Management of Technology Transfer and Marketing (From Science to Business), and Intellectual Property Rights.

Influence of Plasma Gas on the Quality-Related Properties of Protective Fabrics

Adel Elhadidy [*]

Abstract

The primary objective of current research was to examine the effects of fabric finishes on fabric quality parameters in relation to low stress measurements (Fabric Assurance by Simple Testing, "FAST). Plasma-finishing in textile technology is very promising due to various end uses like protective textiles for soldiers, medical textiles and smart textiles. Gas plasma finishing was applied to cotton fabric, and/or polyester fabrics with the use of a no polymerizing gas, namely argon. Properties of the gas plasma treated samples including low stress mechanical behavior, fabric wear ability ,fabric skin-comfort index, fabric pilling resistance, fabric electrostatic discharge resistance ,and fabric day ability , were evaluated in this study, Fabric Assurance by Simple Testing, "FAST", was employed to evaluate the influence of dray treatment on tested fabrics. The change in the fabric quality parameters of the gas plasma and / or mercerized, or mercerized- plasma treatments were in good agreement with the earlier findings and can be attributed to the amount of air trapped between the yarns and fibers. This study suggested that the gas plasma finishing and/or mercerized- gas plasma processes can influence the final fabric quality parameters of tested fabrics, and also provide information for developing mercerized – gas plasma processes treated cotton fabric for very high quality queen fabrics . It was found also, fabric wear ability affected by low temperature plasma treatment. In the present study, the dyed cotton fabrics were subjected to GP-induced color-fading process, and the color-fading effect was compared with conventional mercerization color-fading process. Experimental results revealed that GP treatment could achieve similar color-fading effect when compared with conventional wet color-fading process without much loss in fabric weight and with shorter treatment time. Therefore, it could be concluded that with the careful control of the GP process parameters, GP treatment could be flexible as an alternative to conventional chemical-based color-fading process to be used in textile industry.

Keywords

Fabric wet processing (fabric mercerization) , Fabric dry process (non-polymerized gas treatment) , Fabric assurance by simple testing (FAST) ,. Wrinkle-resistant finishing; Protective fabrics; Surface roughness; Air & Vapor permeability; Fabric wear ability analysis, Color-fading effect

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SMALL ENTERPRISES IN EGYPT; CHALLENGES AND CONSEQUENCES

Mahdy Elkassas

Abstract

The present study investigates the challenges faced by the small enterprises (SE) in Egypt. It reports on an empirical study based on 85 SE (located in Daqahlia Govern-ate, Egypt) that had been surveyed to identify these challenges. Results showed that there was a set of constraints faced by SE, especially; the financial, productive technical, marketing, governmental and political, and administrative constraints. Results, also, showed that there was a decline in the participants' legal consciousness and that the majority of them did not receive any of the Social Fund for Development Services. The study concluded that the financial constraints were the most challenging constraints facing SE, which overcoming would be a large step in the right direction.

Effect of Ginkgo biloba extract on cyclophosphamide-induced reproductive toxicity and oxidative stress in male albino mice

Saber Sakr[*], *Hoda A. Mahran*[*], *Nahed S. Basily*[**] *and Mona E. Saif*[**]

Abstract

The present study was carried out to investigate the possible protective effect of Ginkgo biloba extract (EGb) on reproductive toxicity induced by the anticancer drug cyclophosphamide (CP) in male albino mice. Animals were divided into four groups. G1 was considered as control. G2 was given EGb at a dose level of 100 mg/kg body weight/day, for 4 weeks. G3 was orally given CP at a dose level of 6.5 mg/ kg body weight/ day for 4 weeks. G4 was orally administered EGb and CP daily for 4 weeks. Testes were removed and stained with H&E for histological examinations. Testosterone and LH were measured in the sera. MDA, CAT and SOD were measured in the testicular tissue. The results showed that treating animals with CP caused degeneration of seminiferous tubules and loss of the spermatogenic cells. The interstitial tissue appeared with different vacuoles, blood hemorrhage and Leydig cells were degenerated. The sperm counts decreased and the sperm abnormalities increased. Biochemical results showed a decrease in levels of testosterone, LH, SOD and CAT activities and an increase in MDA. Treating mice with CP and EGb caused an improvement in the pathological alterations and increased the number of sperms. Moreover, testosterone, LH, SOD and CAT increased, while MDA decreased. The results of this study indicated that EGb protected mice against CP induced reproductive toxicity.

Keywords :

Cyclophosphamide, Ginkgo biloba, testis, Histology, Antioxidant

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Autonomous Guard Quadrotor using Visual-Inertial Navigation

Amjad N. Alsadoon[*]*, Mohammed A. Eldosuky*[**]

Abstract

The aim of this paper is to present the specification and the implementation of an autonomous guard quadrotor that fuses data from camera and IMU (Inertial Measurement Unit) to allow for high precision visual-inertial navigation. This can be used for guarding locations such as oil wells as well as buildings both for civil and military uses. The results of simulation and experiments are presented, the experiments on following suspicious objects are in progress.

Index Terms:

quadrotor, SLAM, data fusion, Kalman, IMU, camera, PID control, AR.DRONE

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EFFECT OF CALCIUM HYDROXIDE AND ACETIC ACID ON THE RATE OF DETERIORATION AND DEXTRAN FORMATION DURING SUGAR BEET STORAGE

***S.I.EL-Syiad*[*], *A. M. Khalil*[**], *F. Th. Helal*[***] *and E.G. Ibrahim*[***]**

Abstract

The objectives of the present investigation was carried out to overcome the chemical deterioration and extend the shelf life of sugar beet roots after harvest and before processing and study the chemical change in sugar beet roots during storage in open air after treating with some chemical treatments as calcium hydroxide,($Ca(OH)_2$) and acetic acid,(CH_3COOH).

Therefore, the following aspects have been covered.

1. Studying the chemical composition of two sugar beet cultivars (Pleno and Farida) collected from the research region of Delta Sugar Company directly after harvest.
2- Determination the dextran content of sugar beet roots during storage periods.

From the results obtained it could be noticed that the roots treated with 10% $Ca(OH)_2$ recorded the least values of dextran content at the end of storage periods while control samples and samples treated by 0.5% CH_3COOH was recorded the highest values of dextran content at the end of storage periods

Thus , it is necessary to manufacture sugar beet roots directly after harvest to reduce sugar loss and obtain best chemical and technological characteristics and to also control dextran level and the total viable count and leuconostoc mesenteriodes of suger beet roots but if manufacturing is difficult after harvest because of unsuitable environmental conditions, transportation difficulties or roots are in surplus treatment of beet roots should be done by spraying it by 10% calcium hydroxide solution inside the factory beet yard or after harvesting on the field by spraying on the surface of the beet pile. This is preferred to reduce the loss of sugar and dextran formation during storage and minimize the deterioration rate and fit the required technological properties along the manufacture process.

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Optimization of Dextranase enzyme on beet sugar manufacture under Egyptian conditions

Samy I. El-Syiad[*] and El-Sayed Gomaa I. Mohamed[**]

Abstract

This study was carried out at Delta Sugar Factory during (2009) and (2010) working seasons to study the effect of dextranase enzyme on dextran and viscosity levels of beet raw juice under Egyptian conditions. The results indicated that the levels of dextran reduction by extending the incubation time from 5 min to 20 min, ranged from 38.3% to 60.3% (break down by dextranase) respectively, at different levels of dextranase.

Highly significant increases in the percentage of viscosity reduction of raw juice by 22.8%, 27.5%, 34.7% and 40.4% after 5, 10, 15, and 20 min of incubation time at different levels of dextranase.

The percentage of dextran reduction increased significantly by 57.8, 63.1 and 72% after dextranase is added to raw juice by 1ppm, 2ppm and 3ppm respectively, at 20 min of incubation time.

Highly significant increase in the percentage of viscosity reduction by 23.32, 39.9 and 57.5% after adding dextranase enzyme by 1ppm, 2ppm and 3ppm respectively at 20 min of incubation time .

[*] Food Science and Technology Department, Faculty of Agriculture, Assiut University
[**] Production manager in Delta Sugar Company, Kafr El-Sheikh Governorate, Egypt.

ANTIVIRAL AGENTS DERIVED FROM HERBAL ORGANIC PLANTS

Atif Tantawy [*] ***and M. Elkholy*** [*]

Abstract

The Progress of fighting against viral Diseases like Influenza, HCV, Ebola and Corona viruses have great efforts recently to protect humanbeings, animals, plants and Birds. Drug discovery and researches have exploiting active extracts of volatile and fixed oils present in herbal plants and are planted under organic farming concepts. These oils are characterized by higher purity, are active as antioxidants and have no toxicity or side effects when applied by human being, or other living organisms. They are too active to contact with mucous membranes present nasal cavities and other places causing coupling with the DNA or RNA of the living cells through the well-known theory of emission of waves which have special wave lengths more than 13 fixed and volatile oils are mixed together and formulated to be used by inhalation where the vehicle was the best organic olive oil. The coupling process between the inhaled oils and the RNA or DNA hiders the viral anyway to couple with the occupied DNA or RNA of the cells stopping to a great extent the signals through the nerve fibers to reach brain or other receptors. The formulated Drug was named as EGYPTIAN FLORA or(LAZOKAM). It can be used safely ,has no side effects or any side effects .Experimentally and mode of action is characterized by increasing the immunity (IG-characters)which are under researches.

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An Intelligent Web-based System to Enhance Digital Circuits Concepts and Skills for Deaf Students

A. F. Elgaml[*] and S. M. Baladoh[**]

Abstract

In this paper, an intelligent web-based system is presented. The proposed system uses artificial intelligence, internet technology, and virtual lab to enhance digital circuits' concepts and skills for deaf students at electronic and computing department at the vocational preparatory stage. The system provides deaf students with a learning environment which can be accessed and used easily anywhere at any time. It helps deaf students in training of digital circuits' skills and enhances the understanding of their scientific concept. It enables the teacher to manage and communicate with their students through the administration panel and interaction tools. It consists of four components: pedagogical module, expert module, interaction module, and student module.

Keywords

Intelligent web-based; Digital circuits; Deaf students.

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UTILIZATION OF ORANGE POMACE IN PROCESSING LOW CALORIES CAKE

Ramadan, Afaf-Haniem M. [*]

Abstract

This research was aimed to utilized from baladi orange pomace (Citrus sinensis) as by-products from juices factories which causes some environmental problems in processing low cup calories cakes. Wheat flour 72% extraction was substituted with powdered orange pomace at different three levels i.e. 5, 10 and 15%. Effect of orange pomace on physical, chemical, textural characteristics and microstructure properties of cup cakes were determined. A gradual decrease in moisture, ether extract, carbohydrates, while fiber and ash contents were increased with the increase in concentration of powdered orange pomace. with substitution of 15 % orange pomace to cake batters and cake formulae was negatively effect on physical characteristics namely , pH, line spread, and volume cm3, texture profile and volume measurements. Results of scanning electron microscope showed that substitution with 15 % orange pomace caused undesirable changes in the structure of starch granules, gluten matrix and the gas cells comparing with the other cup cake formulae. Results of sensory evaluation indicated that cup cake formulae containing 5% and 10% orange pomace have the highest scores for taste ,odour, height , crumb colour and crust colour in compared with cup cake formula with 15 % orange pomace. So, substitution wheat flour 72 % with orange pomace powder up to 10 % in processing low calories cup cake is recommended .

Keywords:

orange pomace - cup cake- physical properties - nutritional value – scanning electron microscope .

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Towards Adaptable Industry for the Conservation of Environment in Assiut Governorate: A Geographical Vision

Dr/ Ahmed abdel kawy Ahmed *

Abstract:

Assiut Governorate is suffering from the industrial pollution resulting from its factories, most of which do not observe the environmental dimension, rules , specifications or standards. In addition its inhabitants are exposed to serious illnesses and are hurt by these environmentally irresponsible actions. Every day human, animal and plant life in the governorate is exposed to gases, vapors, dust, bad smells, and solid and liquid wastes due to the great industries it has such as fertilizer, drug, cement and oil refining industries, something which results in air, water and food pollution and environmental imbalance. Therefore, we must confront these problems and find alternative practical solutions to them. Hence, the present study calls for spreading and propagating the concept of (green) adaptable industry, promoting and introducing it into Assiut Governorate, and shifting from the traditional industry which pollutes the environment to the environment-friendly green industry either by green of Existing Industries or by Creating New Green Industries aimed at reducing environmental pollution and the deterioration of ecosystems; reducing poverty, providing new job opportunities; increasing production of economic resources; reducing production costs, increasing competitiveness; providing an environment which is conducive to technology, development, creativity; opening new markets; and reducing the effects of climatic change.

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The study consists of two main sections, preceded by an introduction and concluded by the conclusion, results and recommendations. The first section (the problem) discusses traditional industries which pollute the environment in Assiut Governorate. The second section (the solution) overviews the environment-friendly (green) adaptable industry. The study aims at clarifying the general picture of traditional industry and its sectors in Assiut Governorate; mapping industry and identifying the relative importance of its sectors; locating the industrial areas and the identifying their geographical distribution; attempting to survey industrial pollution and identifying its problems using some practical models; shedding light on the environment-friendly green industry, its concept, its importance, and its advantages and positive effects; highlighting the role of policies adopted to promote green industry and identifying some practical examples and models of it; (Biomass Energy, Solar Energy, Wind Energy, Geothermal Energy, Hydropower, Tides Energy, Waste Recycling, Green Chemistry, Fuel Cells, Retrofits and New Construction) and finally highlighting the role of geographical information systems in green industry planning and the conservation of the environment.

The impact of renewable energy in achieving sustainable development

Shaimaa Gamal Megahed*

Abstract

Renewable energy, Are natural sources of permanent , non-depleted, are available in nature, and constantly renewed, which is clean, does not result from its use environmental pollution . There are several pictures of renewable energy sources, which like: solar energy, wave energy, tidal energy.In addition to the energy derived from the bio-fuel, which is the production of energy from plant ، agricultural and animal waste. In order to protect the environment from pollution and make the most benefit of agricultural and animal waste.

After a series of scientific revolutions and uprisings successive appeared nanotechnology to achieve a new revolution in the field of renewable energy production, and eliminate the effects of pollution of the environment. Which impact on the economic aspects of sustainable development goals .

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Highly porous scaffolds made of nanosized hydroxyapatite powder synthesized from eggshells

***S.M.Naga*[*], *H.F.El-Maghraby*[*], *M.Sayed*[*], *E.A.Saad*[**]**

Abstract

Nanosize hydroxyapatite powder synthesized indirectly from eggshells is used to produce 3 D porous scaffolds. They are fabricated via polymeric sponge method. X-ray diffraction (XRD) and transmission electron microscopy (TEM) are used to characterize the phase composition and grain size of the scaffolds, respectively. The results showed that the prepared powder is composed of pure hydroxyapatite with a grain size ranging between 35 and 122 nm. The prepared scaffolds calcined at 1250°C for 2h possess interconnected porosity (≈73%). The studied scaffolds showed suitable mechanical strength necessary for bone tissue engineering. Their crushing and bending strengths were 0.82 MPa and 1.72 MPa, respectively. Thin film XRD, SEM and EDS confirmed the presence of a rich bone-like apatite layer post-immersion in SBF on the scaffolds' surface.

Key words:

Bioceramics, hydroxyapatite, porous scaffolds, mechanical properties.

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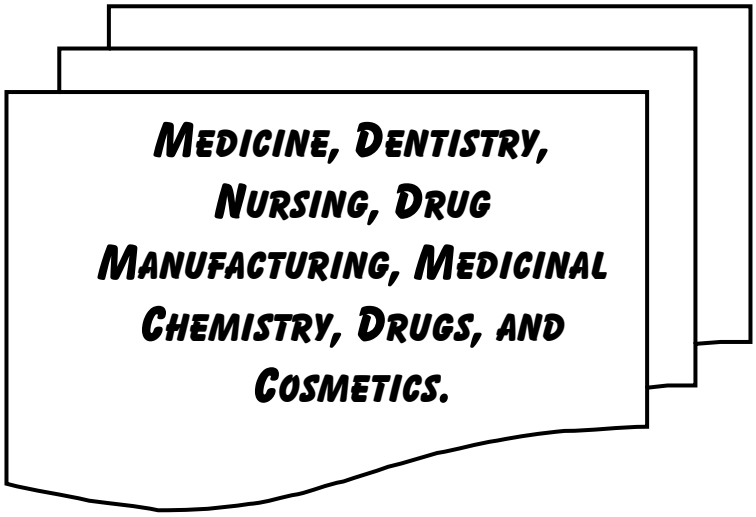
Medicine, Dentistry, Nursing, Drug Manufacturing, Medicinal Chemistry, Drugs, and Cosmetics.

