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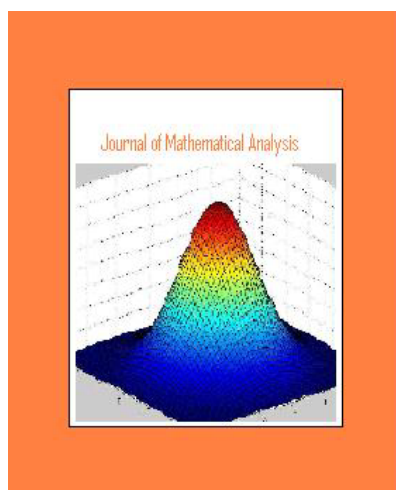
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A Ground Investigation Using Geoelectrical Methods

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ABSTRACT

Goal of this research is to study the ground resistivity of a region located at Sakarya by using vertical electrical resistivity (VES) method which is one of the geoelectrical methods. For that purpose, two Wenner arrays were applied on the ground. The measured VES data was analyzed via software named RES2DINV. The program gives layer thicknesses and real resistivity values on two dimensional underground resistivity sections. With this work, we have knowledge about geology of the region. Interpretations on the possible locations of water can also be made. These interpretations can later be verified by drilling groundwater wells.

Key words: Geoelectrical methods, RES2DINV, Wenner.

Well Tests in Confined and Unconfined Aquifers

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ABSTRACT

In this study, a research was conducted on the well tests in confined and unconfined aquifers. The aim of the tests is to find the hydraulic coefficients of aquifers using several methods. The drawdown values observed in the pumping and observation wells drilled by DSI VII-4 Boring Branch Headoffices in Erbaa Plain are used. The storativity and transmissivity of aquifer were determined by using graphical and numerical methods. As graphical methods, Theis Method, Jacob Method and Constant Discharge Recovery Test were used. As a numerical method, MODFLOW was used. Various simulations were made to determine hydraulic conductivity values for homogeneous and heterogeneous cases. For the homogeneous case, MODFLOW gave close results to the graphical methods.

Moisture sorption isotherms of green lentil (*Lens culinaris Medic.*) stored in a chamber under controlled humidity: Modelling and thermodynamic functions

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ABSTRACT

This study focuses on the isotherms, the thermodynamic functions such as isosteric heat of sorption, sorption entropy, spreading pressure, net integral enthalpy, net integral entropy and the enthalpy-entropy compensation theory of moisture sorption of green lentil. The moisture sorption isotherms of green lentil stored in a chamber the relative humidity of which is controlled by an atomising humidifier were determined at 25, 35 and 45 oC and over a water activity range of 0.1-0.9. Both the adsorption and the desorption isotherms of green lentil exhibited J-shaped type III behaviour according to BET classification. The equilibrium moisture content decreased with increasing temperature at specific water activity. The sorption isotherms of green lentil exhibited the hysteresis effect over the entire water activity range. Several isotherm models such as GAB, BET, Henderson, Oswin, Peleg, Smith, Caurie, Halsey, Ferro-Fontan, Khun, Chung-Pfost, White-Eiring models were used to fit the experimental data. Nonlinear regression analysis was used for predicting the values of the parameters in the models. Statistical tests such as E, average residual, RMSE and r² were applied to evaluate the fitting performance of the models. The Peleg model for adsorption and the Henderson model for desorption gave the best fit to the experimental data for the entire range of temperatures and relative humidities studied. Monolayer moisture content and surface area for adsorption were lower than that for desorption. The sorption isosteric heats determined by the application of the Clausius-Clapeyron equation to sorption isotherms obtained from the best-fitting model and sorption entropy showed a strong dependence on the equilibrium moisture content and approached the latent heat of pure water. The Gibbs free energy decreased with increasing in equilibrium moisture content. The enthalpy-entropy compensation theory verified that the moisture sorption of green lentil was enthalpy-controlled. The net integral enthalpy decreased with increasing in moisture content. The net integral entropy increased with increasing in moisture content and was negative in value.

Moisture sorption isotherms of green lentil (*Lens culinaris Medic.*) stored in a chamber under controlled humidity: Modelling and thermodynamic functions

Mukaddes KARATAŞ and Nurhan ARSLAN– Oral Presentation / 003

Investigation of PCB levels in Bio-Dried green wastes

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ABSTRACT

Bio-drying is an alternative waste pretreatment method for reducing the moisture content and increasing waste initial calorific values. PCB levels in bio dried wastes should comply with Turkish Waste Derived Fuel Notification (WDFN) limits to be used as fuel. Furthermore, PCB content of wastes is also an important parameter in the notification for waste derived fuel classification. In this study, PCB levels of bio-dried green wastes with nine different mixing ratios of different materials (Food waste, paper, plastic, bulking agent) were investigated. PCB measurements were performed using GC/ECD instrument after extraction, column clean-up and concentration steps. According to the obtained results, Mean PCB levels in bio-dried wastes are between 5.91-48.15 ppb. The results show that the amount of added bulking agent increases the PCB levels in bio-dried wastes. Total PCB contents of all bio dried wastes are below the limit values given by WDFN. Thus, bio-dried wastes obtained from this study are suitable for use as fuel.

Multiple Linear Regression Models for Predicting the Race Time of Cross-Country Skiers

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ABSTRACT

The purpose of this study is to predict the race time of cross-country skiers using Multiple Linear Regression (MLR). The data set used for this study includes physiological variables and survey-based data of 370 cross-country skiers. MLR has been used for the development of prediction models with different types of validation options including cross validation and random percentage data split. The Root Mean Square Error (RMSE) has been utilized as the main error metric for evaluating the performance of the prediction models. The RMSE values of the prediction models range between 20.37 and 23.32 seconds (s). When compared with the results of the past studies using machine learning methods, one can conclude that MLR can also be safely used for predicting the race time of cross-country skiers with acceptable error rates.

Development of Standing Long Jump Distance Prediction Models Using General Regression Neural Network

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ABSTRACT

The purpose of this study is to develop new standing long jump distance prediction models for children aged between 6 and 13 years by using General Regression Neural Network (GRNN). The dataset used for this study includes predictor variables gender, age, weight, height, years of training, length of leg and sport branch of 92 children. Seven standing long jump distance prediction models have been developed in total. By carrying out 10-fold cross-validation, the performance of the prediction models has been evaluated by calculating the Root Mean Square Error (RMSE). For comparison purposes, prediction models based on Multiple Linear Regression (MLR) have also been developed. The results show that GRNN-based prediction models are considerably more accurate than the models developed by MLR.

