anahtar Kelimeler: Biyogaz, Hayvan, Bitki ve Çöp Artıklar, Biyogaz Miktarı, Yenilenebilir Enerji

FACTORS AFFECTING THE PRODUCTİON OF BIOGAS

ABSTRACT

In the world of increasing energy demand, we are looking for new and renewable alternative energy sources instead of fossil energy sources. With increasing technology and population, energy needs have increased the importance of the renewable energy sources. One of these renewable energy sources is biogas produced by the evaluation of waste. Biogas production from animal, plant and garbage wastes is one of the most studied and researched subjects in recent years. In this study, the annual production quantities of the biogas institutions in Turkey and the amount of electrical energy obtained from the produced biogas have been determined. The ratio of the electricity energy obtained from the biogas to the total amount of energy consumed in Turkey has been determined and charted. Although increase of biogas production is possible in country conditions, animal, plant and garbage wastes which are necessary for biogas production need to be used more effectively. Increasing biogas production in Turkey is important in terms of ensuring the consumption of electricity from renewable energies.

Keywords: Biogas, Animal Plant and Garbage Wastes, Biogas Quantity, Renewable Energy

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BÖRÜLCE TANE ÜRÜNÜNÜN KALİTE KRİTERLERİNE FARKLI EKİM ZAMANLARININ ETKİSİ

ÖZ

Baklagil bitkilerinden sıcaklık isteği fazla olan bitkilerden biride börülcedir. Börülce bitkisi Akdeniz iklimine sahip yerlerde yazlık yetiştirilmektedir. Kahramanmaraş bölgesinde birinci ürün ekim zamanından ikinci ürün ekim zamanına kadar olan süre dikkate alınarak, Şimal börülce çeşidine 7 farklı ekim zamanı uygulanmıştır. Ekimler 15 günlük periyodik aralıklarla yapılmıştır. İlk ekim 20 Nisan 2015, son ekim 20 Temmuz 2015 gerçekleştirilmiştir. Araştırmada, ekim zamanlarının tane kalite kriterlerine etkisi araştırılmıştır. Her bir ekim zamanı uygulamasında çiçeklenme süresi, bin tane ağırlığı, tanenin yağ oranı, nişasta oranı ve protein oranları incelenmiştir. İncelenen özelliklerden çiçeklenme süresi, bin tane ağırlığı ve protein oranı ekim zamanlarına göre istatistiki olarak önemli, yağ ve nişasta oranı istatistiki olarak önemsiz olduğu kaydedilmiştir. Ekim zamanlarına göre börülce bitkisinin çiçeklenme süresi 32-40 gün, bin tane ağırlığı 138-177g, protein oranı %22.81-25.45, nişasta oranı %42.11-45.83 arasında değişim göstermiştir.

Anahtar Kelimeler: Börülce, Ekim Zamanları, Kalite Kriterleri, Baklagil, Şimal Börülce

EFFECT OF DIFFERENT SOWING TIMES ON QUALITY CRITERIA OF COWPEA GRAIN PRODUCT

ABSTRACT

Cowpea is one of legume plants that demand much temperature. Cowpea plant is grown in summer climate in places where the Mediterranean climate prevails. Seven different sowing times have been applied for Şimal cowpea variety, taking into consideration the period from the first sowing time to the second sowing time in the Kahramanmaraş region. The first planting was begun on 20 April; the last planting was on 20 July 2015. In the study, the effects of planting times on grain quality criteria were investigated. The flowering period, 1000 grain weight, oil, starch and protein ratios were examined on each sowing times application. It was noted that flowering period, 1000 grain weight and protein ratios were statistically significant with respect to planting dates, but oil and starch ratios statistically insignificant. The flowering periods, weight of 1000 grains, the protein and starch ratios of cowpea plant according to the planting dates are varied among 32-40 days, 138-177g and 22.81-25.45% and %42.11-45.83 respectively.

Keywords: Cowpea, Sowing Dates, Quality Criteria's, Cowpea, Şimal Cowpea

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MISIR BİTKİSİNİN GENERATİF DÖNEMİNDE SULAMA SONLANDIRMASININ KALİTE KRİTERLERİNE ETKİSİ

ÖZ

Mısır bitkisi için su tüm gelişme dönemi için önemli bir faktördür. Vejatatif dönemden generatif döneme geçişte bitkinin suya hassasiyeti daha da önem kazanmaktadır. Bu nedenle mısır bitkisinin generatif dönemine geçmesinden sonra sulama işlemine son verme altı farkı zamanda uygulanmıştır. Araştırma tesadüf blokları deneme deseninde yürütülmüştür. Mısır bitkisinin ekimi Şanlıurfa (Türkiye) koşullarında 20 Nisan 2015 tahinde yapılmıştır. Araştırmada koçan püskülü çıkış süresi, koçan tane ağırlığı, 100 tohum ağırlığı, protein, nişasta ve yağ oranları incelenmiştir. Farklı zamanlarda su verme işleminin sona ermesi koçan tane ağırlığı, 100 tohum ağırlığı, nişasta ve yağ oranlarında istatistiki olarak önemli farklılık oluşturmuştur. Koçan püskülü çıkış süresi ve protein oranı üzerinde su verme işleminin sona ermesinin istatistiki olarak farklılık oluşturmadığı kaydedilmiştir. Su verme işleminin tepe püskülü çıkışından 35 gün sonra sona ermesi kaçan tane ağırlığı, 100 tohum ağırlığı ve yağ oranı yönünden uygun, nişasta oranı yönünde 42 sonra olmasının uygun olduğu kaydedilmiştir.

Anahtar Kelimeler: Mısır, Sulama, Protein, Nişasta ve Yağ, Bitki

THE EFFECT OF IRRIGATION TERMINATION IN THE GENERATIVE PERIOD OF CORN ON QUALITY CRITERIA

ABSTRACT

Water for corn plants is an important factor for the whole development period. The susceptibility of corn to water becomes even more important from the vegetative period pass on the generative period. For this reason, irrigation termination application was used as six different time factors after the maize plant passed to the generative period. The study was conducted in randomized blocks trial design. The corn plant was planted in April 20, 2015 under the conditions of Şanlıurfa (Turkey). The grain weight of per ear, the weight of 100 seed, protein, starch, and oil ratio of corn were investigated in the study. The grain weight of per ear, the weight of 100 seed, starch and oil ratio of corn were found significantly as statistically in terms of the different time irrigation termination application. The oil ratio of corn was not affected by the different time irrigation termination. It was noted that the third irrigation termination after 35 days from the tasseling emergence would be appropriate in the terms of the grain weight of per ear, the weight of 100 seed and oil ratio of corn. The highest starch ratio was obtained from last irrigation termination.

Keywords: Corn, Irrigation, Protein, Starch and Oil, Plant

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Porphyridium Cruentum KÜLTÜRLERİNDE KURU MADDE TAHMİNİ

ÖZ

Porphyridium cruentum'un kuru ağırlığının yaklaşık %28-39'unu protein, %40-57'sini karbonhidrat ve %9-14'ünü yağ oluşturmaktadır. *P. cruentum*, Rhodophyceae sınıfına ait, denizel, tek hücreli kırmızı alglerdendir. Bu çalışmada kültüre alınmış *P. cruentum*'un kuru madde miktarının, hem kontrol grubu olarak hem de azotun eksiltildiği besi ortamında, çoklu regresyon analizi yöntemi kullanılarak tahmin edilmesi amaçlanmıştır. *Porphyridium cruentum* türü, kontrol grubu ve %50 oranında N'un eksiltildiği F/2 besi ortamında kültüre alınmıştır. Optik yoğunluk ve klorofil *a* günlük olarak ölçülmüştür. Kontrol grubu ve %50 oranında azotun eksiltildiği grupta optik yoğunluk ve klorofil *a* kullanılarak matematiksel model oluşturulmuştur. Kontrol grubunun R^2 değeri %97.8 ile istatistiki olarak önemli bulunmuştur. %50 azot eksikliği uygulanan grupta ise R^2 değeri %95.4 ile istatistiki olarak önemli bulunmuştur.

Anahtar Kelimeler: *Porphyridium cruentum*, Kuru Madde, Optik Yoğunluk, Klorofil *A*, Regresyon

THE ESTIMATION OF DRY MATTER IN *Porphyridium Cruentum* CULTURES

ABSTRACT

Porphyridium cruetum contains approximately 28-39% protein, 40-57% carbohydrate and 9-14% fat in dry weight. *P. cruentum* is marine, single celled red algae in Rhodophyceae class. In this study, it was aimed to estimate dry matter of *Porphyridium cruentum* in the conditions of control group and nitrogen deficiency in photobioreactors, by using multiple regression analysis method. *P. cruentum* was cultured in F/2 medium of which N was reduced by 50% and control group. Optical density and chlorophyll *a* were measured daily. The mathematical model was formed for control group and for 50% nitrogen deficiency using optical density, chlorophyll *a*. The R^2 value of control group was found 97.8% and statistically significant. The R^2 was found 95.4% and statistically significant in 50% nitrogen deficiency.

Keywords: *Porphyridium cruentum*, Dry Matter, Optical Density, Chlorophyll *A*, Regression

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AV VERİMİ VE BOY SEÇİCİLİĞİ AÇISINDAN SADE MONOFİLAMENT UZATMA AĞLARI İLE SADE MULTİFİLAMENT AĞLAR ARASINDA FARK VAR MI?