Study the Effect of Basil Oil as Herbal Treatment of Acetylsalicylate Induced Gastric Ulcer in Experimental Rat Model

Haithem A.M.A. Farghali[*]*, Shimaa F.A.E Ghozy*[**] *and Hanaa F. El-Mehiry*[**]

Abstract

The current study was carried out to elucidate the effect of basil oil on gastric ulcer induced by acetylsalicylate in rats. Thirty six adult male albino rats (Sprague Dawley Strain) weight 140±10g were used and divided into 6 groups, each of 6 rats for six weeks. The first group was used as a negative control and fed on the basal diet only. Other groups had given acetylsalicylate orally (400 mg/kg B. Wt.). One of these groups left as positive control (Ulcerated rats without treatment) and other ulcerated rats groups treated with either ranitidine hydrochloride or different concentrations of the drug, 1ml, 3ml and 5ml basil oil groups. The results revealed that oral administration of basil oil at different doses showed significant increase in final weight, weight gain percentage, food intake and food efficiency ratio, gastric juice pH, gastric prostaglandin E2, gastric cytochrome P450 reductase, blood hemoglobin (Hb), glutathione peroxidase (GPX) and superoxid dismutase (SOD), compared with their corresponding +ve control (Ulcerated rats) except 5ml group which showed a decrease in cytochrome P450 reductase activity. On the other side , the gastric ulcer length and volume of gastric juice, gastric nitric oxide, serum interleukin-1, serum tumor necrosis factor-alpha, gastric cyclooxygenase, and blood malondialdehyde (MDA) were significantly decreased compared with +ve control (Ulcerated rats). The curative ratio percentage showed insignificant difference between 1 ml and 3 ml basil oil groups compared with ranitidine hydrochloride drug rats group except 5ml rats group. The groups that treated with basil oil at doses 1ml, 3 ml and drug groups when examined with ultrasound showed a significant decrease in gastric wall thickness, longitudinal length and width compared with +ve control (ulcerated rats), except 5 ml group. These obtained (physiological and biochemical) data are confirmed by the histopathological studies and ultrasonographic examinations. From the present study, linalool and eugenol (43.70 % and 13.55 % respectively) which were the major components in the essential oil of basil oil (O. basilicum), would play an important role in the antioxidant activity. The current work suggested that, basil oil could be used for healing acute gastric ulcer disease and implemented for gastric ulcer patients due to its cytoprotective effect coupled with anti-secretory activity.

Key words: Acetylsalicylate * Antioxidants * Basil oil * Gastic ulcer.

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ANTIDIABETIC EFFECTS OF DIETARY FORMULAS PREPARED FROM SOME GRAINS AND VEGETABLES ON TYPE 2 DIABETIC RATS

Tawfeuk , H. Z

Abstract

This study was carried out to prepared dietary formulas prepared from grains and vegetables for type 2 diabetic patients to optimize health and to prevent and treat the chronic complications of diabetes by attaining and maintaining optimal metabolic outcomes. For this purpose three formulas were prepared as a part of diet for diabetes mellitus by mixing equal weight of different ground dried raw materials as follows: (F1: rice, corn and barley), (F2: potato, carrot and green bean) and (F3: barely, corn, rice, potato, lentil, carrot and green bean). The influence of these formulas on the levels of serum glucose, triglycerides and cholesterol was investigated using alloxan-induced diabetic rats. Forty eight male albino rats were divided into six groups and were fed on experimental diets for 4 weeks, G1 (control -) normal rats fed on standard diet (SD), G2 (control +) diabetic rats fed on SD and G3 diabetic rats fed on diabetic specific diet (DSD), G4 (DDF1), G5 (DDF2) and G6 (DDF3) groups are diabetic rats fed on diabetic dietary formulas 1, 2 and 3 respectively.

Feeding the diabetic rats on diabetic specific diet (G3) and diabetic dietary formula3 (G6) significantly reduced serum glucose level (122.37 and 131.25 mg/dl) than those of the G2, G4 and G5 groups (301.88, 200.25 and 188.13 mg/dl) respectively.

In addition, diabetic dietary formulas significantly lowered serum total cholesterol and triglycerides levels when compared with control (+) group. Thus, it can be concluded that formula 3 was more effective for lowering blood glucose in diabetic rats than other tested formulas and can be used to improve glycaemic control in type 2 diabetic patients.

Key words:

Diabetes mellitus; Diabetic specific diet; Diabetic formula; alloxan; Glycaemic control.

Making a new drug mixture based on nanotechnology

C. MAT

Mahmoud Owis Sayed*

Abstract

Over the years, many antibodies have been successfully generated to treat patients

with life-threatening diseases, most notably cancer. While the first generation of antibodies, originating from mice, caused severe side effects and were relatively inefficient, technological advances have made it possible to obtain fully human antibodies for therapeutic use.

'Heavy-chain only' antibodies have recently been discovered in the blood of camelids. Because of their size, the antigen-binding units of these antibodies comprising only a single Ig fold are called Nanobodies

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Substituted thiazoles VII. Synthesis and antitumor activity of certain 2-(substituted amino)-4-phenyl-1,3-thiazole analogs

Ghada S. Hassan [*], [**]*Shahenda M. El-Messery* [***]*Fatmah A. M. Al-Omary a ،Hussein I. El-Subbagh* [****]

Abstract

A novel series of 2-acetamido- or 2 propanamido-4-(4-substituted phenyl)-1,3-thiazoles (11–34) was designed and synthesized. Compounds were subjected to National Cancer Institute (NCI) in vitro assessment for their antitumor activity, at a single dose of 10 lM. Most of the investigated compounds exhibited broad-spectrum antitumor activity. Compounds 19 and 28 believed to be the most active members in this study, with MG−MID GI50, TGI, and LC50 values of 2.8, 11.4, 44.7; and 3.3, 13.1, 46.8, respectively. Compounds 19 and 28 proved to be nine and sevenfold more active than the standard antitumor drug 5-FU, respectively.

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Nonclassical antifolates, part 3: Synthesis, biological evaluation and molecular modeling study of some new 2-heteroarylthio-quinazolin-4-ones

Fatmah A.M. Al-Omary [*], *Ghada S. Hassan* [*, **], *Shahenda M. El-Messery* [***]
Mahmoud N. Nagi [****], *El-Sayed E. Habib* [*****], *Hussein I. El-Subbagh* [******]

Abstract

A new series of 2-heteroarylthio-6-substituted-quinazolin-4-one analogs was designed, synthesized, and evaluated for their in vitro DHFR inhibition, antimicrobial, and antitumor activities. Compounds 21, 25, and 39 proved to be active DHFR inhibitors with IC50 range of 0.3-0.8 mM. Compounds 25, 28, 33, 35 and 36 showed broad spectrum antimicrobial activity comparable to the known antibiotic gentamicin. Compound 29 showed broad spectrum antitumor activity toward several tumor cell lines with GI values range of 25.8-41.2%. Molecular modeling studies concluded that recognition with key amino acid Arg38 and Lys31 are essential for binding and biological activities. Flexible alignment; electrostatic and hydrophobic mappings revealed that the obtained model could be useful for the development of newDHFR inhibitors.

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Nonclassical antifolates, part 4. 5-(2-Aminothiazol-4-yl)-4-phenyl-4H- 1 , 2 , 4-triazole-3-thiols as a new class of DHFR inhibitors: Synthesis، biological evaluation and molecular modeling study

Ghada S. Hassan[a],[b] ،Shahenda M. El-Messery[c] ،Fatmah A.M. Al-Omary [a] ، Sarah T. Al-Rashood [a] ،Marwa I. Shabayek[d] ،Yasmin S. Abulfadl d ، El-Sayed E. Habib[e] ، Salwa M. El-Hallouty[f] ،Walid Fayad [f] ،Khaled M. Mohamed [f] ،Bassem S. El-Menshawi[g] ، Hussein I. El-Subbagh [h]

Abstract

A new series of compounds possessing 5-(2-aminothiazol-4-yl)-4-phenyl-4H-1,2,4-triazole-3-thiol skeleton was designed, synthesized, and evaluated for their in vitro DHFR inhibition, antimicrobial, antitumor and schistosomicidal activities. Four active compounds were allocated, the antibacterial 22 (comparable to gentamicin and ciprofloxacin), the schistosomicidal 29 (comparable to praziquantel), the DHFR inhibitor 34 (IC50 0.03 mM, 2.7 fold more active than MTX), and the antitumor 36 (comparable to doxorubicin). Molecular modeling studies concluded that recognition with key amino acid Leu4 and Val1 is essential for DHFR binding. Flexible alignment and surface mapping revealed that the obtained model could be useful for the development of new class of DHFR inhibitors.

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Nonclassical antifolates, part 5. Benzodiazepine analogs as a new class of DHFR inhibitors: Synthesis, antitumor testing and molecular modeling study

Hussein I. El-Subbagh[a],*, Ghada S. Hassan[b], Shahenda M. El-Messery[c], Sarah T. Al-Rashood[d], Fatmah A.M. Al-Omary [d], Yasmin S. Abulfadl[e], Marwa I. Shabayek [e]

Abstract

A new series of tetrahydro-quinazoline and tetrahydro-1H-dibenzo[b,e][1,4]diazepine analogs were synthesized and tested for their DHFR inhibition and in vitro antitumor activity. Compound 35 showed a remarkable DHFR inhibitory potency (IC50, 0.004 mM) which is twenty fold more active than methotrexate (MTX). Compounds 17 and 23 proved to be fifteen fold more active than the known antitumor 5-FU, with MG-MID GI50, TGI, and LC50 values of 1.5, 46.8, 93.3 and 1.4, 17.4, 93.3 mM, respectively. Computer modeling studies allowed the identification that methoxy and methyl substituents, the p-system of the chalcone core, the nitrogen atoms, on the dibenzodiazepine ring as pharmacophoric features essential for activity. These mark points could be used as template model for further future optimization.

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BIO ALOE GUARD

Atif tantawy[*] *M.Elkholy*[**]

Abstract

Aloe Vera parbadensis plant as old herbal one was greatly Used by ancient Egyptians as cosmetic, anti-sunburns, hydrating agent and nutritional agent. The importance of Aloe Vera plant is characterized by the presence of important 20 Amino acid, growth hormones ،minerals ,vitamins in addition to other substances. Bio aloe Vera is one of our new products which comprises of Aloe Vera jel, and the yellow color and bitter substance (Anthraqinone).As organic pesticide, safe and none toxic ,organic agent ,fight against nematodes ,pathogenic bacteria and other . It differs from chemical pesticides in the ash components as residues, which are harmful for human being , and or all living organisms. It has the ability of organic Farming sustainability .

[*] Faculty of Pharmacy,Pharmac. Oganic Chem. Dept.
[**] Bio Aloe vera And Organic products.

Nitric Oxide is a Potential Diagnostic Marker for Hepatocellular Carcinoma

Laila A. EISSA[*], Nada H. EISA [*], Mohamed A. EBRAHIM[**], Maha RAGAB[***], Amal M. EL-GAYAR [*]

Abstract

Hepatocellular carcinoma (HCC) is the fifth most common cancer in men and the seventh most common in women. This cancer varies widely in incidence throughout the world, with rising incidence in Egypt. HCC is considered the second most frequent cause of cancer incidence and mortality among men in Egypt. This study aimed to estimate the serum levels of nitric oxide (NO) and glutathione reductase in order to evaluate their role as oxidative status markers in HCC development and progression. For this purpose, serum levels of these parameters were assessed in 50 HCC patients, and 30 cirrhotic patients in addition to 15 healthy subjects as a control group. In the present study, glutathione reductase activity showed a significant increase in HCC as compared to the control group (P= 0.019). On the other hand, no significant difference was observed between the cirrhotic and HCC patients (P= 0.492). Serum NO was significantly higher in patients with HCC than in cirrhotic patients (P= 0.001) or the control group (P= 0.001), with a sensitivity of (74%) and specificity of (88.89%) at a cut-off level of 614.1 μmol/l. While AFP, alpha-fetoprotein, at a cutoff level of 200 ng/ml had a sensitivity of (52%), the specificity was (100%). Indeed, nitric oxide was high in 62.5% of AFP-negative HCC patients. In conclusion, glutathione reductase has no role in HCC diagnosis. However, nitric oxide is a potential diagnostic marker for HCC. The simultaneous determination of serum nitric oxide and AFP gave significant improvement in the detection of HCC patients compared to that of AFP alone .

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EFFECTS OF ADRIAMYCIN, CISPLATIN, AND 5-FLUOROURACIL ON THE TESTES OF ALBINO RATS

Hassan I.H. El-Sayyad[*]. Mahmoud.R El-Sherbiny[*] Amoura M. Abou-El-Naga[*] Abdelalim A. Gadallah , El-Sayed K. Areida

Abstract

Objectives: To date, the pattern of spermatogenic failure in patients undergoing chemotherapeutic treatment has yet to be clarified. The mechanisms responsible for the testicular cytotoxicity of the neoplastic drugs cisplatin, adriamycin, and 5-fluorouracil remain to be less explored. Methods: Twenty-four mature male albino rats of the Wistar strain were divided into four groups: control (saline-treated), adriamycin (i.p. 0.2 mg/kg BW), cisplatin (i.p. 0.2 mg/kg BW), and 5-fluorouracil (i.p. 20 mg/kg BW). Drug-treatment were carried every other day for 30 days followed by assessments of testis weight, light and transmission electron microscopy examinations, DNA fragmentation experiments, and measurements of biochemical markers of testicular damage.

Results: The drugs altered the absolute and relative testicular weights of the rats compared to the effects of control treatment. There were marked reductions in the number of germ cells, decreases in germ cell height, and thinning of the tubular basal lamina in the treatment groups. 5-Fluorouracil treatment led to the sclerosis of seminiferous tubules, and enhanced conjugation between spermatogenic cells led to the formation of multinucleated giant cells with different structural patterns. Apparent DNA damage, reduced testicular vascular endothelial growth factor (VEGF), increased heat shock protein 70(HSP-70) and 8-hydroxy-2-guanosine (8-OHdG), and reduced both intercellular and vascular cell adhesive molecules (ICAM-1, VCAM-1) were observed after chemotherapeutic drug -treatment.

Conclusions: We concluded that chemotherapeutic drugs cause testicular cell death, as confirmed by altered 8-OHdG, VEGF, and HSP-70 expression and genomic damage.

Key words: Adriamycin, cisplatin, 5-fluorouracil, rat testis

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Antitumor effect of Chitosan and Silibinin and their combination in mice bearing Ehrlich ascites tumors: Impact of p53 and p21

Yousra M. El-Far ،Khaled H .Abd El Galil ،Mahmoud M. Gabr ، Laila A .Eissa, and Mamdouh M. El-Shishtawy*

Abstract

The main objective of the present work was to study، for the first time, the effect of naturally-derived compounds Chitosan (CS), Silibinin (SB) and their combination in different doses on the expression level of both p21 and p53 genes in Ehrlich ascites carcinoma (EAC) bearing mice considered as a model for the cancer. The aim was to evaluate the antitumor activity, lipid peroxidation, nitrosative stress, antioxidant status of CS, SB and combination treatment of both against EAC in female Swiss albino mice and to provide a first comparative assessment in this regard .

Results:

Treatment either with CS or SB alone has significantly inhibited tumor growth in a dose-dependent manner as compared to the control. Furthermore، the highest antitumor activity was resulted by SB treatment (75 mg/kg body wt) where 87.5% of treated animals showed a complete response meaning complete disappearance of tumors. The second highest antitumor activity was obtained by using combination treatment of both CS 25 mg/kg and SB 50 mg/kg where 66.67% of animals showed complete disappearance of tumors. Significant increase in superoxide dismutase (SOD) activity was observed after treatment using CS, SB and their combination. SB treatment exhibited a significant decrease in malondialdehyde (MDA(level, while no significant decrease was observed sing CS alone or in combination with SB. SB ٥٠)mg/kg) showed a significant decrease in cellulartreatment deserves more investigation in the future.