On Active Estimation of End-to-End Capacity: A Comparison

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ABSTRACT

The end-to-end capacity, defined as the capacity of the weakest link on the entire path between two end hosts, can be useful in various applications. Popular examples include network tomography for tracking and visualizing Internet topology, capacity planning support and optimized route selection, to name just a few. The purpose of this study is to uniformly classify, experimentally evaluate and compare three end-to-end capacity estimation tools, namely pathwave, PBProbe and pingpair. The controlled testbed built to evaluate the tools consists of a source, a transit and a destination subnetwork, whereas the end-to-end capacity of the path to be measured was adjusted to 100 Mb/s. The performance of each tool has been investigated in terms of estimation error, time and traffic injected into the network to deliver an estimate. The results show that pathwave produces the most satisfactory estimates in terms of achieved estimation accuracy, even in presence of intense cross-traffic scenarios within only two seconds. Particularly, pathwave produces for all testbed experiments an average estimation error of 4.13%. The average estimation errors of PBProbe and pingpair for the same experiments, in contrast, are 12.69% and 30.69%, respectively. Furthermore, it is observed that pathwave and PBProbe are also able to produce acceptable results in presence of interrupt coalescence (IC) condition in the network interface card (NIC), whereas pingpair strongly underestimates the end-to-end capacity of the path in such real-world conditions.

On generalized Hermite-Hadamard type inequalities for three times differentiable Quasi-Convex mappings

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ABSTRACT

In this paper, some new generalizations of Hermite-Hadamard type inequalities for mappings whose third derivate absolute values are quasi-convex a variety of earlier results are recaptured as special cases of the inequalities established.

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On generalizations of conformable fractional integral inequalities for Quasi-Convex functions

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ABSTRACT

In this work, motivated by results given in [3], some new Hermite-Hadamard type inequalities for quasi-convex functions linked with the renowned fractional conformable integrals via an identity whose as given in [3] are obtained.

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On extensions of some integral inequalities for product of two m – and (α, m) –convex functions via Katugampola Fractional integrals

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ABSTRACT

The aim of the present paper is establish several extensions of Hermite-Hadamard type inequalities for products of two m – and (α, m) –convex functions associated with Katugampola fractional integrals. Also some special case which are included in our main results are discussed.

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Intraocular Pressure in Eastern Anatolian Red Cattle

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ABSTRACT

This study was conducted to determine the intraocular pressure (IOP) in the Eastern Anatolian Red cattle using Tonopen XL applanation tonometry. The study was carried out on 28 healthy cattle totaling, 14 males and 14 females, aged 1-10 years. The animals were divided into two equal groups, ≥ 5 (7 male, 7 female, $n = 14$) and < 5 (7 male, 7 female, $n = 14$) years old. IOP measurements were performed twice a day, in the morning (7:00 a.m.) and in the evening (7:00 p.m).

Mean IOP in the animals decreased from 24.44 mmHg in the morning to 21.03 mmHg in the evening with an approximately rate of 15% ($P < 0.0001$). Comparison of mean IOP values of right eyes ($n=28$) to the left ($n=28$), male ($n=14$) to female ($n=14$), and ages ≥ 5 ($n = 14$) to < 5 ($n = 14$) showed no difference ($P > 0.05$). The value IOP for Eastern Anatolian Red cattle were determined as 22.18 ± 2.01 mmHg.

Key words: Intraocular pressure (IOP), Tonopen XL, Eastern Anatolian Red.

Oleuropein decreases Gastrointestinal toxicity following radiotherapy

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ABSTRACT

This study was conducted to investigate the protective effect of oleuropein in the prevention of gastrointestinal toxicity during abdominal and pelvic radiation in Wistar albino rats. The rats were divided into four groups including 7 animals each as control group (group 1), oleuropein treatment group (group 2), radiation group (group 3) and oleuropein supplemented group before radiation (group 4). In groups 2 and 4, the rats received 6 mg/kg/day oleuropein for 7 days. In groups 3 and 4, the rats received single fraction 8 Gy abdominal and pelvic radiation (RT) on day 7. On the 10th day of the experiment, the rats were sacrificed. The small intestine mucosa was evaluated histopathological for intraepithelial degenerative changes-necrosis, vacuole formation, inflammation, regeneration-mitosis, and subepithelial bulla formation. Additionally, pyruvate dehydrogenase kinase (PDKs) levels in the liver and kidney were measured. There was no weight differences among groups on the first day of the experiment ($p>0.05$). However, rats in the groups 3 and 4 were lighter than the control group on the 10th day of the experiment ($p<0.001$). All histopathologic examinations showed that the group 4 had significant improvements compared to group 3. PDKs in liver and kidney tissues did not significantly change in groups 1 and 2. PDKs levels significantly increased in the liver ($p<0.05$) and kidney ($p<0.05$) in group 4 relative to the group 3. Oleuropein supplementation significantly reduced the weight loss. All histopathologic examinations showed that the group 4 had significant improvements compared to group 3. PDKs increased in rats treated with abdominopelvic radiation. In conclusion, oleuropein may display some protective qualities against the side effects of radiotherapy.

KEYWORDS: Radiotherapy, oleuropein, pyruvate dehydrogenase kinases (PDKs).

Oleuropein decreases Gastrointestinal toxicity following radiotherapy

Fundagül ANDIÇ, Selvinaz YAKAN, Canan GÜLMEZ, Özkan ÖZDEN, Yusuf Kenan DAĞLIOĞLU, Kıvılcım EREN ERDOĞAN, Ahmet ÇAKIR, Tuba AYDIN, Onur ATAKİŞİ – Oral Presentation / 012

The Effects of Argan Oil and Polyhexanide in the Treatment of Wounds with Tissue Loss Infected with *Staphylococcus aureus* in Mice

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ABSTRACT

The aim of this study is to present the effects of argan oil and polyhexanide on wound healing in wounds with tissue loss infected with *Staphylococcus aureus* (S. aureus). This study was carried out on 45 male mice. Under general anaesthesia, wounds were created with 10 mm skin incision on the back of all mice. After 24 hours, S. aureus (ATCC) suspension was inoculated on wounds. After 48 hours, wound cultures were obtained from each mice. This procedure was repeated every 48 hours until S. aureus positivity was obtained in culture results. As soon as S. aureus reproduction was detected in cultures, the treatment was started. Mice were randomly divided into 3 groups. Control group (wound was done, but no drug application), in the argan oil groups, argan oil was administered on wound, in the polyhexanide groups, polyhexanide was administered on wound. The changes in the diameter of the wounds and the clinical signs were evaluated daily. Tissue samples were taken from sacrificed mice at the 7th and 14th days. Histopathological findings were obtained. We can say that both argan oil and polyhexanide are effective in treatment of wounds with tissue loss infected with S. aureus in mice. However, therapeutic potential of argan oil seemed to be better than polyhexanide.