ÖZ

Bu çalışma kapsamında, monofilament ve multifilament ağların seçicilik parametreleri ve av verimleri arasındaki fark kıyaslanmıştır. Saha çalışmaları kapsamında, aynı teknik özelliklere sahip monofilament ve multifilament ağlar kullnılarak 28.12.2016 ile 13.04.2017 tarihleri arasında, Akçaabat bölgesinde, 40-78m derinler arasında toplam 8 operasyon gerçekleştirilmiştir. Sekiz örneklemede monofilament ağlarla toplam 2061 birey, multifilament ağlara toplam 2050 birey yakalanmıştır. Her iki ağ türünde de dişi birey oranının erkek birey oranından yüksek olduğu belirlenmiştir (Erkek:Dişi oranı monofilament: 1:1.6, multifilament 1:1.4). Elde edilen seçicilik parametreleri, 28, 30, 32,34, 36 ve 38mm ağ göz genişlikleri için monofilament ağların optimum yakalanma boylarını 14.37, 15.39, 16.42, 17.45 ve 18.47cm olduğunu göstermiştir. Multifilament ağlar için ise optimum yakalanma boyları yine aynı sırayla 13.51, 14.48, 15.44, 16.41 ve 17.38cm olarak belirlenmiştir. Av verimi bakımından ise monofilament ve multifilament ağlar arasında istatistiksel açıdan önemli bir fark olmadığı belirlenmiştir.

Anahtar Kelimeler: Mezgit, *Merlangius merlangus euxinus* Karadeniz, Uzatma Ağı Seçiciliği, Av Verimi, Multifilament

IS THERE A DIFFERENCE BETWEEN MONOFILAMENT GILLNETS AND MULTIFILAMENT GILLNETS IN TERMS OF CATCH EFFICIENCY AND LENGTH SELECTIVITY?

ABSTRACT

In this study, the difference between selectivity parameters and catch rates of monofilament and multifilament nets are compared. Within the scope of field works, 8 operations were carried out between 12.28.2016 and 04.13.2017, in Akçaabat region, between 40-78m depth, using monofilament and multifilament nets with the same technical characteristics. A total of 2061 individuals were captured in monofilament nets and 2050 individuals in multifilament nets in eight samplings. In both types of the nets, female ratio was found to be higher than male ratio (male: female ratio monofilament: 1: 1.6, multifilament 1: 1.4). The selectivity parameters obtained show that the optimum catch lengths for monofilament nets for 28, 30, 32, 34, 36 and 38 mm mesh sizes are 14.37, 15.39, 16.42, 17.45 and 18.47 cm, respectively. For multifilament nets, the optimum capture length was also determined as 13.51, 14.48, 15.44, 16.41 and 17.38 cm in the same order. There was no statistically significant difference between monofilament and multifilament nets in terms of catch rate.

Keywords: Whiting, *Merlangius merlangus euxinus* Black Sea, Gillnet Selectivity, Catch Rate, Multifilament

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BALIK (*Caracius gibelio*) SİLAJLARINDA LAKTİK ASİT BAKTERİ SUŞLARININ BİYOJENİK AMİN OLUŞUMU ÜZERİNE ETKİLERİ

ÖZ

Bu araştırmada biyojenik aminler açısından güvenli balık silajları üretebilmek için uygun başlangıç laktik asit bakteri (LAB) türlerinin seçimi hedeflenmiştir. Bu amaçla beş LAB türü (*Lactobacillus plantarum, Lactobacillus brevis, Pediococcus acidilactici, Enterococcus gallinarum* and *Streptococcus* spp) ve kontrol olarakta formik asit kullanılarak *Carassius gibelio* ile balık silajları hazırlanmıştır. Asit ve fermente balık silajları üç hafta boyunca depolandıktan sonra taşıma ve kullanım kolaylığı için püskürtmeli kurutucuda kurutulmuştur. Bu çalışma TÜBİTAK(213O166) tarafından desteklenmiştir. Putresin ve kadaverin üç haftalık depolama süresince düşük düzeylerde (3.5mg/100 altında) bulunmuştur. Histamin düzeyinin üçüncü haftada tüm gruplarda 0.63-3.32mg/100g aralığında olduğu saptanmıştır. Kurutulmuş balık silajı tozlarında histamin tespit edilemezken, diğer tüm biyojenik aminler de 1mg/100g düzeyinin altında tespit edilmiştir. Araştırmada kullanılan bu LAB'lerinin biyojenik aminler yönünden herhangi bir olumsuz etkiye neden olmadığı bulunmuştur.

Anahtar Kelimeler: Balık Silajı, Biyojenik Aminler, *Carassius gibelio*, Laktik Asit Bakterileri, Histamin

EFFECTS OF LACTIC ACID BACTERIA STRAINS ON BIOGENIC AMINE FORMATION IN FISH (Caracius gibelio) SILAGES

ABSTRACT

In this study, it was aimed to select appropriate starting lactic acid bacteria (LAB) species to produce safe fish silages in regards of biogenic amines. For this purpose, five LAB species (*Lactobacillus plantarum, Lactobacillus brevis, Pediococcus acidilactici, Enterococcus gallinarum and Streptococcus spp*) were used and formic acid was used as control, and fish silages with *Carassius gibelio* were prepared. After acid and fermented fish silages were stored for three weeks, they were dried in a spray drier for ease of transport and use. This study was supported by TUBITAK (213O166). Putrescine and cadaverine were found at low levels (below 3.5 mg/100g) during three weeks of storage. Histamine level was found to be in the range of 0.63 to 3.32 mg/100g in all groups in the third week. While histamine was not detected in spray dried fish silage powders, all other biogenic amines were detected below 1 mg/100g. It was found that these LABs used in the research do not cause any adverse effects in terms of biogenic amines.

Keywords: Fish Silage, Biogenic Amines, *Carassius gibelio*, Lactic Acid Bacteria, Histamine

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BOTANICAL FEATURES AND DISTRIBUTION OF *VINCETOXICUM FUNEBRE* BOISS. & KOTSCHY (APOCYNACEAE) IN TURKEY AND CAUCASIA

ABSTRACT

Vincetoxicum funebre Boiss. & Kotschy, one of the widespread *Vincetoxicum* Wolf taxa in the Caucasia, is represented by only one known population in the northeast part of Anatolia, Turkey. This study presents botanical features, updated distribution map and threat category of *V. funebre in Turkey*. Morphological investigations, photographs and drawings were performed on the herbarium samples stored at Recep Tayyip Erdoğan University, Biology Department Herbarium (RUB) by using stereo microscope. The distribution map of *V. funebre* was created using ArcGIS 9.3 program on the basis of our findings in the field work. *V. funebre* is a perennial herbaceous plant characterized with erect stem, dark purplish-black colored and sparsely crisped corolla, dark purple colored, and 5-parted cup-shaped staminal corona, lanceolate and glabrous follicle. This species is recorded from only A9 square with a small population and an area of occupancy (AOO) of 2km^2 in Turkey. *V. funebre* is morphologically similar to *V. scandens* Sommier & Levier but differs from it with erect and bi-serially crisped stem, sparsely crisped corolla, 5 minute intermediate coronal teeth, and obtuse tipped anthers. According to population number and size, habitat quality and our field observations, *V. funebre* is re-assessed as CR for Turkey in the light of IUCN.

Keywords: Distribution Map, Threat Category, Morphology, Turkey, *Vincetoxicum*

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PRESENCE OF EPILOBIUM ALPESTRE (JACQ.) KROCKER (ONAGRACEAE)IN TURKEY

ABSTRACT

Epilobium alpestre (Jacq.) Krocker, one of the widespread *Epilobium* taxa in the Caucasia and Europe, was recorded from two localities in the Caucasus Region of Turkey. However only one population has been confirmed by the present authors in Turkey. The morphological properties, distribution and threats of *E. alpestre* in Turkey were investigated by the present study. *E. alpestre* is characterized by verticillate leaves, nodding inflorescence in bud, entire stigma and large seeds (1.5-2mm). EOO and AOO of this species are less than8 km^2 and 2 km^2, respectively. According to population number and size, habitat quality and our field observations, *E. alpestre* was assessed under the Endangered (EN) category considering to red list criteria of IUCN.

Keywords: IUCN, Morphology, Turkey, Epilobium, Krocker

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İSKENDERUN KÖRFEZİ'NDE AKDENİZ KARİDESİ (*Penaeus kerathurus* Forskal,1775)'NİN BÜYÜME PARAMETRELERİ

ÖZ

Bu çalışmada, İskenderun Körfezi'nde Kasım 2009-Aralık 2010 tarih aralığında aylık olarak dip trolü çekimlerinden elde edilen Akdeniz karidesi (*Penaeus kerathurus*)'nin büyeme parametreleri belirlenmiştir. İncelenen 120 örnek bireyin 41 adet erkek ve 79 adet dişi olup; erkek/dişi oranı yaklaşık 1/2 dir. Örneklerin total boyları 8.5-19.1 cm, total ağırlıkları 4.4-58.41 g değerleri arasında değişim göstermekte ve ortalama boy 13.97±2.19 cm ile ağırlıkları 24.09±11.19 g olarak belirlenmiştir. Boy-Ağırlık ilişkisi toplam eşeyde $W=0.0108*TL^{2.8931}$ ($R^2=0.9042$) olup; büyümede negatif allometrik büyüme özelliği gösterdiği saptanmıştır. von Bertalanffy Büyüme sabitleri $L_\infty=21.95$ cm, $K=0.470$ yıl^{-1} ve $t_0=-0.5138$ yıl^{-1}olduğu belirlenmiştir. Toplam ölüm oranı (Z), doğal ölüm (M) ve balıkçılık ölüm oranı (F) ile stoktan yararlanma düzeyi (E) sırasıyla 2.45 yıl^{-1}, 1.09 yıl^{-1}, 1.36 yıl^{-1} ve 0.55 yıl^{-1} olarak saptanmıştır.