The Estrogenic Effect of Pomegranate Seed Oil on Acquired Osteoporosis of Postmenopausal Rats.

Nadia Z. Shaban [a] , Ahmed S. Sultan[a], Fatma H. El-Rashidy[a], Iman Mamadouh Talaat [b]. Alshymaa Y. Hegazy [a]*

Abstract

Osteoporosis is a complications of menopause . The study revealed the estrogenic effects of pomegranate seed oil on osteoporosis. After oral administration of SOE bone markers and parameters, routine tests and sections of bone were evaluated.. We concluded that oil could help in treatment of osteoporosis.

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Anti-schistosomiasis triterpene glycoside from the Egyptian medicinal plant Asparagus stipularis

Hesham R. El-Seedi,,1,2,7 Rehan El-Shabasy,2 Hanem Sakr,2 Mervat Zayed,2 Asmaa M. A. El-Said,2 Khalid M. H. Helmy,2 Ahmed H. M. Gaara,3 Zaki Turki,4 Muhammad Azeem,1Ahmed M. Ahmed,5 Loutfy Boulos,6 Anna-Karin Borg-Karlson,1 Ulf Göransson7**

Abstract

Bioassay-guided isolation using an in vitro assay testing for antischistosomiasis yielded a novel triterpene saponin, asparagalin A, from the n-butanol extract of the roots of Asparagus stipularis Forssk., Asparagaceae. The structure was elucidated by spectroscopic analysis and chemical transformations. Administration of asparagalin A resulted in a retardation of worm growth and locomotion at the first day and showed a significant activity of egg-laying suppression at 200 μg/mL concentration.

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Enaminonitriles in Heterocyclic Synthesis: Synthesis and Biological Evaluation of Novel Indeno[2,1-b]thiophene Derivatives

Ahmed A. Fadda[*], Eman H. Tawfik[*] and Nesma M. Bayoumy[**]

Abstract

A series of 1,3-indanedione derivatives were synthesized and evaluated as antimicrobial agents using 2-amino-8-oxo-8H-indeno[2,1-b]thiophene-3-carbonitrile as a starting material. This Compound reacted with various types of reagents under different conditions to yield thienopyrazole 3, thienopyrimidines, thienopyridines and thiazolylidines. These compounds were screened for their antibacterial activity against Gram-positive bacteria (Bacillus subtilis and Bacillus thuringiensis) and Gram-negative bacteria (Escherichia coli and Pseudomonas aeruginosa) and antifungal activity against Fusariumoxysporum and Botrytis fabae strains. 2-((3,4-Diphenyl thiazol-2(3H)-ylidene)amino)-8-oxo-8H-indeno[2,1-b] thiophene-3-carbonitrile and 8-oxo-2-((4- oxo- 3-phenylthiazolidin- 2-ylidene)amino)-8H-indeno[2,1-b]thiophene-3-carbonitrile) were found to exhibit equal activity compared with chloramphenicol against B. subtilis (MIC 3.125 mg/mL), while its activity was 50% lower than of chloramphenicol against B. thuringiensis.

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Separation and Preconcentration of Trace Amounts of Cu(II) and Zn(II) Ions From Environmental Samples by Modified Magnetic Chitosan Chelating Resin and Their Determination Using ICP-OES

Y. G. Abou El-Reash[,**], M. Otto[*], I. M. Kenawey[**]*

Abstract

Separation and preconcentration of trace amounts of Cu^{2+} and Zn^{2+} from environmental samples by magnetic solid-phase extraction (SPE) using modified magnetic chitosan chelating resin nanoparticles and their determination by ICP-OES has been developed. Cross-linked magnetic chitosan- anthranilic acid glutaraldehyde Schiff's base resin (CAGS) was prepared for adsorption of metal ions. Magnetic CAGS obtained was investigated by means of SEM, FTIR, wide angle X-ray diffraction (WAXRD), BET surface area measurements and TGA analysis. The separation of cross-linked magnetic CAGS resin from the aqueous solution containing the studied metal ions and magnetic CAGS resin nanoparticles was simply achieved by applying external magnetic field. The adsorption properties of cross-linked magnetic CAGS resin toward Cu^{2+} and Zn^{2+} were evaluated. Various factors affecting the uptake behavior such as pH, temperature, contact time, initial concentration of the metal ions, effect of other ions and desorption were studied. The kinetic parameters were evaluated utilizing the pseudo-first and pseudo-second order. The equilibrium was achieved after about 80 min and 120 in for Cu^{2+} and Zn^{2+} respectively at pH6. The equilibrium data were analyzed using the Langmuir, Freundlich, and Tempkin isotherm models. The adsorption kinetics followed the mechanism of the pseudo-second order equation for all systems studied, evidencing chemical sorption as the rate-limiting step of adsorption mechanism and not involving a mass transfer in solution. The best interpretation for the equilibrium data was given by Langmuir isotherm, and after studying the effect of initial concentration the adsorption capacities reach 263.6 and 229.28 mg/g magnetic CAGS for Cu^{2+} and Zn^{2+} ions, respectively. Cross-linked magnetic CAGS displayed higher adsorption capacity for Zn^{2+}in all pH ranges studied. The adsorption capacity of the metal ions increased with increasing temperature to reach 43 and 51.3 mg/g magnetic CAGS for Cu^{2+} and Zn^{2+} ions, respectively under optimum conditions.

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FREE RADICALS SCAVENGING ACTIVITY OF SPEARMINT METHANOLIC EXTRACT

***Hassan, R. A.*[*]*; H. B. Hamed*[*]*; M. I. Sanad and K. A. Said Ahmed*[**]

Abstract

Plant kingdom contains about 620 families. One of them is family lamiaceae which has spearmint plant. This plant has a pungent taste with digestive effects. Phytochemical screening, chemical composition and antioxidant activity of spearmint aerial parts methanolic extract were investigated. Phytochemical analysis indicated the presence of terpenes, tanins, flavonoids, saponins, glycosides, alkaloids and phenolic glycosides. Total phenolic and flavonoids contents of the methanolic extract were found to be 35.65mg gallic acid equivalent (GAE)/g and 27.47mg quercetin equivalent (QE)/g respectively. Different antioxidant procedures were used to determine the activity of spearmint as antioxidant such as: DPPH, antioxidant capacity, nitric oxide radical scavenging, superoxide dismutase activity, hydroxyl radical scavenging and reducing power assay.

Keywords: Spearmint, Phytochemical screening, chemical composition, ROS, antioxidant activity.

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PHYTOCHEMICALS AND FREE RADICAL SCAVENGING ACTIVITY OF THE EXTRACTS OF LAWSONIA INERMIS L. LEAVES

***Hassan, R. A*[*]*; H. B. Hamed*[*]*; A. F. Hamail*[**] *and M. A. El-Hendawy*[***]

Abstract

The ability of Lawsonia inermis to prevent the initiation of free radicals that cause cellular damage was investigated in vitro. The plant leaves were extracted exhaustively using methanol (ME) or diethylether (EE) after an aqueous base treatment and the active ingredient, Lawsone (2-hydroxy 1,4-naphthaquinone) was also separated by column chromatography. In the reducing power assay, the more antioxidant compounds convert the oxidation form of iron (Fe+3) in ferric chloride to ferrous (Fe+2). The reducing power capacity of the methanol and etheric extracts were significantly less than that of vitamin C. Total phenolic contents (TPC) and flavonoid contents (TFC) were evaluated according to Folin-Ciocalteu and aluminium chloride colorimetric assays, respectively. In this study, etheric extract has the highest TPC and TFC. Radical scavenging activities of lawsone and the extracts were tested against DPPH, NO•, SOD and HO•. The strongest free radical inhibition was demonstrated by etheric extract against radical scavengers, DPPH and SOD in a dose-dependent on IC50 value of 18.17 and 137 µg/mL, respectively. Also, the activity of lawsone to scavenge nitric oxide radical was higher than that of the standard (quercetin) and the extracts (ME, EE). These results clearly indicate the beneficial effect of lawsone and these extracts as antioxidants and anticancer agents.

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Renewable Energy and the Use of Industrial, Agricultural, and Medical Waste.

Isolation, Screening and Identification of Cellulases Produced By Litter Decaying Fungi

Noura El-Ahmady El-Naggar [*] ***E.A. Owis*** [**]

S.A. Haroun [**] ***A.A. Sherief*** [**]

Abstract

The objectives of the present study were isolation, identification and screening of some cellulases producing fungi. Rice straw was used as substrate for cellulases production. Forty-two fungal species were isolated from different soils, straw and compost samples that were collected from different localities in Egypt. After screening of cellulolytic activities on rice straw using solid state fermentation (SSF), the most active eight isolates were chosen for further studies. These isolates were identified using the morphological characters as observed under light microscope. The identified fungi were belonging to only one class: Ascomycetes and it was shown that Aspergillus was represented by four species; Aspergillus niveus, Aspergillus terreus, Aspergillus alliaceus and Aspergillus niger and Talaromyces was represented by two species; Talaromyces oxalicum and Talaromyces pinophilus. On the other hand, Emmonsia and Paecilomyces were represented by only one species for each genus; Emmonsia crescens and Paecilomyces variotii respectively.

Key words:

Isolation, Fungi, cellulases, SSF, Rice straw

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Optimization of Dextranase enzyme on beet sugar manufacture under Egyptian conditions

Samy I. El-Syiad[*] and El-Sayed Gomaa I. Mohamed[**]

Abstract

This study was carried out at Delta Sugar Factory during (2009) and (2010) working seasons to study the effect of dextranase enzyme on dextran and viscosity levels of beet raw juice under Egyptian conditions. The results indicated that the levels of dextran reduction by extending the incubation time from 5 min to 20 min, ranged from 38.3% to 60.3% (break down by dextranase) respectively, at different levels of dextranase.

Highly significant increases in the percentage of viscosity reduction of raw juice by 22.8%, 27.5%, 34.7% and 40.4% after 5, 10, 15, and 20 min of incubation time at different levels of dextranase.

The percentage of dextran reduction increased significantly by 57.8, 63.1 and 72% after dextranase is added to raw juice by 1ppm, 2ppm and 3ppm respectively, at 20 min of incubation time.

Highly significant increase in the percentage of viscosity reduction by 23.32, 39.9 and 57.5% after adding dextranase enzyme by 1ppm, 2ppm and 3ppm respectively at 20 min of incubation time .

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EFFECT OF CALCIUM HYDROXIDE AND ACETIC ACID ON THE RATE OF DETERIORATION AND DEXTRAN FORMATION DURING SUGAR BEET STORAGE

S.I.EL-Syiad*[*], *A. M. Khalil*[**], *F. Th. Helal*[***] *and E.G. Ibrahim*

Abstract

The objectives of the present investigation was carried out to overcome the chemical deterioration and extend the shelf life of sugar beet roots after harvest and before processing and study the chemical change in sugar beet roots during storage in open air after treating with some chemical treatments as calcium hydroxide,(Ca(OH)2) and acetic acid,(CH3COOH).

Therefore, the following aspects have been covered.

1. Studying the chemical composition of two sugar beet cultivars (Pleno and Farida) collected from the research region of Delta Sugar Company directly after harvest.
2- Determination the dextran content of sugar beet roots during storage periods.

From the results obtained it could be noticed that the roots treated with 10% Ca (OH)2 recorded the least values of dextran content at the end of storage periods while control samples and samples treated by 0.5% CH3COOH was recorded the highest values of dextran content at the end of storage periods

Thus , it is necessary to manufacture sugar beet roots directly after harvest to reduce sugar loss and obtain best chemical and technological characteristics and to also control dextran level and the total viable count and leuconostoc mesenteriodes of suger beet roots but if manufacturing is difficult after harvest because of unsuitable environmental conditions, transportation difficulties or roots are in surplus treatment of beet roots should be done by spraying it by 10% calcium hydroxide solution inside the factory beet yard or after harvesting on the field by spraying on the surface of the beet pile. This is preferred to reduce the loss of sugar and dextran formation during storage and minimize the deterioration rate and fit the required technological properties along the manufacture process.

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[***] *[3]Delta Sugar Company, El-Hamool , Kafr El-Sheikh , Egypt .*

Modified particle swarm optimisation technique for optimal design of small renewable energy system supplying a specific load at Mansoura University

S A. Hassan[*], M. Saadawi, M. Kandil, and M. Saeed

Abstract

Recently, a special attention has been attributed to the renewable energy in Egypt. Optimal sizing of Small Renewable Energy System (SRES) has a very important role in the use of renewable energy effectively and economically. Particle Swarm Optimisation (PSO) is a popular stochastic optimisation method that has found in wide applications. Conventional PSO suffers from high computational complexity and slow convergence speed. This paper presents a modified PSO technique to optimize the capacity sizes of different components of hybrid PV/wind/battery power generation system for supplying Communication and Information Technology (CIT) center in Mansoura University-Egypt. A feasibility study for two options is investigated; stand-alone system composed of PV/wind/battery combination and a grid connected PV/wind system. The proposed MPSO technique proves faster convergence speed and shorter computational time as compared to conventional techniques.

Keywords:

Grid Connected; Modified Particle Swarm Optimisation; Photovoltaic; Small Hybrid Renewable System; Stand-alone; Wind Turbines.

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The effect of Using Sweet Potato and Pumpkin Grits on Producing corn Snacks by Extrusion Cooking

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Abdeen, E. M. [**] *Abo Mandour, Hanan* [*]

Abstract

This work was carried out to study effect substitution of corn grits with 5 % sweet potato or pumpkin grits for processing corn snacks using extrusion cooking techniques . The most favorable conditions for operator device were determined namely: feed moisture content , speed screw and extruder barrel temperature .Sensory evaluation such as color, taste, appearance, crispness and over all acceptability on the final product characteristics were studied. Three factors were identified for the operation as follows :feed moisture contents(16, 18 and 20%), screw speed(120, 140, 160rpm) and barrel temperature(130, 150 and 170 ° C) and the impact on the physicochemical properties such as bulk density (BD), expansion rate(ER) and water solubility index %(WSI %). The results indicated that the suitable expansion ratio were 2.01 and 2.62 gm/ cm3 and the swelling percentage were 3 .5 to3.4 %, respectively checks at 16% and 18% moisture for blend snacks1 (95% corn grits + 5% sweet potato grits)and blend snacks2 (95% corn grits + 5% pumpkin grits),while the proper screw speed (120 and 140 rpm) by high barrel temperature (130 and 150 oc). The results showed significant differences in the color, taste, appearance, crispness and over all acceptability in each of the blend 1 and 2 as compared to the control (100% corn grits snacks) and had a best appearance of the blend 1 and the highest values for color, taste and over all acceptability for the blend 2. So, it can be concluded that the process of extrusion device cooking heat the most suitable for operation is content feed humidity 16% ,temperature130 °c and the speed screw120rpm for a blend1 and 18% moisture ,150° c and 140rpmfor the blend 2to produce a product acceptable corn Snacks, and on the other the use of 5% of the sweet potatoes grits or pumpkin grits for the production of corn snacks contributed positively to show the desired qualities of a product such as increasing the expansion rate , improved crispness, taste and overall acceptability. This study highlights the importance of the selection experimentally the impact of new ingredients on different variables when manufacturing snacks from corn snacks.

Keywords: Extrusion, Snacks, Screw Speed, Sweet Potato, Pumpkin, Corn grits and sensory.

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[**] Food Technology Research Institute, Agriculture Research Central, Dokki, Giza- Egypt.

Title of research Efficacy of some agriculture wastes in controlling root rot of Glycine max L induced by Rhizoctonia solani

Mostafa M EL-Sheekh[*] *Mohamed Y Bedaiwy*[*]
Mohamed E Osman[*] *Mona M Ismail*[**]

Abstract

This study was conducted to examine the antifungal activity of some agriculture wastes (rice straw, maize and cotton wastes) against *Rhizoctonia solani* which is the causal agent of root rot of soybeans. For this target, it is logic start first to test the effects of different agriculture wastes extracts on the growth of *R .solani* under laboratory conditions, while most of the tested agriculture wastes extracts were exhibited antifungal activities against *R .solani* on Potato Dextrose Agar medium, so we applied them under greenhouse conditions .Furthermore, we determined the relation between the phenols, polysaccharides and protein content of the tested agriculture wastes and their antifungal activities. The results showed that maize wastes were the most active wastes of all the tested wastes. It could be concluded from the obtained data the fruitful use of the tested biotic factors for controlling soybean rot root induced by *R .solani*.