Keywords: *Staphylococcus aureus*, argan oil, polyhexanide, mice.

The Effects of Argan Oil and Polyhexanide in the Treatment of Wounds with Tissue Loss Infected with *Staphylococcus aureus* in Mice

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Phenotypic differences between *Lactococcus garvieae* isolates obtained from rainbow trout farms in Turkey

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ABSTRACT

Lactococcus garvieae is one of the main pathogenic agents in rainbow trout farms in Turkey. 22 *Lactococcus garvieae* isolates obtained from different regions in Turkey were evaluated phenotypically in the study.

In all isolates, cream colored, bright, round and S-type colonies with smooth margins were seen in TSA medium. They were alive during native examination without movement. It was observed that morphologically all isolates were gram (+), α -hemolytic, oxidase and catalase negative and were reproduced under 21, 37 and 45 °C temperatures with 0–6.5 % NaCl salinity. As a result of the examination of biochemical properties with API Rapid ID 32 Strep test, it was observed that 2 *Lactococcus garvieae* isolates were different from other isolates in respect of sucrose utilization. 1 and 19 number isolates were negative for sucrose whereas other isolates gave positive results. 1 *Lactococcus garvieae* isolates was different from other isolates based on maltose profile. While isolate 22 was maltose negative, the other isolates gave positive results.

According to phenotypic differences, all isolates used in the study were classified as 3 different groups (Table 1).

Table 1. Phenotypic groups of *Lactococcus garvieae*

	Sucrose	Maltose	Isolate No
Phenotype -1	-	+	Isolate no 1 and 19
Phenotype -2	+	-	Isolate no 22
Phenotype -3	+	+	Other 19 isolate

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Systematic history and distribution areas of tarek (*Alburnus tarichi* (Güldenstädt, 1814))

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ABSTRACT

Abstract: This study aimed to determine the distribution area of tarek (*Alburnus tarichi* (Güldenstädt, 1814)) and to define how it must be called according to the scientific name by evaluating its previous studies made by various systematisers and their reports on its distribution, and by comparing literature knowledge. The taxonomic characteristics of the collected samples were evaluated and several measurements and counts were taken on the samples; anal fin origin 0-4 scales behind dorsal fin-base; 72-91 lateral line scales; 21-29 gill rakers; 7½-10 branched dorsal-fin rays and 10-12½ branched anal-fin rays. Body and caudal peduncle was moderately compressed. Body was covered by overlapping scales. Lateral line was complete, reaching caudal fin base. Pharyngeal teeth are in two rows, 2.5-5.2. Body colour is metallic grey, back darker, ventral whitish. Tarek has five different populations in the Basin. They are Lakes Van, Erçek, Nazik and Aygır, and Koçköprü Dam Lake populations. The main living area of the tarek population is Lake Van; however, between May and June, mature individuals of tarek enter to tributaries of Lake Van. Some of them are Karasu, Bendimahı, Deliçay, Zilan, Karmuç, Sapur, Yanıkçay, Gevaş, Engil, Kurubaş and Akköprü streams. At the end of study, it was concluded that tarek should be called as *Alburnus tarichi* (Güldenstädt, 1814) and it is an endemic fish species distributed only in Lake Van Basin.

Keywords: *Alburnus tarichi*, *Chalcalburnus tarichi*, Lake Van Basin, taxonomy, tarek.

On Left (σ, τ)-Jordan Ideals and One Sided Generalized Derivations

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ABSTRACT

Let R be a prime ring with characteristic not 2 and $\sigma, \tau, \alpha, \beta, \lambda, \mu, \gamma$ automorphisms of R . Let $h: R \rightarrow R$ be a nonzero left (resp. right)-generalized (α, β) -derivation associated with (α, β) -derivation d (resp. d_1). Let W, V be nonzero left (σ, τ) -Jordan ideals of R and I a nonzero ideal of R . In this paper we also study the situations. (1) $ah(R)b \subset C_{\lambda, \mu}(R)$ (2) $bh(I, a)_{\sigma, \tau} = 0$ or $h(I, a)_{\sigma, \tau}b = 0$, (3) $bh(I) \subset C_{\lambda, \mu}(W)$ or $h(I)b \subset C_{\lambda, \mu}(W)$, (4) $b\gamma(W) \subset C_{\lambda, \mu}(V)$ or $\gamma(W)b \subset C_{\lambda, \mu}(V)$, (5) $h(I) \subset C_{\lambda, \mu}(J)$, (6) $(h(R), a)_{\alpha, \beta} \subset C_{\alpha, \beta}$, (7) $(W, b)_{\alpha, \beta} \subset (W, b)$, (8) $(h(I)b, a)_{\lambda, \mu} = 0$.

One Sided Generalized Derivations and Right (σ, τ) -Lie Ideals

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ABSTRACT

Let R be a prime ring with characteristic not 2, I an ideal of R and $\sigma, \tau, \alpha, \beta, \lambda, \mu, \gamma$ automorphisms of R . Let $h: R \rightarrow R$ be a nonzero left(resp.right)-generalized (α, β) –derivation, $b \in R$. and U a nonzero right (σ, τ) –Lie ideal of R . The main object in this article is to study the situations. (1) $h^2(I) = 0$, (2) $[a, h(I)]_{\alpha, \beta} = 0$, (3) $(h(x), x)_{\alpha, \beta} = 0, \forall x \in I$, (4) $ah^2(I) = 0$ or $h^2(I)a = 0$, (5) $d\gamma[b, I]_{\sigma, \tau} = 0$.

Solution of Inverse Euler-Bernoulli Problem with Integral Overdetermination Condition

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ABSTRACT

In this work the inverse coefficient problem for Euler-Bernoulli equation with periodic boundary and integral addition conditions is investigated. Under some natural regularity and consistency conditions on the input data the existence, uniqueness and continuously dependence upon the data of the solution are shown by using the generalized Fourier method.