Anahtar Kelimeler: Akdeniz Karidesi (*Penaeus kerathurus*), İskenderun Körfezi, Büyüme Parametreleri, Ölüm Oranları, Stoktan Yararlanma Oranı

THE GROWTH PARAMETERS OF THE MEDITERRANEAN SHRIMP (*Penaeus kerathurus* Forskal, 1775) IN THE ISKENDERUN BAY

ABSTRACT

This study was carried out in the Iskenderun Bay between November 2009 and October 2010 with monthly bottom trawl operations. After the investigations of 120 Penaeus kerathurus, it was determined that male/female ratio was 1:2. The total length of the specimens ranged from 8.5 to 19.1 cm and the total weights varied from 4.4 to 58.41 g, with a mean length of 13.97 ± 2.19 cm and weights of 24.09 ± 11.19 g. Total length-weight relationships were $W=0.108*TL^{2.8931}$ for total individuals. The von Bertalanffy growth constants in length was $TL_\infty=21.95$ cm, $K = 0.470$ year^{-1}, $t_0 = -0.5138$ year for total individuals. In the study, the total (Z), natural (M) and fishing (F) mortality coefficient and exploitation rates (E) were determined as 2.45 year^{-1}, 1.09 year^{-1}, 1.36 year^{-1} and E=0.55 year^{-1}, respectively for all of the obtained individuals.

Keywords: Iskenderun Bay, (*Penaeus kerathurus*), Growth, Mortality Rate, Exploitation Rate

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TRAGOPOGON BUPHTHALMOIDES (DC) BOISS. (ASTERACEAE) IN TURKEY

ABSTRACT

T. buphthalmoides (DC)Boiss. (Asteraceae) is among the widespread species of *Tragopogon* in Turkey. Its distribution range reaches to Caucasus, Iran, Iraq and Lebanon. *T. buphthalmoides* represented with two varieties in Turkey and distinguishing from each other with shape and width of the leaves however, it was found that both varieties characterized by oblate-spheroidal pollen shape in Turkey. Achenes winged and lengths of achenes with beak are 21.8 and 21.6 mm. Lengths of P were found 35.44 and 35.46 µm, and lengths of E were found 37.72 and 37.73 µm for both varieties. According to molecular data members of *T. buphthalmoides* are closely related and grouped with species that having yellow ligules longer than phyllaries and winged achenes.

Keywords: Achene, Molecular, Pollen, *Tragopogon*

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LENGTH-WEIGHT AND LENGTH-LENGTH RELATIONSHIPS OF RED-SPOTTED TROUT (*Salmo trutta macrostigma* (Dumeril, 1858)) IN KARASU RIVER (EAST ANATOLIA, TURKEY)

ABSTRACT

In this study, the length-weight and length-length relationships were determined for *Salmo trutta macrostigma*(Dumeril, 1858) captured in the 15 different site (Yeşildere, Köşk, Ağasuyu, Sincan, Poik, Çiğdemli, Han, Karahasan, Taşağıl, Karataş, Büyükgöze, Deli, Eriç, Kırık, Karnı streams) of Karasu River (Tributary of Fırat River). A total of 104 specimens were catched by electroshocker, gill nets, trammel nets between October 2014 to September 2015. The total length and weight of the sampled ranged between 8.6-27.4 cm and 5.4-241 g. The length-weight relationships were determined as $W=0.0097L^{3.06}$ ($r^2=0.86$) for females, $W=0.0095L^{3.08}$ ($r^2=0.96$) for males and $W=0.0068L^{3.19}$ ($r^2=0.97$) for all individuals. The types of growth for all individuals were positive allometric for *Salmo trutta macrostigma*. Length-length relationships were determined as TL=0.592+1.009FL, FL=-0.104+1.107SL and SL=-0.212+0.881TL for all individuals.

Keywords: Red-spotted trout, *Salmo trutta macrostigma*, length-weight Relationships, length-length Relationships, Karasu River

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THE GENOTOXIC EFFECTS OF SOME FOOD ADDITIVES ON MAMMALS

ABSTRACT

Food additives are substances that are added to foods for numerous purposes, such as prevention of microbiological deterioration and increase in durability, prevention of nutritive value, assisting in technological operations, and correction of sensory characteristics, such as color, appearance, taste and smell. In this review, it is aimed to summarize the data on the genotoxic effects of the various food additives on the mammals and to provide a source for further work to be performed thereafter. In this compiled report, current literature information is organized in the light of the studies in the laboratories of Biology Department of Science and Literature Faculty of Kafkas University. Determination of the presence or absence of such a chemical substance is possible with quick genotoxicity tests. In this review, the genotoxic effects of food additives on mammals were summarized. It has been reported that food additives might cause genotoxicity which was shown by various genotoxicity tests. In vivo and in vitro studies demonstrated that additives increase genotoxicity and cytotoxicity depending on the applied dose. As a result; in this review, various in vivo and in vitro studies consistently have demonstrated that exposure to food additives can be both genotoxic and cytotoxic on mammals.

Keywords: Food Preservatives, Mammals, Genotoxic Effects, Genotoxic Effects, Food Additives

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THE GENOTOXIC-ANTIGENOTOXIC EFFECTS OF SOME OF THE PLANT EXTRACTS USED AS SPICES ON MAMMALS

ABSTRACT

It is known that plants used by humans might have mutagenic, genotoxic and carcinogenic properties and have various side effects. In this review report, it is aimed to organize the studies on some plant extracts, which are commonly used as spices, on possible genotoxic-antigenotoxic effects on the mammals and the results are summarized to provide a further source for the literature. The available literatural information was arranged as review by revising in the direction of the researches in Kafkas University, Faculty of Arts and Sciences, Department of Biology Laboratories. In various studies, it has been shown that plant extracts might have some genotoxic and antigenotoxic effects which was shown by short-term genotoxicity tests. Studies which have performed using various test systems determined that plant extracts have showed their effects on both gene and chromosomal levels. According to studies compiled for this review, it has been reported that both essential oils obtained from various plants used as spices, as well as extracts have both genotoxic and antigenotoxic effects on mammals. In this review, various toxic effects of various plant extracts were determined according to dose, duration and administration method. Findings recorded in different studies on the basis of the assessed studies generally overlap each other.

Keywords: Plant Extract, Genotoxic-Antigenotoxic Effect, Mammalia, Plant,

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THE EFFECTS OF TOXINS ON MAMMALIA

ABSTRACT

Toxins are a number of toxic substances that the living things secrete and protein character, may affect many organisms in different ways, and may alter the various structures of organisms with acute and chronic toxication. The evaluation of the studies on the possible effects of some toxins which are the effective toxicants on mammals by re-examining and the creating resource for the next studies by summarizing the data obtained were aimed in this review. The available literatural information was arranged as review by revising in the direction of the researches in Kafkas University, Faculty of Arts and Sciences, Department of Biology Laboratories. It has been noted that living beings were directly or indirectly exposed to diverse toxins. In this review, the effects of on mammals exposed to, have been tried to be determined by toxicological data. It has been revealed that some toxins have no lethal effect; some others have destructive effects in various reports. Based on the examined information, it has been determined that different levels of toxicity are caused in the mammals, depending on the amount of exposure of the toxins. And also toxicity increases in parallel with the amount of toxin that is exposed and the exposure period. Additionally, it was reported that the effects may vary depending on the type of toxin. As a result, the research results evaluated are similar to each other.

Keywords: Toxin, Toxicity, Mammalia,
Toxic Substances, Protein Character

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THE EFFECTS OF ENDOCRINE DISRUPTORS ON SOME VERTEBRATES

ABSTRACT

Endocrine disruptors are exogenous chemicals, or mixture of chemicals, that can interfere with any aspect of hormone action. The developmental period at which endocrine disruptors exposures occur is a critical consideration in understanding their effects. The studies about the histological effects of endocrine disruptor chemicals on vertebrates were presented and evaluated, and it was aimed to be summarized in such a way that it can generate resources for future studies. The available literatural information was arranged as review by revising in the direction of the researches in Kafkas University, Faculty of Arts and Sciences, Department of Biology Laboratories. Although the endocrine disruptor chemicals presence is tried to be limited at the ecosystem level, the extensive usage of this chemicals in various areas still continues. Many organisms are directly or indirectly exposed to the adverse effects of endocrine disruptor chemicals in this direction. In this review, histological changes occurring in vertebrates as a result of exposure to endocrine disruptor chemicals were investigated. It has been reported that different endocrine disruptor chemical types cause similar histopathological findings in vertebrates in the data obtained from investigations. In the context of the examined data, the effects of endocrine disruptors on some tissues seem to be more variable. Histopathology is a useful tool in endocrine disruptor studies and may provide information on the mechanism of endocrine disruptors that is sometimes unexpected.

Keywords: Endocrine Disruptors, Toxication, Histopathology, Vertebrates, hormone Action

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KAYIP UZATMA AĞLARININ ÜZERİNDE BİRİKEN MADDE MİKTARI İLE 24 SAATLİK AV VERİMİ ARASINDAKİ İLİŞKİ VE AĞA TUTUNAN ORGANİZMALARIN BELİRLENMESİ

ÖZ

Bu çalışmada, kaybolmuş ağ üzerinde biriken kuru madde miktarının sayısal olarak tespit edilebilmesi için bir yöntem oturtulmaya çalışılmıştır. Yöntemin uygunluğunu test etmek içinde, 24 saatlik av verimi ile arasındaki ilişki belirlenmiştir. Saha çalışmaları 27.07.2016 ile 05.04.2017 tarihleri arasında Yumurtalık Koyu'nda gerçekleştirilmiştir. Ağ üzerinde biriken madde miktarını belirlemek; için üzerine 23x23 göz büyüklüğünde ve 45mm göz genişliğine sahip iki parça ağ donatılmış demir paneller 9-12m derinliğe yerleştirilmiştir. Elde edilen veriler ilk 7. günde ağda kuru madde miktarının 3.28gr/panel olduğunu göstermiştir. Devam eden 14, 21, 42 ve 65. günlerde belirlenen kuru madde miktarı ise sırasıyla 3.96, 4.18, 13.97 ve 35.48gr/panel olarak belirlenmiştir (Şekil 3). Daha sonraki örneklemelerde ise kuru madde miktarının fazla değişmediği (93, 115 ve 253. günlerde sırasıyla 35.59, 35.39 ve 33.34gr/panel) tespit edilmiştir. Ayrıca biriken madde miktarıyla av verimi alasında yüksek bir ilişki bulunduğu belirlenmiştir.