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Influence of Molasses on Growth, Biochemical Composition and Ethanol Production of the Green Algae Chlorella Vulgaris and Scenedesmus Obliquus

Mostafa M EL-Sheekh[*] *Mohamed Y Bedaiwy*[*]
Mohamed E Osman[*] *Mona M Ismail*[**]

Abstract

Background:

In this study, wheat bran, an agricultural waste, was utilized as a low-cost carbon source for algal cultivation.

Results:

Treatment of lignocellulosic waste by two fungal species (Pleurotus ostreatus or Trichoderma viride) caused the accumulation of reducing sugar at a relatively high concentration (50.58 and 54.30 mg/g wheat bran) after 7 days of incubation, respectively. The soluble products of treated wheat bran increased the growth, carbohydrate, and protein contents of both Chlorella vulgaris and Scenedesmus obliquus under mixotrophic and heterotrophic conditions.

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Optical and Radiative-Transfer Properties of Mixed Atmospheric Aerosols

A. R .Degheidy ،M .Sallah ،A .Elgarayhi ،S. M .Shaaban*

Abstract

The optical and radiative-transfer properties of mixed atmospheric aerosols have been investigated. The aerosol medium is considered as a plane-parallel anisotropic scattering medium with diffusive reflecting boundaries and containing an internal radiation source. The basic components are defined by their complex refractive index, a lognormal size distribution and humidity dependence in hygroscopic particles. The aerosol particles are assumed to be spherical, so the scattering parameters in the form of single scattering albedo, asymmetry factor, scattering, absorption, extinction efficiencies and linear anisotropic coefficient are calculated using the Mie theory. The calculations have been performed for internal and external mixing media. Radiation transfer problem through the considered aerosol medium has been solved in terms of the solution of the corresponding source-free problem with simple boundary conditions. For the solution of the source-free problem ،the VPE technique has been employed. The variation of the radiative-transfer properties have been calculated and represented graphically for the different aerosols with their different mixing states. A comparison of the obtained results versus available published data has been performed and a very good agreement was observed.

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Air jet spinning of hydroxyapatite/poly(lactic acid) hybrid nanocomposite membrane mats for bone tissue engineering

Abdalla Abdal-haya [*], [**]*Faheem A. Sheikh* [***]*Jae Kyoo Lim*[**]

Abstract

The technique for the production of multifunctional scaffolds from bioactive ceramics and biodegradable polymers for use in tissue scaffolds remains challenging. Here, the goal was to fabricate 3D nanocomposite nanofiber scaffolds of nanohydroxyapatite/poly(lactic acid) (nHA/PLA) prepared by air jet spinning (AJS) as a novel and facile composite fabrication process .The characteristics of the fabricated 3D scaffolds were investigated using SEM, water contact angle, DSC, FTIR, XRD analyses and tensile tests. The surface morphology exhibited highly interconnected bonded fibers due to the high fabrication rates .It was also found that the nHA particles were effectively embedded in the fibers 'surface due to the difference in the kinetic energies between the nHA particles and polymer molecules. The as-received PLA film showed a low crystallinity value of about 19%, which was expected with the casting process. The crystallinities of the plain PLA and nHA/PLA membrane scaffolds were about 31.78% and 32.21%, respectively. This reveals that HA nanoparticles could engage in a beneficial interaction with the PLA chain molecules during the AJS process. The tensile strength of the membrane PLA mats, particularly the hybrid nanocomposite samples with low nHA contents, was considerably improved compared to that of the PLA casted film. Biological in vitro cell cultures of MC3T3-E1 osteoblast-like cells on the fabricated scaffolds were studied for up to seven days. The nanocomposite membrane mats of nHA/PLA, fabricated by AJS, had highly interconnected fibers .This facile technique has a high production rate and is a new concept of potential interest for bone tissue engineering applications.

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APPROACH FOR REUSING THE FLOW OF EL RAHAWY DRAIN AT THE QATTARA DEPRESSION

Ahmed M. Nada [*]

Abstract

Egypt is facing a water scarcity problem; it is a must to reuse drainage water to substitute this deficit between supply and demand. Also the drainage water is polluted and needs to be purified before reusing it. Therefore an approach is proposed herein to reuse the flow discharge of El Rahawy Drain that drains its water to Rosetta Branch (the second most polluted drain in Egypt) and convey its water to the Qattara Depression in the North West of Egypt. This proposed approach and its assessment presents basic background data about the Qattara Depression characteristics, El Rahawy Drain water quality, self purification mechanism of pollutants, digital elevation model (DEM) for the studied area and preliminary economic evaluation of the approach. Two alignment paths were selected and the existing levels were computed employing a digital elevation model (DEM). Proposed design of the canal bed levels, pump and turbine stations locations were determined for the two paths. The proposed path length that exceeds 250 km between El Rahawy Drain and the Qattara Depression will improve its water quality by self purification. This approach will add a new source to the Qattara Depression water resources which will accordingly develop various activities in the area, with the additional benefits of reducing the pollution at the Rosetta Branch that consequently improving the public health .

Keywords :Qattara; Rahawy; Self Purification; DEM; Reuse

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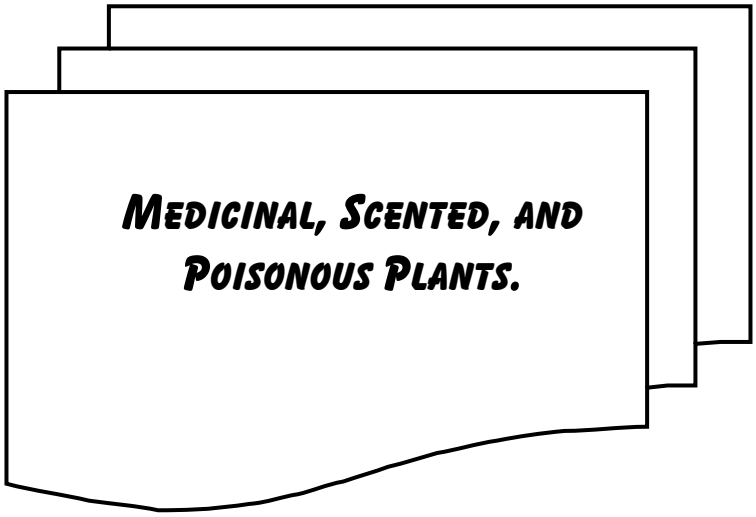
Medicinal, Scented, and
Poisonous Plants.

Protective Effect of Curcumin on Monosodium Glutamate-Induced Reproductive Toxicity in Male Albino Rats

Saber A. Sakr and Gamal M. Badawy[*]

Abstract

The present study was carried out to investigate the possible protective effect of curcumin on reproductive toxicity induced by the flavor enhancers, monosodium glutamate (MSG) in male albino rats. Treating animals with MSG caused decrease in testes weights and sperm counts. Several histological alterations were observed in the testis and epididymis. The testes showed deformed Sertoli cells and loss of the spermatogenic cells. The interstitial tissue appeared with different vacuoles, blood hemorrhage and Leydig cells have pyknotic nuclei. The diameter of seminiferous tubules and their epithelial height were significantly decreased in MSG treated animals in compared with controls. Moreover, testosterone and LH levels decreased significantly in rats treated with MSG. Histological examination of the epididymis revealed deformed ductus epididymis and their epithelial cells appeared with marked vacuolization and decrease of characteristic stereocilia in addition to hyperplasia. Co-administration of curcumin to MSG-treated rats improved the histopathological alterations induced by MSG in testis and epididymis and increased the sperm count. It also significantly increased the serum testosterone and LH.

Key words:

Monosodium Glutamate - Curcumin - Testis - Epididymis- Histology

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Effect of different host plants on the attractiveness the mealybug species and their associated predators at Mansoura district

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El-Nagar M. E.[***] *and Awadalla Hagar S. S.*[**]

Abstract

The present study was carried out in the experimental farm belonging to the Faculty of Agriculture, Mansoura University to evaluate the attractiveness the mealybug species and their predators on the different host plants.

The obtained results revealed that Icerya purchasi Mask. attractive to mandarin trees as a host plant during the two years of study. Also, Maconellicoccus hirsutus (Green) attractive to hibiscus plants as a host plant during the two years. On the other hand, Planococcus citri (Risso) attractive to two host plants and guava trees was more favorable host plants followed by mandarin trees during the two successive years with significantly differences. Meanwhile, Icerya aegyptiaca Douglas attractive to three host plants and more favorable was the ficus trees. Icerya seychellarum Westwood recorded the highest attractiveness on guava trees followed by persimmon, ficus and mandarin during the first year and on persimmon trees followed by guava, ficus and in the last category mandarin trees during the second year of the study.

Regarding to the predatory insects, resultrs revealed that Rodolia cardinalis Mulsant recorded the highest attractiveness to ficus and guava trees, Nephus includens Kirsch found the highest attractive to guava and hibiscus plants and the lowest attractive to mandarin trees and Chrysoperla carnea (Steph). showed the highest attractive to guava trees. While Scymnus coccivora (Aiyar) recorded only on hibiscus plants associated with the pink hibiscus mealybug M. hirsutus during the two successive years of study.

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Effect of different mealybug species as preys on some biological characters and predaceous efficiency of the coccinellid predator Rodolia cardinalis (Mulsant) (Coleoptera: Coccinellidae) under laboratory conditions

Abdel-Salam A. H.[*]; Ghanim, A. A.[*]; Elkady H. A.[**]; El-Nagar M. E.[***] and Awadalla Hagar S. S.[**]

Abstract

Laboratory experiments were carried out to study the influence of different mealybug species as preys on the biological aspects of Rodolia cardinalis (Mulsant) in the insectary of the Economic Entomology, Faculty of agriculture, Mansoura University.

The larval stage of the predator R. cardinalis when reared at 24±1˚c and fed on the third nymphal instars of Icerya purchase Mask., Icerya aegyptiaca Douglas and Icerya seychellarum (Westwood) lasted an average of 14.5±0.60, 11.8±0.34 and 16.6±0.55 days, respectively.

The average of the total consumption for larval instars at 24±1˚c and fed on I. purchasi, I. aegyptiaca and I. seychellarum as preys reached 68.90±4.01, 60.50±2.18 and 42.65±1.77 individuals. Meanwhile, results indicated that, the highest total consumption for the predator larvae during its larval stages when fed on I. purchasi followed by I. aegyptiaca and I. seychellarum with significant differences.

The calculated biomass from (carbohydrates, lipids and protein) consumed by a larva when fed on I. purchasi, I. aegyptiaca and I.

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seychellarum reached an average of (88.88, 85.44 and 49.61 mg), (80.47, 77.44 and 45.98 mg) and (49.90, 49.05 and 28.15 mg), respectively.

The adult longevity for female and male when reared at 24±1˚c and reared on the third nymphal instar of I. purchasi, I. aegyptiaca and I. seychellarum lasted an average of (40.5±2.25 and 26.8±1.72 days), (46.4±2.12 and 29.0±2.09 days) and (32.5±2.60 and 20.8±1.8 days), respectively.

The average of the total consumption for adult female reached 263.2±11.25, 328.2±10.90 and 208.7±6.88 individuals/ female when fed on I. purchasi, I. aegyptiaca and I. seychellarum, respectively, with highly significant differences.

The calculated biomass from (carbohydrates, lipids and protein) consumed by one predator female during its longevity reached (339.53, 326.37 and 189.5 mg), (436.51, 420.10 and 249.43 mg) and (244.18, 240.01 and 137.74 mg) when fed on I. purchasi, I. aegyptiaca and I. seychellarum, respectively, where for the adult male reached (167.57, 161.08 and 93.53 mg), (193.91, 186.62 and 110.81 mg) and (116.65, 114.66 and 65.80 mg), respectively.

The highest total consumption for adult female recorded during the ovipostion period especially, when reared on I. aegyptiaca (289.0±10.53 individuals/ female) and resulting, the number of deposited eggs/ female was the highest (354.30±19.90 eggs/ female), it could be concluded that the best mealybug species for rearing R. cardinalis was I. aegyptiaca because the female layed 354.30 eggs/female.

EFFECT OF DIFFERENT MEALYBUG SPECIES AS PREYS ON SOME BIOLOGICAL CHARACTERS AND PREDACEOUS EFFICIENCY OF THE COCCINELLID PREDATOR RODOLIA CARDINALIS (MULSANT) (COLEOPTERA: COCCINELLIDAE) UNDER LABORATORY CONDITIONS

Ghanim, A. A.*[*]*; Abdel-Salam A. H.*[*]*; Elkady H. A.*[**]*;

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Effect of different host plants on the attractiveness the mealybug species and their associated predators at Mansoura district

Ghanim, A. A.*[*]*; Abdel-Salam A. H.*[*]*; Elkady H. A.*[**]*;

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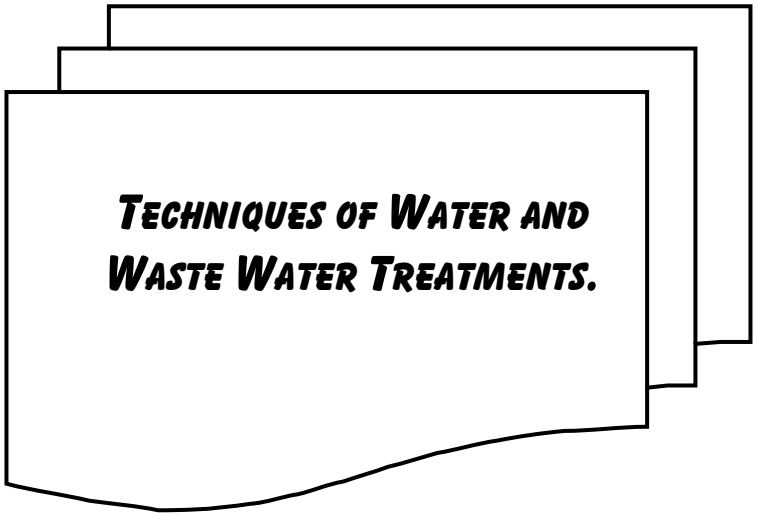
Techniques of Water and
Waste Water Treatments.

Biological tannery wastewater treatment using two stage UASB reactors

Mahmoud A .El-Sheikh [*] *Hazem I .Saleh**

Joeseph R .Flora [**] *Mahmoud R .AbdEl-Ghany* [***]

Abstract

Wastewater discharged from tannery industries is highly complex, concentrated, and toxic .In view of the varying nature of discharged wastewater and the numerous small industries in Egypt ،there is a need for highly efficient treatment processes that are simple to operate and have low/reasonable construction and operation costs .This study investigated the possibility of applying innovative low cost biological treatment using upflow anaerobic sludge blanket (UASB) in providing adequate treatment for tannery wastewater. The anaerobic treatment application was thus evaluated through using two stage UASB reactors connecting in series, each with volume of 94 l. Five hydraulic retention times (HRT (were used along the experimental works, which lasted for a year ،starting by HRT of 24 h then 18, 12, 8 and finally 5 h for each UASB reactor. The proposed process at ١٢ h HRTs could pre-treat the tannery wastewater to be disposed to the municipality sewers. The study created best fit equations to predict the efficiency of the system.

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Impact of traffic exhaust on soil and plant lead (Pb) content.

Ghazi,D. A. M.[*]; M. M. Ragab[**]; A. M. El-Ghamry[*] and I. M. EL-Tantawy[*]

Abstract

The present research was aimed to study effect of traffic exhaust on lead (Pb) content in plant and soil with depth from the roadside. Soil and plant samples were collected from two roadsides sites of El-Mansoura-Meet Ghamr main road at El-Dakahlia Governorate at Nequieta and Selka locatons. The soil samples were collected at distance of 10, 200, 400 and 600 m from the roadside and plant samples (wheat in winter and rice in summer seasons) from theses locations. Soil and plant samples were analyzed for lead (Pb). Results showed that total Pb content in soil (0-20 cm) decreased with increasing the distance far away from the roadside. Also, DTPA-extractable pb took the same trend of total lead for the two studied locations.