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An Investigation on Nol Ring Test Results and Hoop Stress Results of Polyethylene Pipes

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ABSTRACT

In the last decades polyethylene pipes have an increasing part in distribution networks even both pressurized systems for potable water and gas distribution networks and also wastewater collection systems. Even previously popular steel pipes are still in use for very high pressure systems, but ease of transportation, welding and advantages of lightness plastic pipes have a wide range of use. These plastic pipes acquiring 50 years of life under pressure has to pass some tests determined by the authorities to show long time reliability according to EN 12201 standards. Long term inner pressure test are used for this validity, but these tests need hundreds of hours and great volume hot water pools anyway there is a simple method for this comparison. Nol ring test method is tried to be used instead of these long-term methods. Unfortunately this new method is not reliable enough for the moment. Some experimental data will be analysed for reliance and validity of this new method to ensure safety in pipelines.

CBS-Based Decision Analysis with Multidisciplinary Criteria in Site Selection for Solar Plants: Case of Kocaeli

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ABSTRACT

Having faced shortages of energy that is dependent to fossil-based fuels, and predictions that point out their vanish, humankind is exploring and showing great efforts to capture and cultivate renewable energy resources. Solar energy among other renewable energy sources is most cleanest and predictable source of energy. Besides, it produces no air or water pollution and no greenhouse gases. The potential solar energy that could be used differs from the amount of solar energy present near the surface of the planet because factors such as geography, time variation, cloud cover, and the land available to humans limit the amount of solar energy that we can acquire.

Turkey is a country that eagerly explores and adapts renewable energy resources in the last decade. Considering solar energy, Turkey also has a big potential in efficiency in producing energy from solar radiation, given its latitudinal location and climate conditions.

In this study we examine the most suitable places for setting photovoltaic cells (PV) in Kocaeli in Turkey. Using Geographic Information Systems (GIS) tools, a multi-layered, multi-criteria analysis is proposed for site selection. Positional information, climate parameters as well as land cover/use, topographic parameters i.e; elevation, slope, aspect, accessibility and transmission criteria are produced as GIS layers and with a multi-layered, multi-criteria system most suitable places to built up PV cell plants are mapped.

KEY WORDS: Solar Energy, Solar Panels, Photovoltaic Cells, GIS, Multi-Layer, Multi-Criteria

The Use of Six Sigma Methodology in Clinical Biochemistry

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ABSTRACT

Background: In routine biochemistry laboratories, millions of tests are being analyzed daily. The accuracy of the results can be evaluated by different statistical methods. Six Sigma Methodology is one of these methods that the analytical quality of the tests is determined by process sigma values. Six Sigma methodology uses internal quality control serum results. The aim of this study is to determine the analytic process performance of some biochemical tests in our laboratory using the Six Sigma values.

Material and Methods: Internal quality control (IQC) outcomes were obtained from the laboratory information system. Allowable total errors (TEa) were taken from the literature. Sigma values were calculated from the coefficient of variation (CV) and the bias resulting from IQC outcomes (IQC 1 and 2 sample levels) for November and December 2017. The sigma values for the analytes were calculated using the formula $(TEa\% - Bias\%) / CV\%$. Quality was assessed by Sigma values as 'un-acceptable' (under three Sigma), 'acceptable' (between three and six) or 'world-class' (above six Sigma) (1, 2).

Results: Un-acceptable tests of IQC 1 include glucose, Alkaline phosphatase (ALP), creatinine, and urea in November; ALP, creatinine, and urea in December. Alanine transaminase (ALT) and Aspartate transaminase (AST) were acceptable in both November and December; glucose was acceptable in December for IQC 1. Creatinine and Gamma-glutamyl transferase (GGT) were of world-class quality in both November and December for IQC 1. Un-acceptable tests for IQC 2 include glucose, ALP, creatinine, and urea in November; urea in December. Acceptable tests for IQC 2 were ALT and AST (November); glucose and ALP (December). In November, CK and GGT; in December CK, GGT, creatinine, and ALT were determined to be world-class quality.

Conclusion: Un-acceptable tests may be identified using Six Sigma methodology in the analytical processes used in laboratories. Therefore, pre- and post-analytical processes may be investigated using these tests.

Table 1. Sigma values of Internal Quality Control 1

IQC 1	Target values	SD	%TEa	November (n)	mean	November sigma values	CV %	Bias %	December (n)	mean	CV %	Bias %	December sigma values
Glucose (mg/dl)	99,2	7,92	10	30	100,01	2,95	3,11	0,81	28	99,54	1,25	0,34	3,11
ALP (Alkaline phosphatase) (IU/L)	124	15,5	30	30	131,13	2,31	10,51	5,75	28	136,86	6,06	10,37	1,87
ALT (Alanine transaminase) (IU/L)	45,7	5,25	20	30	46,44	4,90	3,75	1,61	28	46,06	2,2	0,79	5,12
AST (Aspartate transaminase) (IU/L)	48,7	5,6	20	30	51,78	4,26	3,21	6,32	28	51,05	2,69	4,83	4,73
CK (creatinine kinase) (IU/L)	167	16,75	30	30	165,77	8,98	3,26	0,74	28	166,75	3,23	0,15	9,16
GGT (Gamma-glutamyl transferase) (IU/L)	55,3	6	33,2	30	57,5	6,31	4,63	3,98	28	56,64	2,97	2,43	6,65
Creatinin (mg/dl)	1,14	0,13	15	30	1,09	0,99	11,07	4,08	28	1,14	1,54	0,22	1,34
Urea (mg/dL)	39,7	4,38	9	30	38,88	1,64	4,22	2,08	28	39,79	2,21	0,22	2,08