Anahtar Kelimeler: Kayıp Av Aracı, 24 Saatlik Av Verimi, Hayalet Avcılık, Panel, Uzatma Ağı

THE RELATIONSHIP BETWEEN THE AMOUNTS OF MATTER ACCUMULATED ON THE LOST GILLNETS AND THE 24 HOUR CATCH RATE AND THE IDENTIFICATION OF THE ORGANISMS ON THE NETS

ABSTRACT

In this study, a method for quantifying the amount of dry matter deposited on the lost nets were tried to be set. In testing the appropriateness of the method, the relationship between the 24 hour catch rate was determined. Surveys were carried out in Yumurtalik Bight between 07.27.2016 and 04.05.2017. In order to determine the amount of material deposited on the nets, iron panels equipped with two pieces of nets with a mesh size of 23x23mm and a width of 45mm are placed at a depth of 9-12m. The obtained data showed that in the first 7 days the dry matter content in the web was 3.28g/panel. The amount of dry matter determined on the following 14, 21, 42 and 65 days was determined as 3.96, 4.18, 13.97 and 35.48gr/panel, respectively (Figure 3). In the subsequent samplings, the amount of dry matter was not changed much (35.59, 35.39 and 33.34gr/panel on days 93, 115 and 253 respectively). In addition, it was determined that there is a high correlation between the amount of the deposited substance and the rate of the catch.

Keywords: Lost Fishing Gear, 24 Hour Catch Rate, Ghost Fishing, Panel, Gillnet

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TÜRKİYE'NİN KUZEYDOĞU AKDENİZ KIYILARINDA DAĞILIŞ GÖSTEREN DENİZ KAPLUMBAĞALARI VE SUGÖZÜ KIYI KUMSALINDAKİ YUVALANMA İZLERİNİN ZAMANSAL DEĞİŞİMİ

ÖZ

Bu çalışmada İskenderun Körfezi'nin batı kıyılarındaki Botaş-Yumurtalık İlçesi arasında yer alan Sugözü Köyü kıyı kumsalındaki yuvalanma izlerinin son on yıldaki mevsimsel dağılışı ele alınmış olup; söz konusu kıyı kumsalına daha çok yeşil deniz kaplumbağası olmak üzere, yaz ve yaz sonlarında yuvalandıkları; bu yuvaların sonbahar, kış ve ilkbahar mevsimlerinde rüzgar, yağmur ve kıyısal kesimdeki büyük dalgaların neden olduğu kıyı kumul hareketliliği ile gelecek yılın yumurtlama mevsimi olarak bilinen yaza kadar büyük oranda silindiği belirlenmiştir. Gözlem sahasında belirlenen aktif konumlu yuva sayılarının zamana göre önemli sayılabilecek düzeyde bir değişim göstermediği (Man-Kendal tau=-0.15; $p>0.05$); sadece Alt Bölge-2'de gözlenen aktif yuva sayılarının zamanla azalış sergilediği belirlenmiştir. Alt alanlardaki aktif yuva sayıları arasındaki farkın istatistiksel açıdan ileri derecede önemli olduğu (Chi square= 38.97; $p<0.001$); bu kapsamda Alt Bölge-1 ile Alt Bölge-2'nin diğer iki alt bölgeye oranla belirgin düzeyde daha fazla yuva barındırdığı görülmüştür.

Anahtar Kelimeler: *Caretta caretta*, *Chelonia mydas*, İskenderun Körfezi, Yuvalanma İzi, Zamansal Değişim

SEA TURTLES DISTRIBUTED ALONG THE TURKISH NORTHEASTERN MEDITERRANEAN COASTS AND TEMPORAL CHANGES OF THE NESTING TRACKS ON THE SUGÖZÜ BEACH

ABSTRACT

In this study, the seasonal distribution of the nesting tracks in the last decade on the Sugözü beach located on the west coast of Iskenderun Bay in between of Yumurtalık and Botaş was investigated. It was found that Green Turtles mostly nested on the beach in between of summer and late summer, and their nests fallen by the mobility of sands on the coast in autumn, winter and spring causing rain, wind and large coastal waves caused by the summer to eradicate as the spawning season till next year. The active net numbers determined in the observation field did not show a significant change with time (Man-Kendal tau = -0.15; $p> 0.05$). It was determined that only the number of active nests observed in Sub Region-2 decreased over time. The difference between the number of active nets in the sub-regions was statistically significant (Chi square = 38.97; $p <0.001$); apart from this point of view, it is seen that Sub Region-1 and Sub Region-2 have significantly more active nests than the other two sub-regions.

Keywords: *Caretta caretta*, *Chelonia mydas*, Iskenderun Bay, Nesting Track, Temporal Changing

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DETECTED EXOTIC AND INVASIVE SPECIES IN AKTAS LAKES (ARDAHAN)

ABSTRACT

Aktaş is a lake with volcanic character. About 20 years before, a fishery cooperative has been established for this lake, which was used to market a large number of natural and indigenous fish species to the domestic market. Population of these highly precious, natural and indigenous species has rapidly decreased in recent years due to breeding of exotic and invasive species, which is the main subject of this report. Nowadays these native fish are found very deep in the lake, few in number and small in size. These species are identified in this important wetland area within Ardahan city boundaries. They are exotic and invasive species and it is unknown that breeding was made by whom, when, how and why. This invasive species in reported lake, have led to significant decrease on natural fish populations. In 2013-2014, The local fishermen of Aktaş lake were told to collect fish samples every three months to determine the fish fauna of the lake. Collected fish samples were identified according to the literature. This study was made on Aktas Lake (Ardahan) under the projects of Ministry of Forest and Water Works. In this investigation, which was made, we detected the presence of Prussian Carp *(Carassius gibelio)* and Turkish Crayfish *(Astacus leptodactylus)*. It was also detected from another investigation in Aktas Lake of summer 2014. In order to determine the biodiversity of the lake and its surroundings; the field work was performed in Aktaş lake, the Israeli Carp and Turkish Crayfish were caught more than other native and natural fish species. According to the statements of the literature and local people, native fish species have decreased rapidly but the populations of Israeli Carp and Turkish Crayfish have increased rapidly. Israeli Carp adults cause natural populations to decrease by eating eggs and larvae of other fish species. Also Turkish Crayfish has been found to cause a decrease in the density of natural populations as they consume underwater plants and fish eggs in the lake ecosystem. After working in these important wetland habitats, it can be concluded that these exotic and invasive species (*Carassius gibelio* and *Astacus leptodactylus*) are destroying species and should be removed from the lake. For the continuation of the natural ecosystem in Aktaş, these exotic and invasive species need to be cleaned up in partnership with Georgia.

Keywords: Ardahan Aktas Lake, Biodiversity, Exotic Species, Invasive Species, Ministry of Forest and Water Works

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MONTHLY CHANGES OF *Pinus* sp. POLLENS IN ARDAHAN PROVINCE 2016

ABSTRACT

In this study, *Pinus* sp. pollen concentration of Ardahan atmosphere was investigated and pollen samples were obtained by Lanzoni VPPS 2000 pollen trap in 2016. As a result of this study, 25614 (pollen/m^3) pollen grains were found in Ardahan atmosphere from January 1st to December 31th in 2016. During the study, total 44 taxa were identified and 24 of these were found as arboreal (9187 polen/m^3-23.85%) and the other 20 were non-arboreal plants (29302 pollen/m^3-76.07%). In this study, *Pinus* sp. pollen was found as third maximum pollen producer in the atmosphere of Ardahan (6.22%-2395 pollen/m^3). *Pinus* sp. pollens were seen during ten months in 2016 (from March to December). The maximum *Pinus* sp. pollen concentration was found in June (1653 pollen/m^3-4.29%).

Keywords: Ardahan, *Pinus* sp., Pinaceae, Pollen Grain, Montly Changes

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ATMOSPHERIC POLLEN DIVERSITY OF KARS, ARDAHAN, AĞRI AND IĞDIR PROVINCES IN 2016

ABSTRACT

The the season of allerjen pollen and it's concentration in the atmosphers of Kars, Ardahan, Iğdır, and Ağrı provinces were determined in this study. In this study, total 18467 pollen were determined during the study period in Kars. It was found that the nonaroreal plant pollens were 74.64% and arboreal plant pollens were 25.14%. Dominant plants pollens in the atmosphere of Kars were listed as follows: Poaceae (39.52%-7298 pollen), *Urtica* sp. (10.23%-1890 pollen), Cupressaceae/Taxaceae (7.91%-1461 pollen) and *Artemisia* sp. (6.44%-1189 pollen). In Ardahan atmosphere total 38521 pollen were obtained and nonarboreal plant pollen were seen dominant pollen producer (76.07%) during the study period. Dominant plant taxa were listed as follows: *Urtica* sp. (38.76%-14929 pollen), Poaceae (21.73%-8370 pollen), *Pinus* sp. (6.22%-2395 pollen), Cupressaceae/Taxaceae (4.52%-1740 pollen) and *Artemisia* sp. (4.20%-1619 pollen). Besides in the atmosphere of Iğdır province total 29542 pollen were determined during 2016. Dominant plants pollens in the atmosphere of Iğdır were listed as follows: Poaceae (%27.12-8013 pollen), *Morus* sp. (15.04%-4444 pollen), Chenopodiaceae/ Amaranthaceae (14.68%-4338 pollen), *Artemisia* sp. (8.26%-2440 pollen) and *Urtica* sp. (6.43%-1900 pollen) and *Populus* sp. (4.19%-1237 pollen). According to Ağrı atmospheric pollen record, total 16631 pollen was obtained during the study period. Maximum pollen spreading plants taxa in the atmosphere were listed as follows: Poaceae, (31.56%-5249 pollen), *Plantago* sp. (15.18%-2525 pollen), *Salix* sp. (5.73%-953 pollen), *Urtica* sp. (5.68%-945 pollen), *Betula* sp. (5.23%-869 pollen), Chenopodiaceae/Amaranthaceae (4.35%-724 pollen).