Also, the highest concentration levels of Pb were found in plant grown at 10m from roadside followed by 200 m > 400 m > 600 m, respectively. So, these values of Pb in plants were gradually decreased as the distance increase far from the roadside. The extractable DTPA lead take the same trend of values of Pb content in soil. The concentration of Pb in the straw of wheat and rice plants almost were higher than in their grains.

Keywords: Roadside soils, traffic density, Plants, soil pollution.

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Mesoporous simonkolleiteTiO_2 nanostructured composite for simultaneous photocatalytic hydrogen production and dye decontamination

Mohamed I. Badawy[*], *Mohamed E.M. Ali*[*],
Montaser Y. Ghaly[**], *Mohamed A. El-Missiry*[***]

Abstract

tIn the present work, mesoporous simonkolleite–TiO٢composite was prepared with sol–gelmethod. The composite photocatalysts were characterized by X-ray diffraction (XRD), diffusereflectance spectroscopy (DRS), and Raman spectroscopy. Also, surface area and parti-cle size were analyzed using BET equation. The photocatalytic hydrogen production withsimultaneous decolorization of Remazole Red (F3B) dye was investigated over TiO2andsimonkolleite–TiO2composite under UV–vis light irradiation. It was worthy to be notedthat the rate of hydrogen production over simonkolleite–TiO٢is higher that producedover TiO .٢The maximum amount of photocatalytic-produced hydrogen was 2.1 mmol and3.3 mmol within 240 min using TiO2and simonkolleite–TiO2composite, respectively. Thespecific production rate of hydrogen from photocatalytic conversion of dye was calculated.Improvement of apparent quantum yield (22.07%) after 5 h was achieved upon additionof simonkolleite to TiO2 . This high apparent quantum yield proves that the system pro-posed in this study could be a hopeful approach toward using sunlight energy as outlookenergy source. The obtained results suggested that a new process for H2production fromwastewater could be achieved. The process also provides a method for degradation of organicpollutants with simultaneous H٢production.

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Biosorption of aluminum, cobalt, and copper ions by Providencia rettgeri isolated from wastewater

Aly E. Abo-Amer[*]*, Abou Bakr Ramadan*[**]*, Mervat Abo-State*[***]

Magdy A. Abu-Gharbia and Hamdy E. Ahmed**

Abstract

Twenty-three bacterial isolates from polluted water and soil were screened for heavy metals resistance) i.e ،.Al3 ،Co2 ،and Cu2 .(The most potent isolate was identified by morphological characteristics ،biochemical tests and confirmed by API20E kits as Providencia rettgeri MAM-4.

Removal of Al3 from aqueous solution by P .rettgeri is more efficient (fourfold) than that by B .cereus ATCC) ١١٧٧٨ a comparison strain) at concentration of 200 mg L1 Al3 .P .rettgeri was able to remove Co2 more than B. cereus ATCC 11778 at concentration of 50 mg L1 Co2 .Inoculation of P .rettgeri into clay enhanced significantly the removal of Al3 ،Co2 ،and Cu2 .P .rettegri MI) mutant

strain (was able to tolerate more Al3 than that of the parent strain. P . rettgeri was resistant to 7 out of ١٥ antibiotics tested. P .rettgeri MAM-4 isolated from wastewater had ability to remove Al3 ،Co2 ،and Cu2 efficiently from aqueous media; and enhanced significantly metal biosporption by clay .This study has revealed that P .rettgeri could be employed as an effective and economic technology for the removal such metal elements from polluted environment.

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Biosorption of cadmium by living and lyophilized biomass of Bacillus cereus DAA54 and Pseudomonas aeruginosa DAA86

Rehab M. Mohamed، Magdy A. Abu-Gharbia،

Dalia A ،.Abdelrehim

Abstract

A total of 102 isolates were isolated from nine waste water samples were collected from different contaminated sites at Sohag governorate–. Egypt .Isolates were screened for cadmium tolerance and the most tolerant two isolates were identified as Bacillus cereus DAA54 and Pseudomonas aeruginosa DAA86.MICs were ٢٠٠ and 250 for B .cereus DAA54 and P . aeruginosa DAA86 ،respectively .Decrease in growth of both isolates (measured in terms of optical density (was observed upon increasing Cd2+ concentration at any given time interval compared controls .protein profiles detected loss in addition to induction of low molecular weight proteins ،٩٦) ٤٤ ،٦٣ ،٨٩ and 11 (KDa as responding to cadmium shock .The optimum conditions for biosorption of cadmium were investigated byusing living and lyophilized biomass of both isolates .The optimum pH values for biosorption rate of cadmium were 7.0 and 6.0 for B .cereus DAA54 and P . aeruginosa DAA86.


Technologies of Food
industry and livestock
development.

Antioxidant Activities of Marjoram (Origanum majoranum L.) Added to Frozen Beef Kofta and Its Therapeutic Effect Against kidney Damage in Rats

Lobna A. Shelbaya[*]*, H. F. El Mehairy* and A.R.M. El-Zainy**

Abstract

Besides certain medicinal effects aromatic plants prolonged the storage life of food by their antioxidant properties. Marjoram powder 5% and 0.5% oil were used during preparation of beef kofta. Beef kofta meat stored at (-18ºC) for 6 months was analyzed for peroxide value (PV), P-anisidine value (AV), antioxidant effectiveness (AE), oxidation rate ratio (ORR), thiobarbituric acid (TBA) and 1,1 diphenyl-2-picrylhydrazyl (DPPH) radical. The results showed a significant decrease in (PV), P-anisidine value and (TBA) in beef kofta meat treated with different marjoram concentration of during storage at (-18ºC) for 6 months compared with control. Therefore, the results of this study showed that marjoram to maintain quality the of frozen beef kofta during storage and can be marjoram proposed to therapeutic the kidney against (KBrO3)-induced kidney damage in rats. The therapeutic effect of Marjoram powder and its oil were investigated to therapeutic against (KBrO3) induced kidney damage in rats. This study was conducted on twenty five albino male rats and classified into five groups (n=5). The first group kept as normal group (control -ve), the second group (n=20) received (KBrO3) through intragastric (20mg/kg B.W.) twice/week until the end experiment period. Then it classified into four groups as: untreated group (control positive) and three treated groups (ALA group, 5% powder of marjoram group and 0.5ml oil marjoram group). The results revealed that the rats treated with marjoram powder and oil showed significant decreases in serum ALT, AST, urea, creatinine, uric acid and bilirubin levels, cholesterol, triglycerides (TG), (LDL-C) and (VLDL-C). While, there was an increase in (HDL-C) compared to untreated group (+ve).

Key words: Antioxidant * ALA * DPPH * KBrO3 * Marjoram * Meat products.

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Beneficial Effects of Different Low-Glycemic-Index Jam Types in Non-Insulin-Dependent Diabetes Women Patients

Hanaa F. El Mehiry[*], Hala E. El-Kewawy and Shelbaya Lobna A.**

Abstract

The aims of the study were to ascertain the potential role of a low-glycemic-index (GI) presented by different types of jam in the onset of disease-related anthropometric measurements complications in diabetes women patients. Indicative parameters of blood, liver and kidney functions, and lipid profile and glycemic index status of prepared jams were measured in blood samples from recently diagnosed (< 6 weeks) 36 diabetic women patients. The results revealed that chemical composition of tomato jam with sucrose (1:1) had the highest content of fiber and ash 1.29 and 0.430% respectively, followed by tomato jam with fructose and sorbitol. Blood parameters of diabetic patient showed non-significant differences in hemoglobin (Hb) and red blood cells (RBCs) while diabetic women patients which treated with carrot jam with sucrose (1:1) showed significant decrease in values of hematocrit compared with other types. Results showed significant decrease in serum ALT for diabetic women patients treated with the strawberry, tomato and carrot jam with sucrose at 4.0, 4.1 and 4.0 (U/L), respectively compared with all other diabetic women patients groups. Processed jam with fructose or sorbitol had mostly significant decrease in glycemic index compared with diabetic women patients treated with different types of jam with sucrose. Lowest values of glycemic index showed for diabetic women patients treated with tomato, strawberry and carrot jam with sorbitol respectively.

These results indicated that types of jam which used in this study improved lipid profile, kidney, and liver function especially the types prepared with sorbitol.

KEY WORDS:

Diabetes- Glycemic Index- Metabolism Fragaria xananassa -Solanum lycopersicum - Daucus

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ENHANCING ANTIOXIDANT ACTIVITIES BY USING DRIED CARROT POWDER ADDED TO BISCUITS DURING STORAGE.

Lobna A. Shelbaya [*]

Abstract

The main objective of the present study was carried to evaluate the possibility of enhancing antioxidant activities by using carrot powder added to biscuits as natural antioxidants to help biscuits industry to minimize lipid oxidation and extend the shelf-life. Two concentrations of carrot powder (5 and 10%) were added to biscuits and stored at room temperature 25ºC for 6 months. Preliminary carotenoids, total phenols and antioxidant activity% of carrot powder were determined. Also chemical composition and organoleptic properties, carotenoids, total phenols and antioxidant activity% for fortified biscuits were determined. Lipids extracted from fortified biscuits with carrot powder during storage were assayed for antioxidant activity of carotenoids. Antioxidant activities of fortified biscuits were evaluated by the determination of moisture, acid, peroxide values and thiobarbituric acid (T.B.A) during 6 months of storage. The present study showed that carrot powder increased the amount of carotenoids, total phenols and antioxidant activity% for all biscuits formula Data indicated that the high amount of carotenoids, total phenols as gallic acid and antioxidant activity% was highest in the formula containing 10% carrot powder. Lipids extracted from biscuits samples without carotenoids (control) reached a maximum Peroxide value of 10.3meq/kg after 6 month of storage. From the same results, Their corresponding inhibition rates were 43.7% and 50.5% from fortified biscuits 5% carrot powder and fortified biscuits 10% carrot powder, respectively, after 6 month under storage conditions compared to biscuits (control). Fortified biscuits samples showed decreases in TBA values as compared to control.

Keywords:

Antioxidant activities, carotenoids, total phenols, carrot powder, biscuits

[*] Home Economics Dept., Faculty of Specific Education, Mansoura University, Egypt

ANTIDIABETIC EFFECTS OF DIETARY FORMULAS PREPARED FROM SOME GRAINS AND VEGETABLES ON TYPE 2 DIABETIC RATS

Tawfeuk , H. Z

Abstract

This study was carried out to prepared dietary formulas prepared from grains and vegetables for type 2 diabetic patients to optimize health and to prevent and treat the chronic complications of diabetes by attaining and maintaining optimal metabolic outcomes. For this purpose three formulas were prepared as a part of diet for diabetes mellitus by mixing equal weight of different ground dried raw materials as follows: (F1: rice, corn and barley), (F2: potato, carrot and green bean) and (F3: barely, corn, rice, potato, lentil, carrot and green bean). The influence of these formulas on the levels of serum glucose, triglycerides and cholesterol was investigated using alloxan-induced diabetic rats. Forty eight male albino rats were divided into six groups and were fed on experimental diets for 4 weeks, G1 (control -) normal rats fed on standard diet (SD), G2 (control +) diabetic rats fed on SD and G3 diabetic rats fed on diabetic specific diet (DSD), G4 (DDF1), G5 (DDF2) and G6 (DDF3) groups are diabetic rats fed on diabetic dietary formulas 1, 2 and 3 respectively.

Feeding the diabetic rats on diabetic specific diet (G3) and diabetic dietary formula3 (G6) significantly reduced serum glucose level (122.37 and 131.25 mg/dl) than those of the G2, G4 and G5 groups (301.88, 200.25 and 188.13 mg/dl) respectively.

In addition, diabetic dietary formulas significantly lowered serum total cholesterol and triglycerides levels when compared with control (+) group. Thus, it can be concluded that formula 3 was more effective for lowering blood glucose in diabetic rats than other tested formulas and can be used to improve glycaemic control in type 2 diabetic patients.

Key words:

Diabetes mellitus; Diabetic specific diet; Diabetic formula; alloxan; Glycaemic control.

CHEMICAL, SENSORY, PHYSICAL AND MICROBIOLOGICAL EVALUATION OF THREE NOVEL MILK BEVERAGES FOR CHILDREN

El-Zainy, A.R.M [*] ***.El-Zamzamy, F.M *.Mostafa, M.Y.A*.***

Abstract

This work was carried out to study effect substitution of corn grits with 5 % sweet potato or pumpkin grits for processing corn snacks using extrusion cooking techniques . The most favorable conditions for operator device were determined namely: feed moisture content , speed screw and extruder barrel temperature .Sensory evaluation such as color, taste، appearance, crispness and over all acceptability on the final product characteristics were studied. Three factors were identified for the operation as follows :feed moisture contents(16, 18 and 20%), screw speed(120, 140، ١٦٠rpm) and barrel temperature(130, 150 and 170 ° C) and the impact on the physicochemical properties such as bulk density (BD), expansion rate(ER) and water solubility index %(WSI %). The results indicated that the suitable expansion ratio were 2.01 and ٢.٦٢ gm /cm3 and the swelling percentage were 3 .5 to3.4 %, respectively checks at 16% and 18% moisture for blend snacks1 (95% corn grits + 5% sweet potato grits)and blend snacks2 (95% corn grits + 5% pumpkin grits),while the proper screw speed ١٢٠)and 140 rpm) by high barrel temperature (130 and 150 oc). The results showed significant differences in the color, taste, appearance، crispness and over all acceptability in each of the blend 1 and 2 as compared to the control (100% corn grits snacks) and had a best appearance of the blend 1 and the highest values for color, taste and over all acceptability for the blend 2. So, it can be concluded that the process of extrusion device cooking heat the most suitable for operation is content feed humidity 16% ،temperature130° c and the speed screw120rpm for a blend1 and 18% moisture ,150 °c and 140rpmfor the blend 2to produce a product acceptable corn Snacks, and on the other the use of 5% of the sweet potatoes grits or pumpkin grits for the production of corn snacks contributed positively to show the desired qualities of a product such as increasing the expansion rate ،improved crispness, taste and overall acceptability. This study highlights the importance of the selection experimentally the impact of new ingredients on different variables when manufacturing snacks from corn snacks.

Keywords :

Extrusion, Snacks, Screw Speed, Sweet Potato, Pumpkin، Corn grits and sensory.

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Genetic and Economic Analysis for the Relationship between Udder Health and Milk Production Traits in Friesian Cows

H. G. El-Awady[*] and E. Z. M. Oudah[**]

Abstract

A total of 4,752 monthly lactation records of Friesian cows during the period from 2000 to 2005 were used to estimate genetic parameters and to determine the effect of udder health on milk production traits. Three milk production traits were studied: 305− day milk yield (305-dMY), 305-day fat yield (305-dFY) and 305-day protein yield (305-dPY). Four udder health traits were studied: somatic cell count (SCC), mastitis (MAST), udder health status (UDHS) with 10 categories and udder quarter infection (UDQI) with 7 categories. Mixed model least square analysis was used to estimate the fixed effects of month and year of calving and parity (P) on different studied traits. Sire and dam within sire were included in the model as random effects. Data were analyzed using Multi-trait Derivative Free Restricted Maximum Likelihood methodology (MTDFREML) to estimate genetic parameters. Unadjusted means of −٣٠٥dMY, 305-dFY, 305-dPY and SCC were 3,936, 121, 90 kg and 453,000 cells/ml, respectively. Increasing SCC from 300,000 to ٢,٠٠٠,٠٠٠cells/ml increased UDQI from 5.51 to 23.2%. Losses in monthly and lactationally milk yields per cow ranged from 17 to 93 and from 135 to 991 kg, respectively. The corresponding losses in monthly and lactationally milk yields return per cow at the same level of SCC ranged from 29.8 to 163 and from 236 to 1,734 Egyptian pounds, respectively. Heritability estimates of 305-dMY, 305-

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dFY، −٣٠٥dPY, SCC, MAST, UDHS, UDQI were 0.31 ،٠.٠٣±٠.٣٣ ،٠.٤± ،٠.٠٣±٠.١٣ ،٠.٠٢±٠.١٤ ،٠.٠٢±٠.٢٣ ،٠.٠٥±٠.٣٥ and 0.09،٠.٠١± respectively. All milk production traits showed slightly unfavorable negative phenotypic and genetic correlations with SCC, MAST، UDHS and UDQI. There were positive and high genetic correlations between SCC and each of MAST (0.85 ،(٠.٧±UDHS (0.87(٠.١٠± and UDQI (0.77 (٠.٠٦±and between MAST and each of UDHS (0.91 (٠.١١±and UDQI (0.83 .(٠.٠٧±It could be concluded that the economic losses from mastitis and high SCC are considerable. The high genetic correlation between SCC and clinical mastitis (CM(suggest that the selection for lower SCC would help to reduce or eliminate the undesirable correlated responses of clinical mastitis associated with selection for increasing milk yield. Additionally, it is recommended also that if direct information on under health traits is not available, measures of SCC can be inclusion in a selection criteria to improve the income from dairy cows) .

