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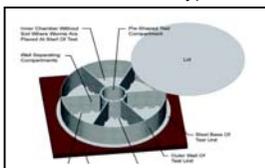
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Institute of Chemistry Timisoara



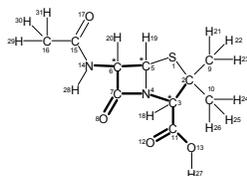
CONTENTS & SHORT SUMMARY

- Avoidance behavior of *Eisenia foetida* to Acetone, Gherhardt T., Bolcu C. 1-10
Deltamethrin and Glyphosate



Earthworm avoidance behaviour test is an important screening tool in soil ecotoxicology. This work demonstrates the potential suitability of the avoidance behavior test as screening method using Eisenia fetida as the bio-indicator species on contaminated soils with acetone, deltamethrin and glyphosate. The results gained sustain the idea that in some cases medium to high concentration can induce a attraction response from earthworms.

- PM3 Conformational Analysis of the (3R, 5R, 6R)-6 Acetylamidopenicillanic Acid. I. Geometrical Properties Ivan D., Mracec M. 11-21

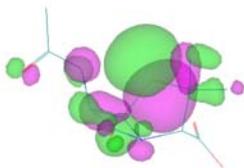


A conformational analysis with PM3 semiempirical MO method was performed for the (3R,5R,6R)-6-acetylamidopenicillanic acid. Because the N atom of the exocyclic amidic group is pyramidalized by the PM3 method, a larger number of conformers (92) than the number of theoretically possible conformers have been obtained. The difference between the lowest energy and highest energy conformer is 12.14 kcal/mol. The calculated average values of various bond lengths, bond angles and dihedrals helped to observe some regularities in the conformers geometries that otherwise could not be observed. The conformers could be divided in three distinct classes of puckering of the thiazolidinic ring. Ring puckering is not influenced by the rotation of the carboxylic group.

PM3 Conformational Analysis of the (3R, 5R, 6R)-6-Acetylamidopenicillanic Acid. II. Electronic Properties

Ivan D., Mracec M.

23-33

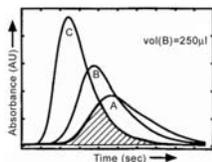


A conformational analysis with the semiempirical PM3 method was performed for (3R,5R,6R)-6-acetylamidopenicillanic acid. 92 distinct conformers were found within 12.14 kcal/mol. Dependence of some electronic properties of these conformers (HOMO and LUMO energies, dipole moment, $\bar{\nu}_{\min}$ minimum vibration energy, maximum vibration energy $\bar{\nu}_{\max}$) with respect to some geometric characteristics: pseudochirality of the N14 atom, the syn-anti arrangement of the O17 and H28 atoms of the amidic group and the three puckering classes of the thiazolidinic cycle noted with a, b, c.

Coordination Compounds Obtained in the Reaction Between Diols and Metallic Nitrates as Precursors of Simple and Mixed Oxides

Dumitru R., Segal E.,

35-44

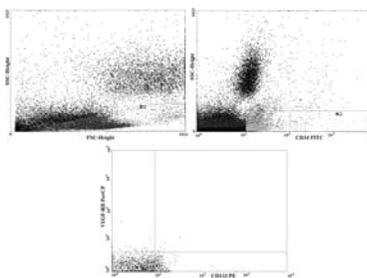


The paper is dedicated to a new nonconventional method of synthesis which permits to obtain homopolynuclear, heteronuclear and heteropolynuclear coordination compounds. The coordination compounds were obtained through the oxidation of ethyleneglycole with nitrates of some type d metals. Through their thermal decomposition simple and mixed oxides with nanometric particle sizes were obtained.

Ficoll Density Gradient Isolation Method vs. Direct Flow Cytometric Quantification of EPCs

Bujor C., Anghel A., Samoilă C., Tămaş L., Otîman G., Şeclăman E.

45-52

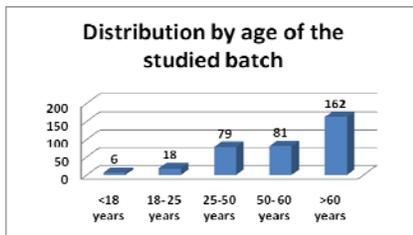


The study has compared two quantifying methods for endothelial progenitor cells (EPCs) enumeration in peripheral blood. The results have shown that there is not a significant difference between the EPCs number obtained by isolation of peripheral blood monuclear cells (PBMC) with Ficoll density gradient method followed by the immunomagnetic labelling with specific antibodies beads (CD34, CD133 and VEGFR2/KDR) and flow cytometry when compared with direct flow cytometry of peripheral blood sample.