Keywords: Kars, Ardahan, Ağrı, Iğdır, Pollen calendar

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DETERMINATION OF INTRADIURNAL VARIATION OF *Fraxinus* sp. POLLENS IN AĞRI ATMOSPHERE 2016

ABSTRACT

Called as the ash tree *Fraxinus angustifolia* species is the widest distribution in Turkey. These species are naturally distributed in our country in the forest formation in North, West and South Anatolia and in other areas they are grown as ornamental plants in parks, gardens and roadsides. *Fraxinus* sp. pollens are separated from the other taxa belonging to the Oleaceae family by wind. This study was performed using Lanzoni VPPS 2000 device which is a volumetric method in Agri province during the year of 2016. Weekly pollen samples were obtained and they were converted to the daily pollen preparations in laboratory. These preparations were analyzed in light microscope. The obtained datas were converted to hourly, daily, weekly and monthly tables. As a result of this study, 16631 pollen/m^3 is detected during the year of 2016 in Agri atmosphere. *Fraxinus* sp. pollens were 6.22% of total pollen and the eighth most intense amount of pollens. *Fraxinus* sp. pollens were observed from March to October during the study period. The highest pollen distribution was identified in May (1.75%). The highest *Fraxinus* sp. pollen concentration was found in April (0.58%) and July (0.19) at noon, in May (1.75%) in the morning and in June (0.10%) in the evening.

Keywords: Ağrı, *Fraxinus* sp., Intradiurnal Variation, Oleaceae, Pollen

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DAILY VARIATION OF Poaceae pollens IN KARS, ARDAHAN, IGDIR AND AĞRI 2016

ABSTRACT

In this study, pollen samples were collected by using volumetric pollen traps (Lanzoni VPPS 2000) during 2016 in the studied provinces. Pollen samples were converted to daily pollen slides according Wodehouse methods and examined under light microscope. The obtained pollen data was converted to hourly, daily and monthly charts. According to pollen data, Poaceae pollens were determined as 39.52% (7298 pollen/m^3) in Kars, 21.73% (8370 pollen/m^3) in Ardahan, 27.12% (8013 pollen/m^3) in Iğdır and 31.56% (5249 pollen/m^3) in Agri. The highest Poaceae pollen concentration were identified in June (22.67% in Kars, 15.57% in Ardahan and 14.74% in Ağrı) and in May (9.96% in Iğdır). Maximum pollen levels of Poaceae family were determined at night in April, at noon in May, July, August and September, in the evening in June in Kars. Maximum pollen levels of Poaceae family were determined at noon in April, August and September, at night in May, June and July, Ardahan. Maximum pollen levels of Poaceae family were determined in the morning in April, in the evening in May, July, August and September, at noon in June in Iğdır. Maximum pollen levels of Poaceae family were determined in the evening in April and July, at noon in May, June and September, in the morning in August in Ağrı.

Keywords: Poaceae Pollen, Kars, Ardahan, Iğdır, Ağrı

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MONTHLY CHANGES OF CHENOPODIACEAE/AMARANTHACEAE POLLENS IN KARS PROVINCE 2016

ABSTRACT

Wind-pollinated species of Chenopodiaceae/Amaranthaceae family causes of allergic rhinitis and allergic asthma. Pollens of these families which are among the most important aeroallergens are seen in summer and autumn. During annual survey of Kars atmosphere, pollen samples were obtained by Lanzoni VPPS 2000 pollen trap. Weekly pollen samples were converted to daily preparation in the laboratory. Preparations were analyzed and counted in Olympus CX21 light microscope. The obtained pollen data were converted to monthly tables. As a result of this study, total 18467 pollens grains were found in Kars atmosphere from January 1st to December 31th in 2016. Total 49 taxa were found and 24 of these taxa were identified as arboreal (4643 polen/m^3-25.14%) plants and the other 25 taxa were recorded as non-arboreal plants (13784 pollen/m^3-74.64%). Chenopodiaceae/Amaranthaceae pollen concentration was found as 3.91% (722 pollen/m^3) of the total pollen concentration and observed in the all months during the study period. The highest pollen concentration was recorded in August (2.29%).

Keywords: Kars, Chenopodiaceae/Amaranthaceae, Pollen, Lanzoni VPPS 2000 Pollen, Wind-pollinated Species

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POLLEN CALENDAR OF AĞRI PROVINCE 2016

ABSTRACT

In this study, pollen contents of Ağrı atmosphere were tried to inverstigate during 2016. Pollen samples were obtained by volumetric pollen trap (Lanzoni VPPS 2000) and converted to daily slides and analyzed by light microscope. Pollen data were converted to daily and monthly tables and pollen calendar was prepared. As a results, the number of plants taxa were 44 of which 23 were arboreal (30.40%-5055 pollen/m^3) and 21 were non arboreal (69.44%-11549 pollen/m^3). Unidentified pollen concentration was 0.16% of the total pollen grains. The most abundant pollen seen in Ağrı atmosphere were listed as follow; Poaceae, (31.56%-5249 pollen/m^3), *Plantago* sp. (15.18%-2525 pollen/m^3), *Salix* sp. (5.73%-953 pollen/m^3), *Urtica* sp., (5.68%-945 pollen/m^3), *Betula* sp. (5.23%-869 pollen/m^3), Chenopodiaceae/ Amaranthaceae (4.35%-724 pollen/m^3), Cupressaceae/Taxaceae (3.59%-597 pollen/m^3), *Fraxinus* sp. (2.79%-464 pollen/m^3), *Artemisia* sp. (2.58%-429 pollen/m^3), *Humulus* sp. (2.38%-396 pollen/m^3), *Ulmus* sp. (2.27%-377 pollen/m^3), *Rumex* sp. (2.13%-354 pollen/m^3), *Populus* sp. (1.60%-266 pollen/m^3), *Ailanthus* sp. (1.48%-246 pollen/m^3), *Pinus* sp. (1.43%-237 pollen/m^3), *Quercus* sp. (1.31%- 218 pollen/m^3) and Boraginaceae (1.29%-324 pollen/m^3). Maximum pollen concentration of Ağrı atmosphere was recorded in June during study period. The arboreal plant pollens reached its highest level in May while the non-arboreal plant pollens in June.

Keywords: Ağrı, Pollen, Pollen Calendar, Lanzoni VPPS 2000, Plant

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THE EFFECTS OF DIFFERENT CONCENTRATIONS OF BENZOCAINE ON SOME BLOOD PARAMETERS OF COMMON CARP (*Cyprinus carpio* L., 1758)

ABSTRACT

In order to keep the fish live and calm, various anaesthetic substances in the aquaculture and laboratory studies with live fish are commonly used. Benzocaine is an anaesthetic widely used for this purpose. In the present study, *C. carpio* with 30 g in mean weight and 4.9cm in mean total length were exposed to the non-lethal concentrations (25, 50, 75, 100 mg/L) of benzocaine and changes of some biochemical parameters in the blood and serum samples of fish were investigated. Three replicates were applied for each concentration. During the study, totally 150 fish were used. A control group without anaesthetic were also used. In the fish groups exposed to 25 and 50 mg/L concentrations of benzocaine, blood parameters such as Haematocrit, Leukocrit, Erythrocyte, Leukocyte, Haemoglobin, Phagocytic ratio, Adherent level and MCV did not differ from those in the control group. However, these blood parameters increased in fish groups exposed to 75 and 100 mg/L concentrations of benzocaine compared with the control group. There was no changes in the total protein values in the blood serum of all exposed groups compared with the control group.

Keywords: Carp, *Cyprinus carpio*, Benzocaine, Blood Parameters, Biochemical Parameters

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FENOL'E MARUZ KALAN BALIKLARIN PERİFERİK KAN ERİTROSİTLERİNDEKİ ANORMALLİKLERİN İNCELENMESİ

ÖZ

Fenol ve fenolik bileşikler, hayvanlarda ciddi sıkıntılara neden olan çevresel ksenobiyotiklerdir. Fenol çevrede antropojenik etkiye sahip olup önemli problemlere neden olmaktadır. Bu çalışma, fenolün sazan eritrositlerinde olası genotoksik etkilerinin araştırılması amacıyla yapıldı. Çalışmada ortalama ağırlıkları 0.474±0.04g olan balıklar kullanıldı. Balıklar 96 saat boyunca 0 (kontrol), 5, 10 ve 20ppm fenol ile muamele edildi. Eritrositlerdeki mikronukleus (MN) ve nükleer anormallik (NAs) oluşumu incelendi. Eritrositlerde mikronukleus ve diğer anormalliklerin oluşumunda, fenol konsantrasyonuna bağlı olarak bir artışın olduğu görüldü. Mikronükleus testindeki sonuçlar, fenolün güçlü mutajenik bir etkiye sahip olduğunu göstermiştir ($p<0.05$). Fenol tatlı su ekosistemlerinde yüksek risk taşıyan bir kirletici olduğundan, akuatik ortamların çevresel risk değerlendirmesinin saptanması için daha ayrıntılı çalışmalar yapılmalıdır.