Key Words:

Somatic Cell Count, Udder Traits, Mastitis, Genetic Parameters, Economic Milk Losses

EFFECT OF DIETARY SUPPLEMENTATION WITH TIGERNUT (CYPERUS ESCULENTUS) TUBERS ON STREPTOZOTOCIN-INDUCED DIABETIC RATS

HANAA A. HASSAN[*]

Abstract

This work has been carried out to detect the effect of tigernut tubers powder as an antidiabetic plant on some biochemical parameters in streptozotocin (STZ) induced diabetic rats. Diabetes mellitus was induced by a single intraperitoneal injection of 45 mg STZ /kg body weight. The present results indicated an increase in both serum glucose level and liver glucose-6-phosphatase (G6Pase) activity in STZ-diabetic rats. In addition, a significant decrease in serum insulin level and liver glycogen content was recorded in the same rats. Moreover, serum total lipids, total cholesterol, triglycerides and LDL-cholesterol levels revealed a significant increase, while a decrease in HDL-cholesterol was observed in the diabetic rats. The activities of serum aspartate aminotransferase (AST), alanine aminotransferase (ALT) and alkaline phosphatase (ALP) showed marked increase. On the other hand, tigernut tubers supplemented diet (25% w/w) for two or four weeks recorded an improvement in the above all the biochemical parameters affected by streptozotocin injection especially after four weeks of treatment. Therefore, it was concluded that tigernut tubers had appreciable hypoglycemic and hypolipidemic effects on STZ-diabetic rats.

Key Words:

Tigernut (Cyperus esculentus) – STZ-diabetic rats – lipid profiles

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Protective effect of oat biscuits containing herbal oils on potassium bromate induced high oxidative stress rats.

El-Zainy, A.R.M.[*], *El-Zamzamy, F.M.*[*], *Shalaby, A.O.A.*[*] and *Mostafa, M.Y.A.*[*]

Abstract

Natural antioxidants have gained great interest recently for their role in preventing the auto oxidation of fat containing food products. Biscuits are from the most common bakery products preferred nearly by all levels of consumers. In order to improve their nutritive profile and functionality, standard formulation based on wheat flour was substituted with oat) Avena sativa L (.flour at three levels (10%, 20% and 30%). According to sensory evaluation 20% was the ideal addition percentage of oat flour to the biscuits. Hence, 20% oat biscuit was flavored by 0.75% cinnamon) cinnamomum zeylanicum ٠.٢٥٪ ،(ginger) Zingiber officinalis ٠.٢٥٪ ،(chamomile)Matricaria chamomilla L.) and 0.1% marjoram) Origanum majorana L (. essential oils (EOs). Biscuits supplemented with essential oils were subjected to sensory studies, chemical analysis and biological evaluation in comparison with oat biscuit (based on wheat flour and 20 % oat). Addition of herbs (EO) gave an excellent antioxidant effect on kidney, liver and lipid profile of rats under oxidative stress which occurred by potassium bromate. Results revealed that the addition of herbs essential oils increased the total content of protein and fat. The treated rats groups fed on biscuit containing oat and herbs EOs recorded a significant decrease in aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP ،(malondialdehyde) MDA), total bilirubin (TBil), very low density lipoprotein (VLDLc), cholesterol (TC) and triglycride (TG (values .The prepared herbal oat biscuits caused a significant increase in glutathione) GSH ،(superoxide dismutase) SOD ،(glutathione peroxidase) GSH−px ،(catalase) CAT), total protein (TP) and albumin (Alb (values in all rat groups as compared to the positive control group fed on the basal diet with potassium bromate .It can be concluded that incorporation of oat and herbal oils in bakery products increases their protective capacity against deleterious effects of oxidative stress .

Key words :

Biscuit, Oat ،Cinnamon ،Ginger ،Chamomile ،Marjoram ،Potassium bromate ،Rats.

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CHEMICAL, SENSORY, PHYSICAL AND MICROBIOLOGICAL EVALUATION OF THREE NOVEL MILK BEVERAGES FOR CHILDREN

El-Zainy, A.R.M [*] ***.El-Zamzamy, F.M *.Mostafa, M.Y.A*.***

Abstract

This work was carried out to study effect substitution of corn grits with 5 % sweet potato or pumpkin grits for processing corn snacks using extrusion cooking techniques . The most favorable conditions for operator device were determined namely: feed moisture content , speed screw and extruder barrel temperature .Sensory evaluation such as color, taste، appearance, crispness and over all acceptability on the final product characteristics were studied. Three factors were identified for the operation as follows :feed moisture contents(16, 18 and 20%), screw speed(120, 140، ١٦٠rpm) and barrel temperature(130, 150 and 170 ° C) and the impact on the physicochemical properties such as bulk density (BD), expansion rate(ER) and water solubility index %(WSI %). The results indicated that the suitable expansion ratio were 2.01 and ٢.٦٢ gm /cm3 and the swelling percentage were 3 .5 to3.4 %, respectively checks at 16% and 18% moisture for blend snacks1 (95% corn grits + 5% sweet potato grits) and blend snacks2 (95% corn grits + 5% pumpkin grits),while the proper screw speed ١٢٠)and 140 rpm) by high barrel temperature (130 and 150 oc). The results showed significant differences in the color, taste, appearance، crispness and over all acceptability in each of the blend 1 and 2 as compared to the control (100% corn grits snacks) and had a best appearance of the blend 1 and the highest values for color, taste and over all acceptability for the blend 2. So, it can be concluded that the process of extrusion device cooking heat the most suitable for operation is content feed humidity 16% ،temperature130° c and the speed screw120rpm for a blend1 and 8%moisture ,150 °c and 140rpmfor the blend 2to produce a product acceptable corn Snacks, and on the other the use of 5% of the sweet potatoes grits or pumpkin grits for the production of corn snacks contributed positively to show the desired qualities of a product such as increasing the expansion rate ،improved crispness, taste and overall acceptability. This study highlights the importance of the selection experimentally the impact of new ingredients on different variables when manufacturing snacks from corn snacks.

Keywords :

Extrusion, Snacks, Screw Speed, Sweet Potato, Pumpkin، Corn grits and sensory.

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Effect Of Feed Withdrawal Preslaughter On Some Chemical, Physical and Microbiological Carcass Traits Of Meat Broiler

T. H. Tag- EL-Din*.; Tork, I. Dorra**.; El-Samra, H. Abo Egla* ***and Eman, A. Elsaid** **

Abstract

The present study was performed in order to investigate the effect of different pre-slaughter feed withdrawal (FW) periods (0.0, 4.0, 8.0 and 12.0 h) on weight loss, carcass parts and traits, water holding capacity and pH values of meat. Some blood plasma constituents and chemical composition of meat. In addition the effect of different pre-slaughter FW periods on microbiological structure of gut content total microbial counting of some broiler parts .

The obtained results showed that weight loss, carcass parts, protein and ash content of thigh and breast meat, WHC values were significantly (p (٠.٠١≥increased gradually with the increasing of FW period from 0.0 up to 12.0 h before slaughtering. On the other hand, weight of abdominal fat, concentration of glucose, pH value and moisture and fat content of meat decreased as the FW period increased. For meat samples, results showed that the total bacterial count gradually decreased with FW time .

This study revealed that the optimum FW times pre-slaughter for broiler chickens ranging from 8.0 to 12.0 h which showed the best results for less carcass contamination, carcass traits and quality.

Key Words:

broiler, feed withdrawal, meat yield ،weight loss, pH value, blood constituents.

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Protective effect of oat biscuits containing herbal oils on potassium bromate induced high oxidative stress rats.

El-Zainy, A.R.M.[*]*,El-Zamzamy, F.M., Shalaby,*

A.O.A. and Mostafa, M.Y.A.

Abstract

Natural antioxidants have gained great interest recently for their role in preventing the auto oxidation of fat containing food products. Biscuits are from the most common bakery products preferred nearly by all levels of consumers. In order to improve their nutritive profile and functionality, standard formulation based on wheat flour was substituted with oat) Avena sativa L (.flour at three levels (10%, 20% and 30%). According to sensory evaluation 20% was the ideal addition percentage of oat flour to the biscuits. Hence, 20% oat biscuit was flavored by 0.75% cinnamon) cinnamomum zeylanicum %٠.٢٥ ،(ginger) Zingiber officinalis %٠.٢٥ ،(chamomile)Matricaria chamomilla L.) and 0.1% marjoram) Origanum majorana L (. essential oils (EOs). Biscuits supplemented with essential oils were subjected to sensory studies, chemical analysis and biological evaluation in comparison with oat biscuit (based on wheat flour and 20 % oat). Addition of herbs (EO) gave an excellent antioxidant effect on kidney, liver and lipid profile of rats under oxidative stress which occurred by potassium bromate. Results revealed that the addition of herbs essential oils increased the total content of protein and fat. The treated rats groups fed on biscuit containing oat and herbs EOs recorded a significant decrease in aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP ،(malondialdehyde) MDA), total bilirubin (TBil), very low density lipoprotein (VLDLc), cholesterol (TC) and triglycride (TG (values .The prepared herbal oat biscuits caused a significant increase in glutathione) GSH ،(superoxide dismutase) SOD ،(glutathione peroxidase)GSH-px ،(catalase) CAT), total protein (TP) and albumin (Alb (values in all rat groups as compared to the positive control group fed on the basal diet with potassium bromate .It can be concluded that incorporation of oat and herbal oils in bakery products increases their protective capacity against deleterious effects of oxidative stress

Key words :Biscuit, Oat ،Cinnamon ،Ginger ،Chamomile ، Marjoram ،Potassium bromate ،Rats.

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Simultaneous Ammonia removal and Methane Production from Chicken Manure under Dry Thermophilic Condition

Fatma Abouelenien [*], *Nagham .Elsaidy* [**] *and Yutaka Nakashimada*[**]

Abstract

In a trail to improve and reduce the cost of dry anaerobic fermentation of chicken manure with ammonia stripping through biogas recycling ،raw chicken manure) RCM (is used as a sole substrate instead of using treated chicken manure) TCM (or mixture of TCM:RCM (١:١) used previously .Biogas produced was ranged from٥٥ -٢٣.٥ L kg-CM ١-with methane percentage of ٧٠ to ،%٨٥ the amount which is ٦١ to %٩٥ and ١٠٩ to %١٤١ higher than that obtained from TCM and mixture of TCM and RCM .(١:١) Ammonia removal reached %٨٢.٧ keeping the ammonia level in the reactor in most batches less than ٣.٦ g-N kg .١-Acetate was less than ٢٠mmol kg ١-at the end of each batch .A maximum of ٣٢٤ ml g-VS ١-of methane was obtained which is quiet higher than that obtained from any other previous study .Additionally RCM could be used as a substrate

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Improved methane fermentation of chicken manure via ammonia removal by biogas recycle

Fatma Abouelenien, Wataru Fujiwara, Yuzaburo Namba, Maria Kosseva، Naomichi Nishio, Yutaka Nakashimada[*]

Abstract

This study demonstrates methane fermentation that was carried out along with ammonia striping to avoid ammonia accumulation that significantly inhibited methane production. Ammonia was successfully removed by means of recycling of biogas followed by gas washing in sulfuric acid to capture ammonia، when chicken manure was anaerobically digested for 4 days at 55_ C and at an initial pH of 8 .٩–By using this method, 80% of total nitrogen in chicken manure was converted to ammonia and 82% of the produced ammonia was removed. A bench scale reactor equipped with an ammonia-stripping unit for methane production from chicken manure was developed and operated in repeated batch mode. At an initial pH of 8 and at 55_ C, 195 and 157 ml g-VS ١_of methane was successfully produced from the treated chicken manure and the mixture of treated chicken manure and raw chicken manure in the ratio of ،١:١ respectively. In this method, ammonia concentration was maintained at a level lower than 2 g-N kgwet sludge ١_in the reactor

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Enhancement of methane production from co-digestion of chicken manure with agricultural wastes

Fatma Abouelenien [*], Yuzaburo Namba[**], Maria R. Kosseva [***]
*Naomichi Nishio **, Yutaka Nakashimada ***

Abstract

The potential for methane production from semi-solid chicken manure (CM) and mixture of agricultural wastes (AWS) in a co-digestion process has been experimentally evaluated at thermophilic and mesophilic temperatures. To the best of author's knowledge, it is the first time that CM is co-digested with mixture of AWS consisting of coconut waste, cassava waste, and coffee grounds. Two types of anaerobic digestion processes (AD process) were used, process 1 (P1) using fresh CM (FCM) and process 2 (P2) using treated CM (TCM), ammonia stripped CM, were conducted . Methane production in P1 was increased by 93% and 50% compared to control (no AWS added) with maximum methane production of 502 and 506 mL g ١_VS obtained at 55_ C and 35_ C, respectively. Additionally, 42% increase in methane production was observed with maximum volume of 695 mL g ١_VS comparing P2 test with P2 control under 55_ C. Ammonia accumulation was reduced by 39% and 32% in P1 and P2 tests.

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Effect of adding guar and xanthan gum on the rheological characteristics of rice flour to produce gluten-free bread

Abdulmola, N. A.[*], M. A. Abou Raya[**] and M. T. Shalaby[**].

Abstract

The current study was carried out to examine the effect of xanthan and guar gums addition in different concentrations. Xanthan gum at (0%, 0.5%, 0.1% and 1.5%) levels were added to rice flour. Also, guar gum was added to rice flour at (0%, 1%, 2% and 3%) levels. Mixtures of both gums were added at different levels (0.5% xanthan+ 1%guar, 0.1% xanthan+2% guar and 1.5% xanthan+ 3% guar). Rheological properties of dough measured by farinograph and extensograph (absorption of water, stability, arrival time and dough development time), were investigated. Results showed a positive correlation in rheological properties of dough by xanthan addition alone. And the weakness degree decreased from 190 to 40 B.U. Similar results recorded when guar gum added to rice flour with levels (1%, 2% and 3%). While, mixture addition of xanthan/guar to rice flour has led to a clear increase in (water absorption, stability, dough development time, strength and extensibility) was relevant to gums levels. Inversely, a scored reduction in the weakness degree and resistance to extension was observed.

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EFFECT OF BAKING PROCESS ON β -GLUCAN CONTENT IN WHOLE BARLEY BALADY BREAD

Shalaby, M. T.; M. A. Abo-Rya and Al-Zahraa M. Motawei*

Abstract

This study aimed to examine the possibility of the production of bread using whole barley flour (WBF); two levels of substitution of 50% and 100% compared with wheat flour (WWF) only were administered. The effect of the baking process on the content of dietary fiber, particularly β-glucan, was investigated. Chemical composition alongside with the content and solubility of b-glucan in both raw materials and bread produced were determined. The results obtained showed that the barley flour gave the highest content of ash, crude fiber and fat compared to wheat flour. The highest content of total and soluble beta-glucan were recorded in whole barley bread followed by 50% barley substituted treatment. Moreover, the 100%WBF bread scored the highest content of fiber, protein and ash as well as fat content compared with wheat bread only, which was the highest in carbohydrate content only. Content of β-glucan showed higher values for the bread produced from whole barley flour followed by treatment 50% of barley flour and then bread traditional wheat flour, which scored the least content of β-glucan. The process of fermentation and baking could significantly reduce the total content of β-glucan in spite of increased solubility of beta-glucan. Taking into account the functional dose of β-glucan, it could be assumed that, presented content of β-glucan in barley bread, meet the recommended daily needs to achieve the health benefits attributed to barley β-glucan.

Keywords: β-glucan, Whole Barley, Baking Process, Bread.