Table 2. Sigma values of Internal Quality Control 2

IQC 2	Target values of IQC 2	SD	TEa %	n	mean	CV %	Bias %	November sigma values of IQC 2	n	mean	CV %	Bias %	December sigma values of IQC 2
Glucose (mg/dl)	235	18,75	10	30	233,49	3,63	0,64	2,58	28	231,87	1,67	1,33	5,19
ALP (<i>Alkaline phosphatase</i>) (IU/L)	514	64,25	30	30	532,53	10,09	3,61	2,62	28	546,14	4,03	6,25	5,89
ALT (<i>Alanine transaminase</i>) (IU/L)	126	14,48	20	30	127,28	4,28	1,01	4,44	28	125,18	2,32	0,65	8,34
AST (<i>Aspartate transaminase</i>) (IU/L)	131	15,00	20	30	136,82	4,8		3,24	28	134,76	2,86	2,87	5,99
CK (<i>creatinine kinase</i>) (IU/L)	388	38,70	30	30	389,00	3,49	0,26	8,52	28	387,96	3,26	0,01	9,20
GGT (<i>Gamma-glutamyl transferase</i>) (IU/L)	151	16,50	33,2	30	153,87	4,12	1,9	7,60	28	152,14	1,55	0,76	20,93
Creatinine (mg/dl)	5,34	0,58	15	30	5,17	5,97	3,24	1,97	28	5,25	1,75	1,67	7,62
Urea (mg/dL)	175	19,50	9	30	168,25	5,23	3,85	0,98	28	171,19	2,73	2,18	2,50

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A method Comparison study for Serum C-reactive Protein Measured by Three Different Biochemistry Autoanalyzer

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ABSTRACT

Aim: To determine the level of harmony between different measurement techniques in the laboratory using Bland Altman (drawing a scatter graph of differences against the mean of the measurements obtained from two different methods) and linear regression analyses. A prospective method comparison study was planned based on the feedback from the infection clinic with regard to the high readings of the C-reactive protein (CRP) assay. **Material and methods:** In our study, we analyzed the CRP values of 22 patients that were collected using three different devices. We performed the analysis with two different autoanalyzers in the Derince Educational Research Hospital Laboratory (Emergency laboratory, turbidimetric method with Abbott Architect C-16000; Central laboratory, nephelometric method with Siemens BN2) and an autoanalyzer in the Kocaeli University Medical Faculty Central Laboratory (turbidimetric in BeckmanCoulter AU 5800 autoanalyzer). For the statistical analysis, the results of the CRP tests performed on the three different systems were evaluated using Bland-Altman graphs and linear regression. **Results:** Architect-BN2, $R2_{Linear} = 0.998$; Architect-Beckman $R2_{Linear} = 0.998$; BN2-Beckman, $R2_{Linear} = 0.999$. **Conclusion:** The results of the Abbott Architect, Siemens BN2, and Beckman Coulter autoanalyzers are compatible with each other for CRP analysis.

Competing risks regression analysis and application

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ABSTRACT

Survival time, which is one of the important criteria in the area of health working, indicates health level. The effects of the factors, which influence human health, on survival time is analyzed by survival analysis method using disease and death data. Survival analysis was developed to determine how much a group of patient under treatment will remain alive, the recurrence time of disease, the effects of prognostic factors on survival time and determination of death risk from disease. In death-end diseases, many factors can be cause of death. If one of the factors is preceding the cause of death, then this is called competing risks. In a disease data, if there are more than one cause of death, competing risks approach is used to calculate risk probabilities for determining which cause or causes are preceding. In the competing risks regression analysis, the cumulative incidence function is used to compare the risks of subgroups. This function estimates the probability of failing from cause j before a given time t . It is computed for a population or for an interested subgroup. The subdistribution hazard method is used to model the effects of covariates on the cumulative incidence functions. In this approach, the subdistribution hazard gives the hazard of failing from a given cause in the presence of competing events, given that a subject has survived or has already failed due to different causes.

Key Words: Competing risks regression analysis, cause-specific cumulative incidence, Prognosis, Risk assessment

GIS Based Site Selection for Industrial Regions: Kocaeli Case

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ABSTRACT

Today, industrial areas are the one of the main sectors that guide the economies and promote the development of the countries. The proper selection of the industrial location is quite important for the countries economy, production, employment and investments. Industrial region site selection studies employed due to establishment of new industrial facilities, expansion of an existing industrial facility and renewal of an industrial facilities that lost its economic viability for changing conditions. In this sense, Geographic Information Systems (GIS) plays an important role in processing and analyzing all kinds of spatial data and determining the most suitable region among the alternatives. Spatial analyzes that take multiple criteria into account in GIS environment is called multi-criteria decision analysis. Most widely used types of site selection are weighted site selection analysis which uses raster data. This method allows ranking raster cells and assigning a relative importance value to each criterion. As a result of the analysis potential suitable sites from least suitable to most suitable is obtained. Kocaeli is one of great importance for Turkey as an industrial economy. Therefore, within the scope of the study, optimal locations of industrial regions have been determined in GIS environment in the case of Kocaeli. The most appropriate location selection analysis was carried out by considering 11 different criteria based on expert opinion and various limitations. In this study the geology, slope, distance to main roads, ports, farmlands, garbage collection region, forest region, industrial region, residential area and free spaces and landslide densities were considered as the main criteria's for the analysis. As a result of the study, the regions in Dilovası, Gebze, Başiskele and Körfez districts were identified as the most suitable places.

Quality and Land Use Detection Performance Evaluation of High Resolution Goktürk-2 Satellite Images

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ABSTRACT

The human population is continuously increasing. Despite the ever-increasing population, the use of land needs to be more effective, sustainable and under control in order to enable individuals to maintain their lives better. Remote Sensing and Geographic Information Systems technologies are the technologies that help to record and obtain information about the land use. Additionally, the new areas of use can be detected, tracked and controlled in an organized, planned and continuous manner by using these technologies. In the scope of the projects that are carried out in Turkey from past to today, significant experience and infrastructure have been established in satellite-space and ground station issues by the first ground observing satellite Bilsat and, by the second ground observation satellite system Rasat. Turkey's originally developed the first high-definition earth observation satellite Goktürk-2, began to capture images in 2012. The satellite has 2.5m. panchromatic, 5m. multispectral resolution images. In this study, the qualities of the images, as well as the ability of land use detection of national satellite Goktürk-2, were examined. The study was carried out over a hundred images of Goktürk-2 satellite images in the Western Marmara region. The structural properties, band characteristics, image acquisition and surface coverage properties of the image, were investigated by using visualization and spatial functions in Geographic Information Systems. Additionally, the land use detection ability of Goktürk-2 was tested in the study. Supervised classification method, which is one of the most preferred methods in the literature, has been used to determine land use capability. The 88% overall accuracy and 0.85% kappa statistic was obtained as the result of the classification analysis.