Anahtar Kelimeler: Sazan, Fenol, Eritrosit, Mikronukleus, Nükleer Anormallik

INVESTIGATIONS OF ABNORMALITIES IN PERIPHERAL BLOOD ERYTHROCYTES OF FISH EXPOSED TO PHENOL

ABSTRACT

Phenol and phenolic compounds are xenobiotics stressful environmental factors to which animals are subjected to serve animia due to phenol and have become environmental problem due to anthropogenic impact on the environment. This study was conducted to investigate of the possible genotoxic effects of phenol on erythrocytes of carp. The fish used in this study were an average weight of 0.474±0.04g. Fishes were treated with 0 (control), 5, 10 and 20ppm of phenol during 96 hours. Fish were analyzed for induction of micronucleus (MN) and nuclear abnormalities (NAs) in erythrocytes. Results showed exposure concentration dependent increases in the frequencies of micronuclei and other abnormalities. Our results in the micronucleus test also indicated that phenol is potentially mutagenic ($p<0.05$). Further detailed studies should be done for the determination of the environmental risk assessment for aquatic life since phenol is a high risk contaminant of freshwater ecosystems.

Keywords: Carp, Phenol, Erythrocytes, Micronucleus, Nuclear Abnormalities

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EFFECT ON GROWTH PERFORMANCE OF USING HAZELNUT MEAL IN Siberian Sturgeon (*Acipenser baerii*) DIET

ABSTRACT

In this study, the effects of the control diet (0%) and the diets containing hazelnut meal in different levels (15%, 30 and 45) on the growth performance and body composition of Siberian sturgeon were investigated and, total 180 fish with mean weight 283.13±6.52 g were used. Each group had three replicate and 15 fish were placed in each replicate. Experiment was carried on for 12 weeks. In trial results, the highest WG (180.62%±2.84) was observed in the control group, and 15%, 30 and 45 hazelnut meal in followed this group as 159.03%±1.18, 144.72%±1.22 and 125.55%±0.89, respectively. As a result of values of the statistical analysis, the control group with the best proportional WG, SGR, FCR and PER was similar to15% but different with other groups ($P<0.05$). Optimum dietary level of hazelnut meal for growth, FCR, meat quality and body composition obtained from quadratic regression was 15%, but when economic aspects were considered, the optimum dietary level was 45% hazelnut meal.

Keywords: Siberian Sturgeon, Fish Meal, Hazelnut Meal, Growth Performance, Economic Analysis, Body Composition

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ANATOMICAL CHARACTERIZATIONS OF TWO *DAPHNE* (Tymelaeaceae) SPECIES FROM NE ANATOLIA

ABSTRACT

The genus *Daphne* L. (Thymelaeceae) is represented by 70 species in the world, while 7 species are present in Turkey. Four of them distributed in Black Sea Region. Present study has been carried out to enlighten the anatomical characteristics of *D. glomerata* and *D. pontica*, in detail. The wood samples were sectioned according to standart techniques and macerated with Schultze's method. Handmade sections were made for peripheral and cross sections of leaf parts. It was found heterogenous and uniseriate rays, and helical thickening in vessels of wood. Hypostomatic type stomata and dorsiventral type mesophyll were observed in leaf. It was calculated the length and index of stomata and the size of vascular bundles in midrib of leaf. Mucilage material was found in upper epidermis of two species. The present study defines and compares the anatomical features of the wood and leaf anatomy of two Daphne species. The significance of the results was also discussed in relation to previous studies.

Keywords: Daphne, Wood, Leaf, Anatomy, Turkey

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SİBİRYA MERSİN BALIĞI (*Acipenser baerii*) NAKLİNDE BALIK REFAHI

ÖZ

Bu çalışmada, 4+ yaşlı Sibirya mersin balığı (*Acipenser baerii*) bireylerinin farklı nakil şartlarına (su sıcaklığı, stok yoğunluğu, zaman) maruz bırakılarak, uygun nakil koşullarının belirlenmesi amaçlanmıştır. Ortalama balık ağırlığı 980±50g ve ortalama kondisyonları 0.47±0.05 olarak ölçülmüştür. Stok yoğunluğu, su sıcaklığı, zaman değişkenlerinin etkileri ve bazı kan parametreleri çalışılmıştır. Çalışma sonunda, 100 ve 150kg/m^3 stok yoğunluklarında, toksik amonyak azotu ve nitrit azotu seviyelerinin ve 15°C su sıcaklığında 8inci saatten sonra ani artış olacağı, 16ıncı saatte kritik seviyelere (4.7mg/L) ulaşacağı belirlenmiştir. Bununla birlikte, 50 kg/m^3 stok yoğunluğunda 20 saat 15±1°C su sıcaklığında balık naklinin güvenle gerçekleştirilebileceği sonucuna varılmıştır. 17°C su sıcaklığında, su kalitesindeki bozulmasına bağlı olarak, 16ncı saatten itibaren Sibirya mersin balığı naklinin riskli olacağını ortaya koymaktadır.

Anahtar Kelimeler: Sibirya Mersin Balığı, Nakil, Balık Refahı, Su Kalitesi, Kan Parametreleri

FISH WELFARE UNDER THE TRANSPORTATION OF SIBERIAN STURGEON FISH (*Acipenser baerii*)

ABSTRACT

In this study, it was aimed to determine appropriate transport conditions by exposing 4+ old Siberian sturgeon fish (*Acipenser baerii*) individuals to different transport conditions (water temperature, stock density, time). Mean fish weight was 980±50g, and their mean condition factor was 0.47±0.05. The effects of stocking density, water temperature, time variables and some blood parameters were studied. At the end of the study it was determined that toxic ammoniac nitrogen and nitrite nitrogen levels at 100 and 150kg/m^3 stock levels would reach a critical level (4.7mgL-1) at 16th hour, after 8 hours at 15°C water temperature. However, at a density of 50kg/m^3, the fish transportation at a water temperature of 15±1°C for 20 hours can be realized safely. The increase in water quality deterioration shows that the Siberian sturgeon fish transportation will be risky from the 16th hour.

Keywords: Siberian Sturgeon, Transportation, Fish Welfare, Water Quality, Blood Parameters

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DOĞU KARADENİZ BÖLGESİ'NDEKİ AMATÖR BALIKÇILIĞIN SOSYO EKONOMİK ANALİZİ

ÖZ

Bu çalışmada, Doğu Karadeniz Bölgesi'ndeki amatör balıkçılığın durumu belirlenmeye çalışılmıştır. Bu amaçla, 2013 yılında bölgede bulunan Giresun, Trabzon, Rize, Artvin illerinin sahil şeridinde 517 amatör balıkçıyla yüz yüze anket çalışması gerçekleştirilmiştir. Anket çalışmasında, amatör balıkçıların demografik yapılarının yanı sıra, yapmış oldukları aktivitenin amaçları, avlanma çeşitleri, tercih ettikleri avlanma zamanları, avlanma sıklıkları, gün içinde balık avında geçirdikleri süre ve tercih ettikleri saat aralıkları, yakaladıkları su ürünlerinin cinsi ve miktarı, yakalanan su ürünlerinin nasıl değerlendirildiği, harcamalarını (yem, ulaşım, olta malzemeleri vb.) belirlemeye yönelik sorular yöneltilmiştir. Ayrıca sürdürülebilir balıkçılığa yaklaşımları, katkıları, yasal düzenlemeler hakkındaki bilgileri ve ilgili kurumlardan beklentileriyle ilgili ucu açık sorular da sorulmuştur. Elde edilen sonuçlara göre, bölgedeki amatör balıkçıların %46.5'inin 41-60 yaş arasında olduğu ve daha çok %30'luk bir oranla amatör balıkçılığın en çok emekliler tarafından yapıldığı belirlenmiştir. Amatör balıkçıların %97.7'sinin erkek, %82.4'ünün evli bireyler olduğu, %74.3'ünün boş zamanlarını değerlendirmek ve eğlenmek amacıyla avlandığı tespit edilmiştir. Daha çok (%86.3) kıyı balıkçılığı yaptıkları, en çok istavrit avladıkları (%50.3) ve en fazla Eylül ile Ekim aylarında avlandıkları belirlenmiştir. Ayrıca amatör balıkçılık yapanların %81.2'sinin belge sahibi olmadığı ve %93.2'sinin hiç denetlenmediği tespit edilmiştir.

Anahtar Kelimeler: Doğu Karadeniz, Amatör Balıkçılık, Sosyo-Ekonomik Analiz, Trabzon, Rize, Artvin

SOCIO-ECONOMIC ANALYSIS OF AMATEUR FISHING IN THE EASTERN BLACK SEA REGION

ABSTRACT

In this thesis, we tried to determine the status of amateur fishery in the Eastern Black Sea Region. For this purpose, 517 face-to-face interviews with amateur fishers were conducted at the coastlines of the four cities, Giresun, Trabzon, Rize, Artvin, of the region in 2013. The main aim of this research is to determine the socio-economic status of the amateur fishers with or without a recreational fishing license. In addition to the demographic structure of the fishers obtained, we also tried to determine the motivation for their activity, types of fishing they perform, fishing times they prefer, frequency of fishing, preferred fishing hours and the total amount of fishing time they spend in a day, the kind and amount of aquatic products they catch and how they benefit from this catch, their expenses (fish bait, transportation, fishing equipment etc.). Open-ended questions were also directed to fishers about their thoughts on sustainable fishing and their contributions, inquiring how much they know about legal regulations and their expectations from relevant institutions and organizations. According to our results, 46.5% of the amateur fishers in the study region are at the ages of 41 to 60 and they are mostly retirees (30%). It was shown that; men constitute 97.7% of the amateur fishers, 82.4% of the fishers are married and 74.3% of them fish recreationally and for fun. 86.3% of the amateur fishers fish from the coast while catching horse mackerel in general (50.3%) mostly in September and October months. It was determined that 81.2% of the amateur fishers do not have a license and 93.2% of them have never been controlled.