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Efficacy of Some Selected Algae as Fodder in Fish Farms

Eladl Galal Eldeen Eladl[*]

Prof. Dr. Sami Ahmed Shaaban Dessouki[**]

Dr. Abdel-Rahman Ibrahim Soliman[***]

Abstract

This study aimed to determine the efficacy of some selected algae as a fodder in fish farms. El-serw fish farm was selected as study area because it depends on Nile fresh water in farming ponds of Nile tilapia fish, which is the most common in Egypt because of its farming facilities in ponds and its tolerance to environmental changes and high pollution and so it become one of the most important economic fish in Egypt and River Nile basin.

As a study of fish farm ecosystem we studied the water column properties in the study area during annual cycle of fish farming from April to October 2004. with two monthes interval. This ،in addition of isolation and identification of microalgae from the study area, biochemical analysis of microalgae, determination of algal growth and carrying out toxicity test for algal metabolic solution on tilapia larvae aiming to select the non toxic strains and test it on the monosex tilapia fingerlings.

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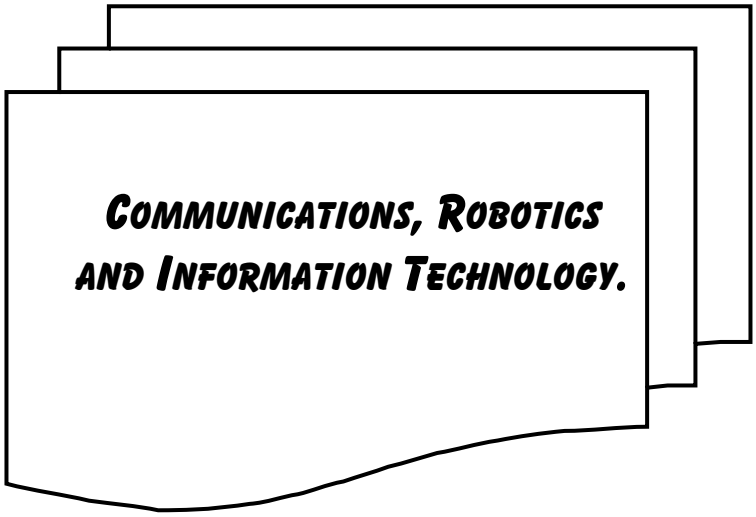
Communications, Robotics
and Information Technology.

Autonomous Guard Quadrotor using Visual-Inertial Navigation

***Amjad N. Alsadoon*[*], *Mohammed A. Eldosuky*[**]**

Abstract

The aim of this paper is to present the specification and the implementation of an autonomous guard quadrotor that fuses data from camera and IMU (Inertial Measurement Unit) to allow for high precision visual-inertial navigation. This can be used for guarding locations such as oil wells as well as buildings both for civil and military uses. The results of simulation and experiments are presented, the experiments on following suspicious objects are in progress.

Index Terms— quadrotor, SLAM, data fusion, Kalman, IMU, camera, PID control, AR.DRONE

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Building Cryptosystem Based on Genetic Algorithm and Pattern Recognition Concepts for Academic Institution

A. E .Amin[*] *A .Abd Elbadea*[*]

Abstract

This paper introduces cryptography real time data transmission framework for based on concepts of artificial intelligence techniques. The proposed framework is integrated between concept of genetic algorithm to generates unique genetic key and use it to formulate patterns table then the secrete message is divided into blocks with same size according to length of key and pattern recognition is used to blocks matched by weighted Euclidean distance.

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Mobile agents' authentication using a proposed light Kerberos system

Heba Kandil [*] *Ahmed Atwan* [**]

Abstract

A mobile agent is a program that is issued either by a human user or an application to travel over a network autonomously to either gather information or perform some computation. However its many benefits, mobile agent technology resulted in new significant security threats from both malicious agents and hosts. This paper introduces novel efficient and light security framework for mobile agent environment based on Kerberos system. The proposed framework aims at reducing the usual overhead resulting inside the Kerberos system by using 2-layer software that accomplishes the work of the hardware components. Besides, it reduces the required hardware which means low cost and high speed communication compared to traditional Kerberos system.

Keywords— Mobile agent; security; Kerberos; authentication; E-commerce.

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Automatic Speech Recognition of Arabic Phones Using Optimal-Depth-Split-Energy Best Tree Encoding

Amr M. Gody[*]*, Rania Ahmed Abul Seoud*[*]*, Eslam E. Elmaghraby*[*]

Abstract

Best Tree Encoding (BTE) which is first introduced in [1] gives promising results in Automatic Speech Recognition (ASR). The key factor in BTE is that solving the ASR problem in new domain for which the frequency information is mapped into 2D patterns. BTE4 seeks of many weaknesses that prevent it from being commercially suitable for ASR applications. The main weakness is the significant crossover areas in features space for different phones. BTE was continue developed for eliminating or reducing the weakness in the first generation. BTE5 is introduced in [2] by Amr M. Gody and his team to provide solution for the weakness point mentioned earlier. The key point in BTE5 is to add more discrimination for BTE which in turn will reduce the crossover areas in features space. Adding the 5th level to wavelet packet analysis is reflected into 15 bit encoder in BTE5 instead of 7 bit encoder in BTE4.

In this research, two factors are added to enhance BTE encoder. Analysis levels (AL) in wavelet packets becomes 7 and Energy becomes 4 components instead of single component in BTE. Energy distribution percentage over the 4 consecutive portions of bandwidth constructs 4 extra components to the BTE features vector. Both factors add to discriminative power in features space. Adding the 7th level to wavelet packet analysis is reflected into 63 bit encoder. The developed features family is called BTE7 for consistency with the previous generations of BTE. BTE7 gives 22% Efficiency enhancement over BTE4 and about 45% efficiency enhancement over BTE5. In addition, BTE7 indicates more stability for recognition results over both BTE4 and BTE5. BTE7 gives more than 10% accuracy enhancements over both BTE4 and BTE5.

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Speech Recognition System Based on Wavelet Transform and Artificial Neural Network

Engy R. Rady[*], Ashraf H. Yahia[**], El -Sayed A. El-Dahshan[***], and Hatem El-Borey

Abstract

for the past several decades, designers have processed speech for a wide variety of applications ranging from mobile communications to automatic reading machines. Speech recognition reduces the overhead caused by alternate communication methods. Speech has not been used much in the field of electronics and computers due to the complexity and variety of speech signals and sounds. However, with modern processes, algorithms, and methods we can process speech signals easily and recognize the text .This paper presents an expert speech recognition system for isolated words based on a developed model of Discrete Wavelet Transform (DWT) and Artificial Neural Network (ANN) techniques to improve the recognition rate .The data set was created by using English digits from zero to five and other nine words (spoken words) which was collected from four individuals in various time intervals. The feature vector was formed by using the parameters extracted by DWT .We have employed Daubechies 4-tap (db4 (wavelet for the experiment. The feature vector was produced for all words and formed a training set for classification and recognition. Forty-four features were feed to feed forward backpropagation neural network (FFBPNN) for classification.The performance of the developed system was evaluated by using speech signals. The rate of correct classification was about % ٩٨.٩ for the sample speech signals .

Keywords :Discrete Wavelet Transform, Speech Recognition, Feature Extraction, Artificial Neural Network.

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A NOVEL CLASSIFICATION MODEL FOR COTTON YARN QUALITY BASED ON TRAINED NEURAL NETWORK USING GENETIC ALGORITHM

A.E. Amin [*]

Abstract

This paper introduces a novel classification model for cotton yarn quality. The proposed model is composed of two major techniques namely: Artificial Neural Network (ANN) and genetic algorithm (GA)

First, training the ANN on encoding database to extract the weights between input and hidden layer، and hidden and output layer. Consequently, the output function for each output node of ANN can be constructed as a function of input attributes values and the specific obtained weights. This function is nonlinear exponential function depending only on the values of input attributes. Second, the genetic algorithm is used to find the optimal values of the input chromosomes (attributes) which maximize the nonlinear exponential function of the output node of ANN. Finally, the results of the optimum chromosomes are decoded and used to get a rule belonging to a specific class.

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A Recommender System for Team Formation in MANET

***Waleed M. Al-Adrousy*[*], *Hesham A. Ali*[**], *and Taher T. Hamza*[***]**

Abstract

Mobile social networking is a new trend for social networking that enables users with similar interests to connect together through mobile devices. Therefore, it possesses the same features of a social network with added support to the features of a Mobile Ad-hoc Network (MANET) in terms of limited computing power, limited coverage, and intermittent connectivity. One of the most important features in social networks is Team Formation. Team Formation aims to assemble a set of users with a set of skills required for a certain task. The team formation is a special type of recommendation which is important to enable cooperative work among users. Team formation is challenging since users 'interaction time is limited in MANET. The main objective of this paper is to introduce a peer-to-peer team formation technique based on Zone Routing Protocol (ZRP .(A comparison was made with Flooding and Adaptive Location Aided Mobile Ad Hoc Network Routing (ALARM) techniques. The suggested technique achieves fast successful recommendations within the limited mobile resources and reduces exchanged messages. The suggested technique has fast response time, small required buffering and low power consumption. The testing results show better performance of the suggested technique compared to flooding and ALARM technique .Keywords :Mobile Ad-Hoc Networks (MANET), Social Networks, Recommender Systems, Group Formation, Zone Routing Protocol (ZRP), Peer-To-Peer (P2P) .

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SMART VOICE SEARCH ENGINE

Shahenda Sarhan*

Abstract

For years and years the search engine researchers focus their efforts on having more accurate and faster search engines. This was more than enough in the past but with the appearance of smart phones the idea of having everything smart became dominant. In this paper we tried to share the dream of having a domain independent search engine and not only an ordinary one but a smart search by voice engine which searches user speech automatically without the user' s request and provide him with evidence on his speech, this engine was called SVSE. Through the paper we will introduce the proposed system in details explaining each part of it and finally discussing the difficulties it faces.

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COLLABORATION AND VERSION CONTROL ARCHITECTURE USING SOCIAL NETWORKS

Waleed Mohamed Mahmoud Al-Adrousy[*]

Prof. Hesham Araft Ali[**] *Assoc.Prof. Taher Tawfeek Hamza*[***]

Abstract

Studying the relationships of multiple categories of people and items in online open source communities is an important topic to infer important information for information technology members. However, a great challenge is facing analyzing the largest network of online communities due to the large number of participants and artifacts in that networks with hourly updates. Some possibilities to form teams of developers may not be detected without direct contact between developers and each other .The developer‟s skills are not the only factor in recruiting developers, but also the experience in dealing with specific audiences and category of applications. On the other hand, students in information technology schools aim to learn the most up-to-date tools related to commercial usages. Those commercial usages are needed to be simplified and presented to students to select the best set of tools to learn.

There are three main areas of this thesis: social networks in general, education recommender systems, and career recommender systems. In social networks, millions of users communicate social networks around the world. Many famous social networks exist nowadays like Facebook, Twitter, Google plus and Linkedin. There are common features in those sites like messaging, chatting, sharing of items, posting topics and adding

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events. Performance and accuracy of social networks operations are discussed in this thesis.

A side effect of social networks on students is wasting hours on communications and discussion which may decrease the available time for learning and studying. Even without spending so many hours ،the use of social networks isn‟t useful for education or self leaning process. This thesis studies how to use social networks to find the suitable courses and learning resources to enhance the education level and also uses the other colleagues „ expertises and advices in a useful collaboration.

Our study continues the lifecycle of students after graduation. Working as professionals is a challenging process. The companies professionals should always pick the right tools to use, train on the new technologies in shortest team, pick new candidates from hundreds of new graduates, and build teams for new projects. Our study tries to get use of social networks to make experts' networks to recommend tools, technologies, companies, teams and new employees.

This thesis presents a suggested framework for students, experts, even customers to collaborate and integrate their direct and indirect communications to recommend the most suitable items for them. A special type of social networks called mobile ad-hoc social networks is also integrated in this framework. We suggest new type of usage for mobile social networks to allow team building in ad-hoc networks to collaborate and make use of available skills in a geographic area within limited time window. Finally, we hope that the framework presented in this thesis helps as a base for a large society project to enhance the education in the following years.

The Role of the Pre-development Activities in Information Systems Projects' Failure

Mohamed A. Hamada [*] ***Sherif A. Mazen*** [**] ***Ehab E. Hassanein*** [***]

Abstract

Information systems (IS) development projects have high failure rates, lots of researches discussed IS projects failures and listed a huge number of failure reasons, despite that IS projects still have considerably high failure rates. This research looks for the sources of the failures as a new approach to decrease the failure probability of IS projects. Through investigating the failure reasons of IS projects, it has been detected that, most of failure reasons are attributed to the pre-development activities, which begin with the System Service Request (SSR) to initiate the projects and end with developing the project plan to represent a road map to explain how the project will progress through all its phases. Pre-development activities are focal points which have ability to improve IS projects success. So, an avoidance strategy includes many critical success factors for each pre-development activity is introduced as a swift solution for the research problem .

Keywords :

Failures of IS projects, Pre-development activities, Project planning, Avoidance Strategy

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Integration of K_Means and Decision Tree for Knowledge Extraction from a Database

A. E. ELAlfy[*], A. F. ELGamal [*], and D.L. Elshowakh[*]

Abstract

Data mining is the process of discovering previously unknown and potentially interesting patterns in databases. Though most knowledge discovery methods have been developed for supervised data, the task of finding knowledge from unsupervised data often arises in real-world problems. In addition, techniques for unsupervised knowledge discovery are essentially different and still much less developed than those for supervised discovery. This paper introduces a novel framework for extracting a set of comprehensible rules from unsupervised database. The proposed framework depends on three techniques namely; clustering technique, fuzzification technique, and inductive learning technique. Clustering technique uses a k-means for clustering unsupervised database. Consequently the input database is converted into supervised database. Fuzzification technique transforms the continuous attributes of database into linguistic terms. This transformation leads to reduction of search space. Decision tree used as a inductive learning algorithm for extracting a set of accurate rules from supervised database.

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Building an Expert System to Assist in Diagnosis and Medicament Some Child's Problems

A. Abd Elbadea[*] *R. Reda* [*]

Abstract

The main question in this paper is how to building an expert system to assist in diagnosis and medicament some child's problems?

Paper Objectives:

1. Clarify the most important influences that play a role in the nurture of the child.
2. Diagnosis the most important problems that affect in child.
3. Determine the foundations of the design and construction expert systems.
4. Provide an efficient expert system to diagnosis and medicament some child's problems.
5. Providing a model for expert system is used to design other similar systems.

The most important results in this paper that expert system proposed effective in the diagnosis and medicament some child's problems. The most important problems was (the anger problem, the fear problem, the shyness problem, the aggression problem, the lies problem), our expert system diagnose these problems for each child and then providing solutions to that problems in medicament program.

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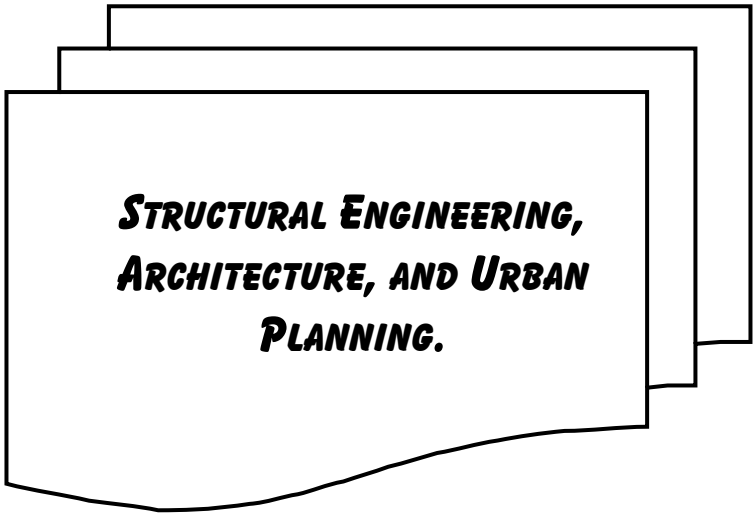
Structural Engineering,
Architecture, and Urban
Planning.