Key words: Goktürk-2, land use, classification, GIS

Türk Sanayisinin Gereksinimleri Doğrultusunda Mesleki Teknik Eğitim Programlarının Planlanması ve Kocaeli Meslek Yüksekokulu Teknik Programları Örneği

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ABSTRACT

İşsizlik ülkemizin en önemli sorunlarından biridir. İnsanların kendilerinin ve ailelerinin geçimini sağlayacak işlerinin olmaması, sosyal barışı ve toplumsal huzuru tehdit etmektedir. Fakat, işverenler de istedikleri niteliklere sahip iş gücü bulamamaktan yakınmaktadır. Ülkemizde faaliyet gösteren sektörlerin lisans seviyesinin altındaki eleman ihtiyacı, meslek liseleri ve meslek yüksekokulları tarafından karşılanmaktadır. Bu süreçte, endüstriden ticarete tüm sektörlerin faaliyetlerini gerçekleştirecek ara (ana) eleman yetiştirme görevi büyük oranda meslek yüksekokullarının üzerindedir. “Türkiye Yükseköğretim Yeterlilikler Çerçevesi” ülkemizdeki Meslek Yüksekokullarında açılan Bölüm ve Programları, ISCED (The International Standard Classification of Education) tanımları doğrultusunda sınıflandırmıştır. Bu tanımlı programlardan mezun olan öğrenciler, programın yer aldığı bölüme bağlı olarak, tekniker ya da meslek elemanı ünvanına sahip olmaktadır. Bu çalışma kapsamında, Kocaeli Üniversitesi Kocaeli Meslek Yüksekokulu bünyesinde yer alan Teknik Programların ders planlarının Türk sanayisinin gereksinimlerini karşılayacak şekilde planlanması yapılmıştır. Planlama süresinde, Makine ve Metal Teknolojileri Bölümü Makine Programı dersleri, Ulusal Meslek Standartları (UMS) ve Ulusal Yeterlilikler (UY) kapsamında değerlendirilmiştir. Bu süreçte, Makine programı kapsamına giren yeterlilikler ve bu yeterlilikleri karşılamak için gerekli dersler belirlenmiştir. Belirlenen dersler, var olan planlar ile karşılaştırılarak, ders planlarına eklenecek ve çıkarılacak dersler belirlenmiştir. Ayrıca, Makine Programı ders planlarının yanında, Kimya, İnşaat ve Elektronik Programlarının ders planları, Türk çimento sektörünün gereksinimleri doğrultusunda düzenlenmiştir. Bu çalışmanın sonucunda, Kocaeli Meslek Yüksekokulu Teknik Programları mezunlarının, sanayimizin ihtiyaç duyduğu nitelikte yetişmesi için gerekli eğitim planları belirlenmiştir.

Kocaeli Meslek Yüksekokulu Ölçme ve Kalibrasyon Programı

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ABSTRACT

Metroloji, ölçme tekniklerini ve süreçlerini kapsayan, ölçüm bilimi ve uygulaması olarak tanımlanmaktadır. Dünya ekonomisi, uluslararası düzeyde güvenilir ölçümlere ve testlere bağlı olup ülkeler arası ticaretin teknik engellere takılmaması için ön koşul metroloji alt yapısıdır. Bu konuda gerekli alt yapıyı, bilimsel metrolojiyle ilgili olarak TÜBİTAK Ulusal Metroloji Enstitüsü (UME), endüstriyel metrolojiyle ilgili olarak TSE ve yasal metroloji alanında görev yapan Bilim, Sanayi ve Teknoloji Bakanlığının Metroloji ve Standardizasyon Genel Müdürlüğü oluşturmaktadır. Bu kurumların görevlerini en iyi şekilde yapabilmesi için, metroloji alanında eğitim almış personele ihtiyaçları vardır. Türkiye’de ölçme ve kalibrasyon alanında eğitim veren bir kurum bulunmamaktadır. Yurtdışında ise 2 yıllık ön lisans düzeyinde eğitim veren kurumlar mevcuttur. Bu eksikliğin giderilmesi için bahsedilen kurumlar ile yürütülen işbirliği süreci, “1. Uluslararası Mesleki Bilimler Sempozyumu”nda “Kocaeli Meslek Yüksekokulu Metroloji Programları” başlıklı bildiri anlatılmıştı. Program başvurusu yapılmış ve Yükseköğretim Kurulu Başkanlığının uygun görmesiyle, ülkemizin ilk “Ölçme ve Kalibrasyon Programı”, Elektronik ve Otomasyon Bölümü altında açılmıştır. Bu çalışmada bahsedilen paydaşlar ile yürütülen süreç sonunda oluşan ders planı sunulmaktadır. Eğitim planını tartışarak, olası fikirlerin değerlendirilmesi amaçlanmaktadır. Eğitim-öğretim faaliyetleri, paydaşların ve Kocaeli Meslek Yüksekokulunun personel ve laboratuvar imkanlarının ortaklaşa kullanımı ile yürütülecektir. 2018 yılında alımı planlanan 30-40 arası öğrencinin mezun edilmesi ile sektörün metroloji alanındaki teknik personel gereksinimi karşılanmış olacaktır.

Nd: Yag Laser Drilling of Continuous Carbon Fibre Reinforced Peek Composites

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ABSTRACT

Carbon fibre reinforced PEEK (CF-PEEK) composites are increasingly used in applications especially in aerospace and aeronautical industry[1], where high strength and lightweight are important. As known in aircraft manufacture, use of carbon fibre composites result in remarkable weight reductions compared to metals. Commercial applications are day by day growing [2,3,4,5]. The use of lasers to cut and drill these CF-PEEK materials are also growing. Potential benefits of rapid processing, the absence of tool wear, the capabilities to drill high aspect ratio holes and to easily produce holes at shallow angles to the surface are the main advantages of laser drilling [6].

In the present study, holes are drilled in a multilayer carbon fibre composite under multiple pulse drilling conditions using Nd:YAG laser. Detailed drilling characteristics, such as entry and exit hole geometries, delaminations and surface damages of the holes are investigated. Analysis of materials were made by non-contact laser profilometer and stereo microscope.

It has been observed that hole geometry and defect of material are strictly related to laser parameters such as pulse energy, pulse duration, spot size etc.

Keywords: CF-PEEK, carbon fibre, composites, Nd:YAG laser, drilling.