Keywords: Eastern Black Sea, Amateur Fishing, Socio-Economic Analysis, Trabzon, Rize, Artvin

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BLOOD BIOCHEMISTRY OF FATTENED BLUEFIN TUNA (*THUNNUS THYNNUS* L.) IN THE AEGEAN SEA

ABSTRACT

Blood biochemical values are important for all animals for indicating health, welfare. Also, it gives many knowledge about disease clues. Bluefin tuna-BFT (*Thunnus thynnus* L.) is economically important fish species in aquaculture because the price is high. Thus, farmers are care about fattened fishes and some analyses give efficient knowledge especially blood analyses for them. In the research, uric acid 4,25 ($mg/100mL^{-1}$), creatinine 1,04 ($mg/100mL^{-1}$), serum urea concentration 16, 10 ($mg/100mL^{-1}$), albumin 2,20 ($g/100mL^{-1}$), globulin 2,63 ($g/100mL^{-1}$), total protein 5,46 ($g/100mL^{-1}$), serum glutamic oxaloacetic transaminase 182, 15 (UL^{-1}), serum glutamate pyruvate transaminase 130,23 (UL^{-1}), alkaline phosphatase 51,32 (UL^{-1}), g-glutamyl transferase 241,74 (UL^{-1}), total cholesterol 265,73 ($mg/100mL^{-1}$), triglycerides 314, 69 ($mg/100mL^{-1}$), high-density lipoprotein 94,21 ($mg/100mL^{-1}$), low-density lipoprotein 110,54 ($mg/100mL^{-1}$), parameters were measured in serum samples of farmed bluefin tuna. According to the results, during the fattened period in growing cages, BFTs were under pressure and stress attacks because of unnatural habitats such as feeding, narrow area etc. in farm area.

Keywords: Bluefin tuna, *Thunnus thynnus*, Blood Biochemistry, Fattened Fish, The Aegean Sea

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LENGTH-WEIGHT RELATIONSHIPS OF *Greater forkbeard* (*Phycis blennoides* (Brünnich, 1768)) CAPTURED FROM NORTH-EASTERN MEDITERRANEAN

ABSTRACT

In this study was carried out to determine the length-weight relationships of greater forkbeard *Phycis blennoides* obtained from northeastern Mediterranean. *P. blennoides* samples were captured by commercial bottom trawler at a depth of 200 to 400m off the Iskenderun Bay (36° 13′ 242″ N, 35° 31′ 328″ E; 36° 12′ 927″ N, 35° 14′ 566″ E). Minimum-maximum length and weight of captured fishes were determined as 16.9-38.7cm and 31.06-415.0g for females and 16.3-38.3cm and 27.14-504.08g for males respectively. Length-weight relationships of *P. blennoides* were found as $W=0.0058*L^{3.077}$, $R^2=0.905$, for all individuals, $W=0.0069*L^{3.033}$, $R^2=0.913$, for females and $W=0.0076*L^{3.074}$, $R^2=0.90$ for males. The type of growth for all inviduals, females and males were positive allometric growth (b>3). Regression analysis is shown that fish length has significant correlation with weight ($R^2=0.91$, $F_{1.206}=37.601$, $P<0.001$) it is possible to say that 91% increase in weight was due to length increase.

Keywords: Greater forkbeard, *Phycis blennoides*, Length-Weight Relationships, North-eastern Mediterranean

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SEYHAN BARAJ GÖLÜ SU KALİTE ÖLÇÜM DEĞERLERİ (YAZ DÖNEMİ)

ÖZ

Bu araştırma, Seyhan Baraj Gölü'nde (Adana) yürütülen limnolojik etüt çalışmasının; gölde özellikle yağış miktarının azalması nedeniyle kuraklık oranının arttığı ve su seviyesinin azaldığı yaz dönemindeki 3 aylık periyotta (Haziran, Temmuz ve Ağustos 2016) saptanan, bazı su kalite ölçüm değerlerini içermektedir. Çalışma, göle giren su kaynakları dikkate alınarak belirlenen 4 farklı istasyonda yürütülmüştür. Su kalite parametrelerinden ışık geçirgenliği, seki diski ile çözünmüş oksijen, pH, sıcaklık, tuzluluk, elektriksel iletkenlik ve toplam çözünmüş katı madde CTD cihazı ile ölçülmüş; sonuçlar en yüksek ve en düşük değerler olarak belirlenmiştir. Çalışmada, seki diski derinliği 1.90-5.20m; çözünmüş oksijen 7.16-8.48mgl^{-1}; pH 8.03-8.67; sıcaklık 23.68-31.23°C; tuzluluk 0.21-0.22; elektriksel iletkenlik 442-513µS/cm; toplam çözünmüş katı madde 0.279-0.304gl^{-1} olarak saptanmıştır. Belirtilen en yüksek ve en düşük ölçüm değerleri irdelendiğinde, baraj göllerindeki türlerin nitel ve nicel dağılımlarının su seviyesindeki değişimlerden etkileneceği düşüncesiyle yapılacak çalışmalarda bu durumun özellikle dikkate alınması yönlendirici olacaktır.

Anahtar Kelimeler: Seyhan Baraj Gölü, Su Kalitesi, Su Seviyesi, Yaz Dönemi, Adana

WATER QUALITY MEASUREMENTS (SUMMER PERIOD) OF SEYHAN DAM LAKE

ABSTRACT

In this study, Seyhan Dam Lake (Adana), especially detected 3 months period (June, July, August 2016) determined that contains some water quality measurement values. Because this period Seyhan Dam Lake due to shorter precipitation seasons coupled with higher ratio of droughts in summer. The study determined considering the lake water resources was conducted in 4 different stations. The light penetration of water quality parameters secchi disc; dissolved oxygen, pH, temperature, salinity, conductivity and total dissolved solids measurements are made with the CTD device; the results was determined as the highest and lowest values. In this research, secchi disc depth 1.90-5.20m; dissolved oxygen 7.16-8.48mgl^{-1}; pH 8.03-8.67; temperature 23.68-31.23°C; salinity 0.21-0.22; conductivity 442-513µS/cm; total dissolved solids 0.279-0.304gl^{-1} were determined. Water-level regime is regarded to be a significant factor for lake ecosystem functioning. When the specified highest and lowest measured values were examined, the reservoir species in the study will be impressed with the idea that qualitative and quantitative distribution of the changes in the water level in this situation will be taken into consideration, especially the router.

Keywords: Seyhan Dam Lake, Water Quality, Water Level, Summer Period, Adana

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ANTALYA KÖRFEZİ (DOĞU AKDENİZ) DERİN DENİZ DİP TROL BALIKÇILIĞINDA DERİN SU İSKORPİTİ *Helicolenus dactylopterus* (Delaroche, 1809)'UN BOYUT SEÇİCİLİĞİ

ÖZ

Derin su iskorpiti gibi derin su balıkları biyolojik özellikleri ve yoğun avcılık baskısı nedeniyle aşırı avcılığa çok duyarlıdırlar. Avcılık denemeleri, Antalya körfezinde (Doğu Akdeniz) R/V "Akdeniz Su" araştırma gemisi kullanılarak 2009-2011 arasında gerçekleştirilmiştir. Avcılık yapılan alandaki su derinlikleri 334-670m arasında değişmektedir. Çekim süreleri 3-5 saat arasında ortalama çekim hızı 2.5 knot dur (2.3-2.6 knot arasında). Araştırmada 4 farklı ağ torbası denendi (44mm baklava ve kare, 50mm baklava ve 90^0 döndürülmüş). Denemelerde toplam olarak 44 çekim yapıldı: 44mm DM ile 9, 44mm SM ile 8, 50mm DM ile 14 ve 50mm döndürülmüş ağ ile ise 13 çekim yapıldı.

Anahtar Kelimeler: Trol Torbası, Seçicilik, Antalya Körfezi, Doğu Akdeniz, *Helicolenus dactylopterus*

SIZE SELECTIVITY OF THE BLUEMOUTH *Helicolenus dactylopterus* (Delaroche, 1809) IN THE DEEPWATER TRAWL FISHERY IN THE ANTALYA BAY, EASTERN MEDITERRANEAN

ABSTRACT

Deep-water species such as the bluemouth rockfish are particularly vulnerable to overfishing due to their biological characteristics and intense fishing pressure (Pirrera et al., 2009). Fishing trials were carried out during the daytime onboard "RV *Akdeniz*" (overall length 26.5m, 160 GRT, engine power 670kW) between 2009 and 2011 the Bay of Antalya, eastern Mediterranean. Water depth of the fishing area varied between 334 and 670m. The towing durations were between 3-5 hour for all the hauls and the average towing speed was 2.5 knots (ranging between 2.3 and 2.6). Four codends were tested (44mm diamond and square, 50mm diamond and 90^0 turned mesh). A total 44 hauls were carried out during the trials: 9 hauls were made with DM (towing duration 40.5 h), 8 hauls with SM (towing duration 35.5 h), and 14 hauls with T0 (towing duration 42.8 hr) and 13 hauls with T90 (towing duration 40.9 hr).