DYNAMIC ANALYSIS OF HIGH RISE SIESMICALLY ISOLATED BUILDINGS

***Khloud El-Bayoumi*[*], *Mohammed Naguib*[**], *Fikry A. Salem*[***]**

Abstract

The purpose of this paper is to offer a relative understanding of the seismic performance enhancements that a typical 40-story steel office building can achieve through the implementation of base isolation technology. To reach this understanding, the structures of a fixed-base office building and a base-isolated office building of similar size and layout were designed, their seismic performance was compared in both response spectrum analysis and time history analysis. As a result of this paper, building owners and construction industry professionals can recognize the benefits of implementing base isolation on a wider range of projects, thereby creating the potential for a significant increase in the technology's use.

Keywords

Triple friction pendulum bearing, structure control, seismic isolation, base isolation, high rise buildings.

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Modeling and Simulation of Greater Cairo Region Urban Dynamics Using SLEUTH

Ibrahim Mohamed Badwi[*]*; Mohamed M. El_Barmelgy*[**]*;*
Ahmed Salah El_Din Ouf[***]

Abstract

Modeling urban growth have the ability to play an important role in the planning process; if not in aiding in policy decisions, then in processes such as visioning and scenario evaluation. Spatial urban models passed through many developed phases to define the responsible urbanization factors.

As a result, there are many applications and planning tools that have been developed and successfully used in universities and research institutions to simulate the spread of planned settlements in developed nations. Such as: What If?, UrbanSim (Urban Simulation) and SLEUTH (Slope, Land use, Exclusion, Urban, Transportation and Hillshade).

This paper will use SLEUTH to assess the model capacity to generate realistic simulation and prediction of informal settlements in the context of unplanned areas, such as greater Cairo region (GCR), Egypt. The results show that, yet the successful application of a model in one particular geographical area does not necessarily imply its successful use in another setting where local characteristics, regional constraints, social habits and situation properties of economic base ensure that different development trends have been followed.

Keywords: Urban Modeling, Urban Dynamics, Informal Settlements, Cellular Automata (CA)

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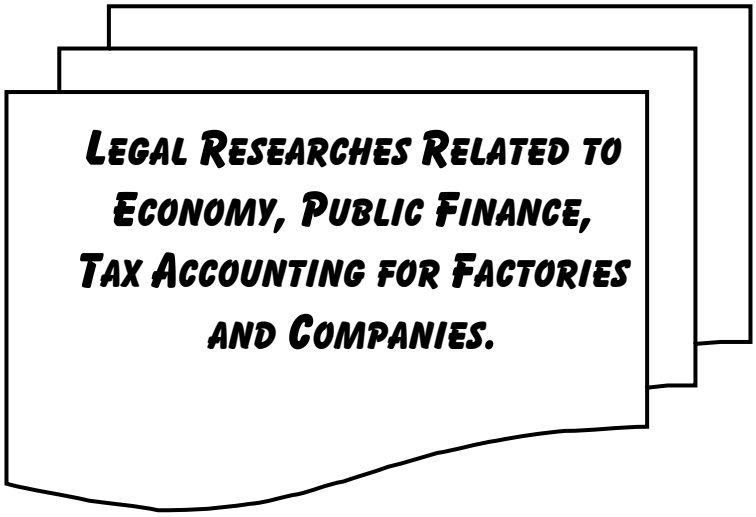

Legal Researches Related to
Economy, Public Finance,
Tax Accounting for Factories
and Companies.

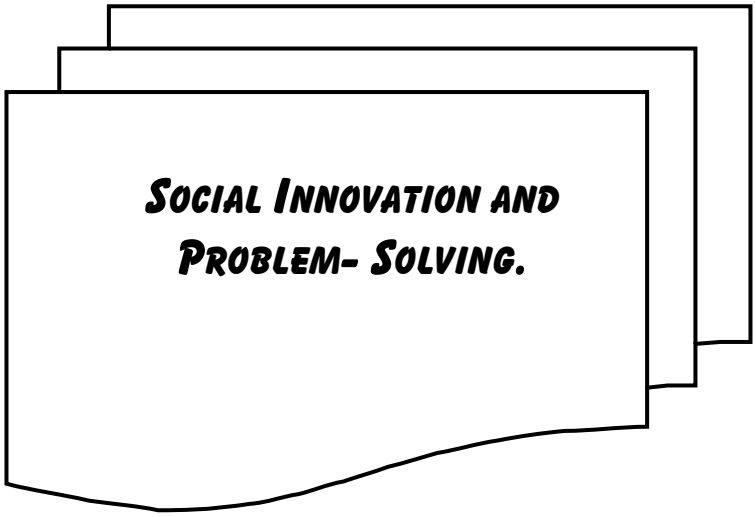
Social responsibility to the Saudi telecom sector (Application to the Saudi Telecom Company STC)

Dr / Gehan Abdellatif El Refaie

Abstract

Social Responsibility has become part of a strategic businesses to interact with the community and the surrounding environment , and has become a priority in terms of conversion companies to partners in sustainable development.

So research aims to shed light on the definition of social responsibility and its importance , and its fields ، and the constraints faced by the scope of the activities of the Saudi telecom companies


Social Innovation and
Problem- Solving.

Mechanisms of Enabling Youth and the Targeted Role of Media in the Arab Republic of Egypt

Dr .Amany Moustafa Kamal Tawfik*

Abstract

The research discusses studying and analyzing for the major obstacle about the micro financial institutions due to its role in enabling the youth, the major local and regional successful experiments to enable them, the mechanism of generalizing the establishment of the poor's bank in Egypt, the targeted role of media in enabling the youth.

Keywords

Triple friction pendulum bearing, structure control, seismic isolation, base isolation, high rise buildings.

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Synthesis of Antibacterial Additives used in Metal Working Oils from Local Materials

Shady Atef Mansour Abd El Salam[*]

Prof. Dr. Nadia G. Kandile[**] *Prof. Dr. Nabel A. Negm*[***]

Dr. Ashraf M. Abd El Salam[****]

Abstract

It is known that one of the serious environmental problems is the accumulation of plastic bottles made of Polyethylene Terephthalate (PET) in large quantities and the inability of natural factors to analyze them or get rid of them, due to (PET) has high thermal stability.

Another environmental and health problem is the bi-products of the bacterial growth in cutting fluids. The contaminated cutting fluid has irritating effect on the workers skin, in addition to the bad smells produced.

In this study we use recycled (PET) polymer in the manufacture of new generation of biocides for cutting fluids formulations to improve the stability of the cutting fluids against bacterial growth and to increase the economic impact of the cutting fluids.

The Polyethylene Terephthalate (PET) polymer was glycolyzed by (polyethylene glycol) to give the glycolyzed products. The bromoacetate derivatives were prepared by the reaction of the glycolyzed products and (bromoacetic acid). These esters were quaternizing with excess amounts of (triethylamine) and (pyridine) respectively to give the products: (PET400BrT, PET600BrT, PET1000BrT, PET400BrPy, PET600BrPy & PET1000BrPy).

These products were evaluated as biocides for the cutting fluid formulations at concentrations of (0.1%, 0.25%, 0.5%, & 1%). The results of evaluation revealed excellent biocidal activity of the prepared additives against the bacterial growth in the cutting fluids. The tribological properties including: kinematic viscosity, viscosity index, emulsification power, surface tension, specific gravity, flash point, pH value, and rust prevention were measured. The results of measurements showed that the prepared biocides have no effect on the tribological properties of the cutting fluids.

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Evaluating of Imported Used Clothes Economically and Microbiologically

Prof.Dr. Mysaa El Sayed Zaki[*], *Dr. Zeinab Ahmed Abd El Aziz*[**], *Amal Fawzy Abd El Monem*[***]

Abstract

The problem of this study determined in dealing with an important subject for popular a lot of community groups to buy used clothes coming from abroad with no knowledge of the health damage may be caused by the use of these clothes, with conflicting views on their use, and not dealt with the study and research to find out the pluses and negatives.

The study aims at identifying the positive aspects and negative aspects of the use of used clothes coming from abroad, and to identify scientific method proper handling and use of this type of clothing, also the study aimed at enlighten and educate consumers about what needs to be followed towards this kind of clothes if they used them.

To achieve these goals the study was applied through two axes parallel: firstly, conducting a field study through the design of two questionnaires (1), (2) and direct them to some dealers of used clothes and some consumers in four different provinces of the Arab Republic of Egypt, namely, (Cairo, Alexandria, Port Said, Dakahlia), in order to determine the extent of these clothes, and to identify their sources, and the demand of consumers by, and monitoring problems that can be caused by these clothes, secondly making some laboratory tests on the study sample (100 pieces)

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variety of used clothing from abroad in terms of (types - crude - places of purchase) has been assembled from the same provinces that were conducted the field study, and in order to detect the presence of microbes, and also tests the definition of these microbes to determine the types, and then conduct some transactions washing and cleansing to assess the impact of these transactions on the get rid of the microbes that were found in this clothes.

The main findings of the study

- The adoption of a large sector of consumers used clothing clearly, despite the lack of emphasis on the validity and the possibility of pregnancy for many microbes.
- Ensure that there are microbes in used clothing coming from abroad, and these microbes can transfer some diseases from one individual to another case before the circulation of these clothes washed or disinfected.
- Make some transactions washing and cleansing the used clothing prior to use, can get rid of any microbes carried by these clothes. The study recommends the need for guidance to educate consumers about the damage that can be caused by used clothes if they are used before disinfection, the study also recommends the need to wash and clean these clothes before using them.

Effect of performance endurance on some drills biochemical variables and level of performance skill for junior boxers

Mustafa Amin Jaber Ibrahim

Abstract

This study aims to identify the effect of performance endurance on some drills biochemical variables (red blood cells - white blood cells - hemoglobin - glucose) and level of performance skill for junior boxers.

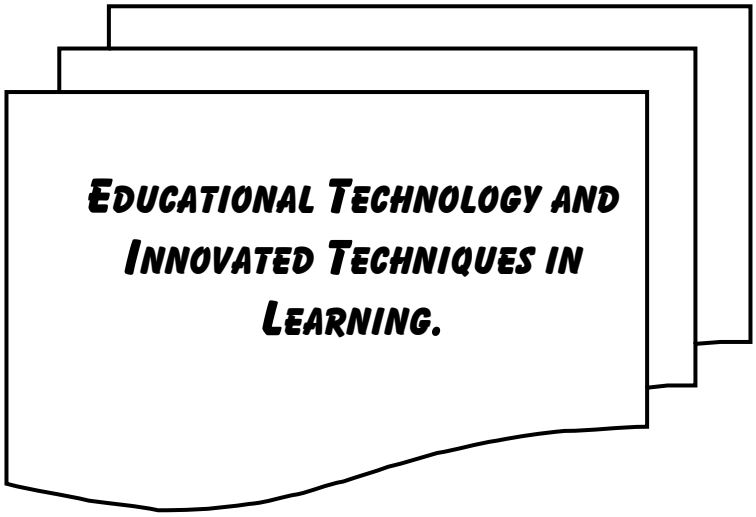
The researcher used the experimental method for a single trial, using the pre and post measurement. The sample was chosen from junior boxers in Mansoura Stadium of sport between (15:16 years) .the number of the sample was (23), (3) are out due to the irregularity in training and healthy problems ,(10) boxers were as an experimental group and (10) boxers range reconnaissance the training program was applicated for (12)weeks including (4) exercises a week during the the period from 30/04/2011 to 22/7/2011 m.

The most important results.

- There is an incrase in phyaascal and skillful abilities .
- Effect on the incrase of hemoglobin percentage.
- They are opositive effect on the incrase of redblood cells number .
- They are opositive effect on the incrase of glucose rate in blood .
- They are opositive effect on white blood cells number .
- They are opositive effect on the incrase of performance skill level for junior boxers .

The most important recommendations:

- Applicating proposed training program to develop of bearing performance skills endurnce for junior boxers.
- Making use of such training programs in the medical and sportive fields to reduse the blood sugar rate.
- Prefering to use blood measurements to indicate the biochemical variables (the number of red blood cells - the number of white blood cells - hemoglobin – the proporting blood glucose) because they give acertain amount readings for the change rates in the biochemical status of the body organs.


Educational Technology and
Innovated Techniques in
Learning.

The Effectiveness of program based first on Geographic information system in developing some map skills for year secondary stage students

Esraa Ali Epraheam Tawfeuk [*]

Abstract

The present study aims to use GIS in education and learning , through the training of first-grade students from high school to some of the skills used in the detection of map analysis associated with geographical topics which are going to be studied, and seeks the study to investigate the effectiveness of a program based on GIS in the development of some of skills analysis of the geographical map of first-grade secondary students which provides them with the necessary tools and techniques to address some of the issues and geographic phenomena and make realistic decisions.

[*] ARISH FACULTY OF EDUCATION-SUEZ CANAL UNIVERSITY

Corporate Universities and Economic Development Requirements: A Comparative Study for Kettering University and Petrobras University and the Possibility of Benefiting from It in Arab Republic of Egypt

Mahmoud M. Elmahdy Salem [*]

Abstract

Corporate universities can be considered a contemporary educational model by which the responsibility of education transferred from the academic mediums to business sector. The curricula in this model are derived from the laws of market, and they are designed to preserve the smart experienced labour force. Through this model, business sector can respond to the fast and successive changes in the field of information and technology, which is considered a feature of the world nowadays. It can also adopt the concept of lifelong learning in order to preserve and widen the experience of its labour force, thus protecting the rank and position of the companies and the economic institutions at the national, regional and international market. The research, therefore, intends to study corporate universities and Economic Development Requirements, and it is trying to recognize the possibility of benefiting from them in Arab Republic of Egypt.

In the light of the nature of the subject and its aims, the current research depends on the comparative approach.

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E-learning as a means of sustainable education undergraduate Case study: the experience of the application of the first decision-mail in architecture at the university level Egyptian

Mona Awd Elwazer [*]

Abstract

E-learning is one of the requirements of quality in education, where it is one of the means to maintain a sustainable success at the university level, since it is an important way of learning speed and thus helping to scientific excellence and innovation. And engineering faculties of colleges operation, which lend themselves to the application of e-learning experiences, In Egypt, the Supreme Council adopted the university one of the important projects, which is the production of electronic courses all sections of courses in the faculties of engineering. And the Department of Architecture of the recent sections of this experience where Atnawa search application experience first Decision Aketrony, the Department of Architecture at the level of all the faculties of engineering in Egypt. It is a new experience has been working at the University of Mansoura an Egyptian universities, intended to measure the benefit of this course, student-mail and experiences gained from it. And tries to find measure student satisfaction and observation of the decision-mail because of its features and what it Notes to the development and modernization of the decision later, in order to maintain success and excellence in the course material, which is one of the basic materials specialized over the years of the study, Department of Architecture. Will the experiment will succeed? And help the student's understanding of the material easily or that the study, Department of Architecture depends on the talent just as some say whether the decision-mail a role in increasing the student's skills and improves experiences help him to success and innovation all these research questions will be answered through practical experience in this search.

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The Expressive Styles for a Selection of Fouad Hadad's poetry as an approach to forming subject in Modern Painting

D. wael Anwr [*]

Abstract

The research is asking a question and identifying a problem, how to connect between the aesthetic value in common poetry and the expressive value in the descriptive form?

The research is aiming to discover the distinctive characteristic of the poetic imagination and its effect in creating a new formative experience and utilizing from its figure of speech in an attempt to create a state of inspiration for the artist to create a new imagination, the research has supposed that the poetic image can be useful in enriching the expressive value in the descriptive image.

The researcher is studying the poetic value in the poetic works of Fouad Hadad and how to utilize it in the field of description, making a personal experience to achieve the aims and objectives of the research and assuring the truthfulness and correctness of suppositions.

The importance of the research depends on the status of the creative poet Fouad Hadad as one of the leaders of the common(free) poetry in Egypt and to help the students of art to knew the essence of specialty artistically and to help them in the accuracy of artistic performance and creating new subjects in the art of picturing.

The researcher has dealt with the definition of the free poet, its origin in Egypt, introduction to the poet Fouad Hadad, his growing up, the effective factors in his personality . his poetic style and there is an indication to the importance of the poetic figure, identifying colour as a method of forming picture and the difference between imagination and figure then an introduction of Salah Jaheen as one of the leaders of free poetry in Egypt.

What is the drama of the picture, its effect on the picturing, the difference between the content and the subject. The study of the importance of the event, how it is connected with picture in modern description through some modern artistic schools. The most important leaders of these schools, introducing some of their artistic works, then defining empiricism in painting, pop art and its effect on creating new schools in painting.

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