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Measurements of charged particle capture reaction cross sections for astrophysical p-process

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ABSTRACT

Nuclei heavier than iron group are mostly synthesized by the s- and r- processes (slow and rapid neutron capture reactions, respectively). There is another mechanism (p-process) that is responsible for creation of some proton-rich nuclei (so-called p-nuclei). It is believed that there are about 35 p-nuclei, which are produced by photodisintegration reactions on existing heavy s and r seed nuclei. The reaction cross section values used in p-process network calculations are mostly derived from Hauser-Feshbach statistical model results because experimental data is scarce for charged particle reactions at astrophysical relevant energies. Therefore the input parameters of the models should be constrained by experimental studies. Recent measurements of charged particle capture reaction cross sections for astrophysical p-process will be presented.

Activation measurements: γ -ray and X-ray detection for astrophysical γ -process

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ABSTRACT

The reaction rates used in γ -process nucleosynthesis network calculations are mostly derived from process nucleosynthesis network calculations are mostly derived from theoretical model cross sections since most of the reaction cross sections involved in reaction rates are experimentally unknown. Experimental and theoretical efforts in astrophysical modeling have been significantly increased in the last two decades. However, the abundance and the origin of the p-process nucleosynthesis network calculations are mostly derived from nuclei are still not fully understood. For the improved modeling and understanding of the γ -process nucleosynthesis network calculations are mostly derived from process, reaction cross sections were measured at low energies close to the astrophysically relevant energy range (the so-called Gamow window) by means of the activation technique. After the irradiation of the p-process nucleosynthesis network calculations are mostly derived from nuclei using either the electrostatic type (Van de Graaff) or electromagnetic type (cyclotron) accelerator, the produced activities were determined by off-process nucleosynthesis network calculations are mostly derived from line detection of the γ -process nucleosynthesis network calculations are mostly derived from rays and/or characteristic X-process nucleosynthesis network calculations are mostly derived from rays emitted following the beta decay of the reaction products.

In this talk, the experimental techniques, the obtained results and related projects have been presented. The author acknowledges support from the “ChETEC” COST Action (CA16117), supported by the COST (European Cooperation in Science and Technology).

On Product of different kinds convex functions by using conformable fractional integral operators

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ABSTRACT

In this note, we have established some new integral inequalities involving product of different kinds of convex functions by using conformable fractional integral operators.

Some Hadamard type inequalities for Quasi-convex functions via Katugampola Fractional integral operator

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ABSTRACT

In the present note, new integral inequalities of Hadamard-type for quasi-convex functions have been proved by using Katugampola fractional integral operators and the definition of quasi-convexity.

Haddehanelerde yürüyen tabanlı fırın sistemleri

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ABSTRACT

Haddecilikte geçmişten günümüze birçok tip ve kapasitelerde tavlama fırınları kullanılmaktadır. Fırınlarda üretimin ihtiyaçlarına göre farklı kesit ve ebatlarda kütükler kullanılarak, kütüğün rekristalizasyon sıcaklığının üzerine çıkılması sağlanır ve plastik şekil vermeye uygun hale getirilmektedir. Fırınlardaki bu işlemler fırının teknik özelliklerine göre farklı sonuçlar ve şartlar sunmaktadır. Yürüyen tabanlı fırınlar hidrolik sistemle tahrik verilen yataklardan, şarj ve deşarj sistemine ait mekanizma ve fırın brülör sistemleriyle tam otomasyon çalışan bir yapıdır. Bu çalışmada Kar-Demir Haddecilik AR&GE Merkezi mühendisleri tarafından mevcut orta profil haddehanesinde kullanılan itmeli tip fırın yerine yeni yürüyen tabanlı fırına geçişin kazanımları üzerinde de durulmaktadır.

Haddeleme Prosesinde Kullanılan Makaralı Çeviricilerin Ürün Kalitesine Etkisi

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ABSTRACT

En az iki merdanenin ezme kuvveti etkisiyle araya giren sıcak malzemeye plastik şekil verme işlemine sıcak haddeleme denir. İyi bir haddeleme için malzemenin merdane kalibresine uygun şekilde girmesi gerekmektedir. Bunun için yatayda yatay makaralı çevirici, dikeyde dikey makaralı çevirici kullanılmaktadır. Bu çalışmada, haddehanede üretilen Köşebent, Lama, Kare, Yuvarlak, I ve U gibi profil ürünlerinde daha önce kullanılan statik çeviricilerde yaşanan sürtünmeden kaynaklı malzeme yüzeyinde oluşan pürüzlerin ve kalite bozukluğunun giderilmesi amaçlanmıştır. Tasarlanan yeni dizayn ile mamulün daha sağlıklı haddelenmesi gerçekleştirilmiştir. Çeviricinin makaralı oluşu da sürtünme katsayısını azaltmış ve yüzey kalitesinde iyileşmeyi sağlamıştır. Çapak oluşumunu ortadan kaldırmıştır. Bununla birlikte yeni makaralı çevirici tasarımı ile statik çeviricilerde yaşanan sorunlardan dolayı meydana gelen zaman kaybı önlenmiştir.

Antibacterial and antioxidant activity of essential oils and extracts of *Ferula orientalis* and determination of chemical composition of its essential oils

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ABSTRACT

In this study, it was aimed to determine essential oils and extracts, which are known as *Ferula orientalis* and obtained from naturally grown plants in Narman province, antioxidant effects and antimicrobial effects against *Chryseobacterium indologenes* which cause soft rot in certain vegetables and fruits in vitro. Also was determined the chemical composition of essential oils used in this study. For this purpose, 8 *C. indologenes* isolates, which were determined to be soft decay agents in cucumber, tomato, pepper and squash, were used in previous studies. Laboratory trials were established in triplicate and penicillin and kanamycin antibiotics, which are commercially available, were used as positive controls in the experiments. According to the results obtained; It has been observed that essential oils obtained from *F. orientalis* plant have bactericidal activity against bacterial pathogens in the ratio of 9-16 mm. However, none of the extracts obtained from the *F. orientalis* plant used in the study were found to have antibacterial activity against *C. indolenes* species. Antibiotic used as positive controls. Also have been observed to have no effect against pathogens as in the extracts. As a result, it has been determined that the essential oil and antibiotic used in the study has a lethal effect against 8 different *C. indologenes* which have soft caries pathogens, but the extracts used have no antimicrobial effect. In addition, the chemical composition of essential oil determined to be effective in the study has been determined. For this reason, it is considered that the essential oil obtained from *F. orientalis* plant can be used successfully in the control against *C. indologenes* pathogens. This result shows how much the *F. orientalis* essential oil has a great importance in control against these pathogens very resistant to chemical drugs. In this study, antioxidant capacity of *F. orientalis* methanol, acetone, chloroform, hexane extract and essential oil was determined by DPPH and ABTS method, phenolic substance contents and folin was determined by cysaltio method. Water extract had highest ABTS free radical scavenging activity with 90,46% (0.05 mg / ml), (DPPH) capacity with 72,22% (50 µg/ml) and highest amount of phenolic compound with 13,55 (mg GAE/gr).