Keywords: Codend, Selectivity, Antalya Bay, Eastern Mediterranean, *Helicolenus dactylopterus*

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ORTAOKUL ÖĞRENCİLERİNİN MÜZİK TERCİHLERİNİN VE BU TERCİHLERİ ETKİLEYEN FAKTÖRLERİN BELİRLENMESİ

ÖZ

Bu araştırmada ortaokul öğrencilerinin müzik tercihlerinin ve bu tercihleri etkileyen faktörlerin belirlenmesi hedeflenmiştir. Bu araştırmada betimsel yöntem izlenmiş olup, tarama modeli kullanılmıştır. Araştırma 2015-2016 eğitim-öğretim yılında Van iline bağlı Özalp ilçe merkezindeki 20 Temmuz Ortaokulu, 3 Nisan Ortaokulu, Atatürk Ortaokulu, Yatılı İlköğretim Bölge Ortaokulu ve Özalp İmam Hatip Ortaokulu'nun 5., 6., 7. ve 8. sınıflarına toplam 239 öğrenciye gerekli izinler alınarak anket uygulanmıştır. Araştırma bulgularına göre öğrencilerce beğenilen müzik türünün bireyin yaşadığı sosyal çevredeki diğer bireylerle benzer özellikler sergilediği ve bireylerin, içerisinde bulundukları tabakanın genel müzik eğilimine yakın müziksel beğenilere sahip olduğu, bireylerin TV-radyo ve telefon gibi kitle iletişim araçlarının toplumdaki müzik beğenisi ve tercihlerine büyük etkisi olduğu görüşünde birleştiği, duygu durumlarını yansıtan müzikleri ortam fark etmeksizin her fırsatta dinledikleri, sesini beğendiği sanatçıları ve popüler müzik dinlemeyi tercih ettiklerini ve bireylerin müzik dinlemek için ayırdığı süreyi eğlenmek ve iyi vakit geçirmek amacıyla kullandığı görülmüştür.

Anahtar Kelimeler: Müzik, Müzik Tercihi, Müzik Beğenisi, Ortaokul, Öğrenci

THE DETERMINATION OF THE MUSIC PREFERENCES AND THE FACTORS AFFECTING THESE PREFERENCES OF SECONDARY SCHOOL STUDENTS

ABSTRACT

In this study, it was aimed to determine music preferences of the secondary school students and in this study descriptive method was followed and screening model was used. After the necessary permissions for 239 students, the research was carried out and the questionnaire was applied on the students of the 5th, 6th, 7th and 8th grades of 20 Temmuz Secondary School, 3 Nisan Secondary School, Atatürk Secondary School, Regional Boarding Primary School and Özalp İmam Hatip Secondary School in Özalp district center of Van Province in 2015-2016 academic year. According to the findings of the research, it is found out that the accustomed musical passion exhibits similar characteristics to other individuals in the social circles where the individual lives, and that the individual has a musical likeness close to the general music tendency, that the individuals have a common opinion that the mass media such as TV - radio and telephone are the major influences on the music taste and preferences of the society, that the music they listen to for every occasion reflect their emotional situations, that they prefer listening to the singers whose voice they like and popular music and it has been seen that the time spent by individuals to listen to music is used to enjoy and have a good time.

Keywords: Music, Music Preference, Music Likes, Secondary School, Student

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BİREYSEL SES EĞİTİMİ DERSLERİNDE KULLANILAN REPERTUVARIN İNCELENMESİ

ÖZ

Bu araştırma; eğitim fakültelerinin müzik eğitimi anabilim dallarında bireysel ses eğitimi derslerinde kullanılan repertuvarı belirlemek amacıyla yapılmıştır. Araştırmanın evrenini Türkiye'de bulunan eğitim fakültelerine bağlı 26 müzik eğitimi anabilim dalı oluşturmuştur. Araştırmanın örneklemini ise; bireysel ses eğitimi dersi öğretim elemanı bulunan müzik eğitimi ana bilim dalları içerisinden random yoluyla seçilmiş 10 müzik eğitimi anabilim dalı oluşturmuştur. Araştırmada; bireysel ses eğitimi dersinde kullanılan repertuvar seçiminde en çok öğrencinin teknik bilgisi, öğrencinin müzikalite açısından seviyesi ve entonasyona dikkat edildiği, ilk dönemden başlayarak kullanılan kaynakların, okul şarkıları albümleri, türkü albümleri, ariaantiche'ler, lied albümleri, müzikal eserler, fasikül notalar ve vaccaj ve concone etüt kitapları olduğu, kaynakların yetersiz olduğu, yabancı eserlerin Türkçe okunuşlarının yazılmaması ve müzik eğitimi anabilim dallarında ortak bir repertuvarın belirlenmemiş olması, ses eğitimi derslerinde özellikle tercih edilmeyen eserlerin öğrencilerin ses sınırlarını zorlayacak, yabancı sözlü eserler, ezgisel olarak uyumsuzluk içeren eserler olduğu, ses eğitimi dersinde öğrencilerin özellikle seslendirmesi gereken repertuvarın; okul şarkıları, türküler, napolitenler olduğu, ses eğitimi ders içeriklerinde yer alan kazanımların repertuvar oluşumuna büyük ölçüde etkisi olduğu sonuçlarına ulaşılmıştır.

Anahtar Kelimeler: Müzik, Müzik Eğitimi, Ses, Ses Eğitimi, Repertuvar

INVESTIGATION OF REPERTOIRE USED IN INDIVIDUAL VOCAL TRAININGS

ABSTRACT

This research is conducted to determine the repertoire used in individual vocal training courses at the music education departments of education faculties. The universe of the research is constituted by 26 music education departments adherent to the education faculties located in Turkey. The sample of the research is constituted by 10 music education departments, which are selectly randomly from the music education branches those have instructors on individual vocal training courses. As a result of the research findings, it was found out that most of the students' technical knowledge, level of the musicality and intonation are observed in the selection of the repertoire used in the individual vocal training courses; the sources used beginning from the first period are school songs albums, folk song (türkü) albums, ariaantiches, lied albums, musical works, fascicle notes and vaccaj and concone etude books, the Turkish musical works used in vocal training are school songs. It is also figured out that the sources are inadequate, that the pieces in foreign languages are not written in Turkish and a common repertoire has not been determined in music education branches and that the pieces which are not particularly preferred in the vocal training courses will compel the sound limits of the students and besides, it is also precipitated that the pieces in foreign languages are showing incongruity in terms of melodic harmony, the repertoire that the students should vocalize in particular during vocal training courses are school songs, folk songs and napoliten and the acquisitions in the contents of the vocal training courses are found to have a great effect on repertoire formation.

Keywords: Music, Music Education, Vocal, Vocal Education, Repertoire

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DEVLET KONSERVATUARLARI TEMEL BİLİMLER BÖLÜMLERİNDE KALİTE ÇALIŞMALARI

ÖZ

Üniversitelerde eğitim-öğretim ve araştırma kalitesinin ve bu konularda akademik performansın iyileştirilmesi için "standardizasyon" ve "akreditasyon" büyük önem taşımaktadır. Ülkemiz, Bologna süreciyle birlikte politikalar geliştirerek yükseköğretimde eğitim konusunda ortak ölçütler oluşturmayı hedeflemektedir. Ortak ölçütler yoluyla standardizasyonun sağlanması, üniversitelerde; ders programlarının oluşturulması, öğrencileri üniversitelere kabul için gerekli kriterler, öğretim elemanlarının mesleğe giriş, kariyerlerinde ilerleme ve kadroya atanma kriterleri, performans değerlendirme ve ölçme kriterleri, üniversiteler arasında rekabeti ve mobiliteyi sağlayacak kriterler gibi kolaylıkları da beraberinde getirir. Bu çalışma Devlet Konservatuarları Temel Bilimler Bölümlerinin kalite çalışmaları kapsamında gelecekte akredite olma sürecine dâhil edilebileceği varsayımından hareketle, uluslararası standartlara ulaşmak için var olan durumun tespitini ve hedefe ulaşma önerileri yapmayı amaçlamaktadır. Devlet Konservatuarları Temel Bilimler Bölümlerinin Akreditasyon süreci içine girdiğinde ortak ölçütler belirlemesinde ve evrensel boyutta tanınmasına yol açacak hedeflerin belirlenmesi için önemli bir çalışma olduğu düşünülmektedir. Araştırma nitel araştırma yöntemlerinden içerik analizi ile gerçekleştirilecek, elde edilen veriler; öğrenci ve öğretim elemanı performansları hakkında belirlenen kriterlere göre sınıflandırılacaktır.

Anahtar Kelimeler: Kalite Çalışmaları, Akreditasyon, Standardizasyon, Devlet Konservatuarı, Temel Bilimler Bölümü

QUALITY STUDIES IN DEPARTMENT OF BASIC SCIENCES OF STATE CONSERVATORY

ABSTRACT

Standardization and Accreditation are great important for improve of academic performance in universities education-teaching and research quality. Our country aims to create common criterions by improving policies together with Bologna process in higher education and training subject. Provider of standardization by common criterions brings along create of lesson timetable, necessary criterions for the agreement to universities, teaching to personnel for profession, criterions of appoint about staff career progress, performance evaluations and evaluation criterions and criterions that will provide to mobility and rivalry among universities. In this study it is aimed status determination and recommendations to reach international standards by thinking if Conservatories of State Departments of Basic Sciences may be included as a part of quality studying. When Conservatories of State Departments of Basic Sciences enter into process of accreditation, it is believed that this report will be important for common criterions and to determine targets in universal size well-known. This research uses content analysis from methods of qualitative research and datas are classed according to criterions about student and education personnel performances.

Keywords: Quality Studies, Accreditation, Standardization, State Conservatory, Basic Sciences Department

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