Key words: Antibacterial activity, *Ferula orientalis*, Soft rot, *Chryseobacterium indologenes*

Antibacterial and antioxidant activity of essential oils and extracts of *Ferula orientalis* and determination of chemical composition of its essential oils

Fatih DADAŞOĞLU, Esin DADAŞOĞLU, Aykut ÖZTEKİN, Nasibe TEKİNER, Gökhan ERARSLAN – Oral Presentation /035

The role of folic acid against cornea damage induced by ionizing radiation

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ABSTRACT

Aim: We aimed to determine effect of folic acid against cornea damage induced by ionizing radiation. Twenty-four rats were used in this study.

Material and Methods: The rats were divided into 3 groups (rats in each groups). Groups were planned as control, ionizing radiation and folic acid + ionizing radiation groups. In the ionizing radiation group, the total cranium was exposed to 8 Gy ionizing radiation. Folic acid was used intraperitoneally at 50 mg/kg dose to rats in the folic acid days folic acid treatment group for then irradiated as used in the ionizing radiation group.

Results: In the ionizing radiation group, the oxidative parameter was significantly elevated and antioxidant parameters decreased compare to the control group, and observed that oxidant level was decreased and antioxidant parameters increased in the folic acid treatment group.

Conclusions: These results shown that folic acid has been effective in alleviating ionizing radiation-induced corneal damage.

Keywords: Radiation, cornea, folic acid, rats.

Inequalities Generated with Riemann-Liouville Fractional Integral Operator

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ABSTRACT

The primary objective of this study is to handle new generalized midpoint, trapezoid and Simpson's type inequalities with the help of Riemann-Liouville fractional integral operator. In order to do this, a new fractional integral identity is obtained. Then by using this identity, some inequalities for the class of functions whose derivatives in absolute values at certain powers are convex are derived. It is observed that the obtained inequalities are generalizations of some results exist in the literature.

The Stability of Solution for Pseudo-Quasilinear Euler Bernoulli Mixed Problem

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ABSTRACT

In this paper, the stability for a solution of pseudo-quasilinear Euler Bernoulli mixed problem with periodic boundary condition is investigated. The stability of solution are shown by using the generalized Fourier method.

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The effect of Fraxin against lung and testes tissues damage induced by testicular torsion/detorsion in rats

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ABSTRACT

Aim: This study was planned to determine the effect of Fraxin against lung and testes tissues damage induced by testicular torsion/detorsion in rats. **Material and Methods:** In this study, experimental animals were weighed and grouped. Groups were designed as sham, torsion/detorsion (T/D), 10 mg/kg Fraxin + T/D and 50 mg/kg Fraxin + T/D groups. After the detorsion period was completed, all rats were sacrificed by high-dose anaesthesia. At the end of the experiment, testes and lung tissues of rats were taken rapidly for biochemical analyzes. **Results:** When evaluating our biochemical data, Total oxidant status and malondialdehyde level were significantly elevated, and total antioxidant status and superoxide dismutase activity decreased significantly in the T / D group compared to the sham group. On the contrary, in the groups applied the doses of 10 and 50 mg/kg of fraxin, the level of oxidant were decreased and the level of antioxidant was increased. **Conclusion:** These results demonstrate that the applications of fraxin at 10 and 50 mg/kg doses show the protective effect on lung and testicular tissue, demonstrating a positive effect on experimental T / D injury in rats.

Keywords: Fraxin; Rats; Testes; Torsion/detorsion.

Role of gentisic acid against cardiotoxicity induced by doxorubicin

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ABSTRACT

In this study, it was aimed to determine the role of gentisic acid against cardiotoxicity induced by doxorubicin in rats. Rats were randomly grouped as control, gentisic acid, doxorubicin and gentisic acid+doxorubicin groups. At the end of the experimental procedures, rats were sacrificed by high dose anesthesia and heart tissue were removed quickly for some biochemical analyses. Our results were analyzed using appropriate statistical methods. MPO activity, NO level, TNF- α , caspase 3 increased in doxorubicin group according to control and only gentisic acid groups. But these parameters decreased in gentisic acid+doxorubicin group. According to these results, it can say that, gentisic acid has beneficial role against cardiotoxicity induced by doxorubicin in rats.

Keywords: Doxorubicin, gentisic acid, cardiotoxicity, rat.

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The efficacy of treatment of fraxin in oxidative cardiac and brain tissue injury induced by cisplatin

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ABSTRACT

Aim: In this study, it was aimed to investigate the possible therapeutic effect of fraxin on oxidative heart and brain tissue damage induced by cisplatin. **Material and Methods:** The experimental animals used in our study were randomly divided into four groups to as 8 animals in each group. Later, the groups were regulated as control, only fraxin, cisplatin and cisplatin + fraxin. Any drug was not administered in the control group. In only fraxin group, 50 mg/kg IP. dose of fraxin was given for three times. Cisplatin 15 mg/kg single dose was administered to cisplatin group. In the cisplatin + fraxin group, treatment with fraxin was administered for three times after the cisplatin treatment. At the end of the experiment, brain and heart tissues of all rats were removed. **Results:** When the biochemical results of the tissues are evaluated, the levels of malondialdehyde and myeloperoxidase enzyme activity in brain and heart tissues increased in the cisplatin group according to the control group, however, the activity of antioxidant enzymes decreased considerably. In cisplatin + fraxin group, it was showed an increase in antioxidant enzyme activity while malondialdehyde level decreased. **Conclusion:** It can be concluded in light of these results, fraxin treatment is effective against oxidative heart and brain tissue injury induced by cisplatin

Keywords: Brain; Cisplatin; Fraxin; Heart; Oxidative injury.

Continuous dependence on data for a solution of fourth order Euler Bernoulli quasilinear equation with periodic boundary condition

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ABSTRACT

In this study, continuous dependence on data for a solution of the fourth order Euler Bernoulli quasilinear equation with periodic boundary condition is investigated. Stability of solution are shown by using the generalized Fourier method.

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