A Retrospective Study of the Serum Biochemical Parameters in a Laboratory from Timișoara, Romania

Mincea M., Rumel R., Kis K., Dronca S., Ostafe V.

53-64

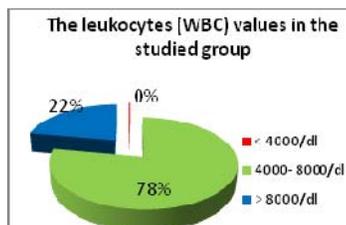


A retrospective analysis of 348 patients evaluated in respect to their biochemical parameters was conducted. The biochemical parameters investigated are serum total protein, alanine aminotransferase (ALAT), aspartat aminotransferase (ASAT), triglycerides, total cholesterol, LDL-cholesterol, glucose and creatinine.

Hematological Indices in a Population Sample in Timișoara, România

Rumel R., Mincea M., Kis K., Dronca S., Ostafe V.

65-75

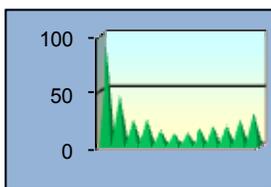


The aim of this study was to investigate and to correlate the presumptive diagnostic with the hematological indices from a private medical laboratory from Timișoara. It was a retrospective study regarding 384 patients which present to that laboratory in 2009. The investigated hematological parameters are hemoglobin (HGB), hematocrit (HCT), mean corpuscular volume of erythrocyte (MCV), mean corpuscular hemoglobin concentration (MCHC), mean corpuscular hemoglobin (MCH), leukocytes (WBC) and platelets (PCT).

Pollution with Particulate Matter in a Former Metallurgical Center of Romania (Călan)

Crințoai C-I., Albulescu M.

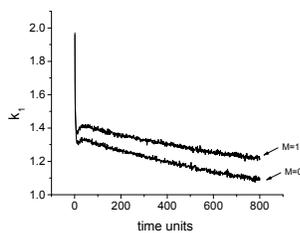
77-86



Large particles are retained in the nasal cavity and pharynx, while the small particles reach the lungs and are retained there, the respiratory system it has a mechanism for the elimination of the inhaled particles. In this paper we proposed to follow the evolution of the ambient air quality in terms of emissions of heavy metals (Pb, Ni, Cd) and particulate matter (PM_{10}) in the area of the old steel mill from Călan City.



The incidence of skin cancer has significantly increased over the past decade. It is important to define the accurate etiology and the mechanisms involved in development of skin cancer to apply the appropriate preventative measures. Interleukin-6 (IL-6) is a pleiotropic cytokine that contributes in the body to a multiple biological processes. IL-6 induces the final maturation of B cells into antibody-producing cells and can enhance or inhibit the proliferation of carcinoma cells. We try to determine the serum level of IL-6 in rat with irradiated with UVB. We have used Sprague-Dawley rats UVB irradiated in comparison with control (non-irradiated) lot. UVB radiation determined a cutaneous inflammatory response at 24h after the last irradiation. The maximum inflammatory reaction was evident at 48h after the UVB exposure. Acute exposure to UVB radiations induced acute inflammatory response as evidenced by the increased level of IL-6 in serum both after 24 and 48 hours after the last irradiation. Inflammatory response to UVB radiation has been reflected clinically by apparition of erythema and local edema.

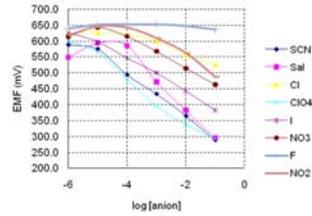


The present study comprises 3D Monte Carlo simulations of enzymatic processes in crowded media following Michaelis-Menten kinetics, performed in order to bring more insights of the fractal behavior of the rate coefficient. The model of hard-sphere interactions between particles has been considered. The effect of crowders of different density and mobility has been explored. The parameters of equation used to fit the simulation data have been compared for different cases.

Determination of thiocyanate using an ironporphyrin-based sensor

Popa I., Sorescu S.L., Fagadar-Cosma, E., Vlascici D.

105-112



In the present paper, the potentiometric response characteristics of a metalloporphyrin-based electrode in plasticized polyvinyl chloride (PVC) membranes are presented for a set of monovalent anions. As membrane ionophore, 5,10,15,20-tetrakis-(3,4-dimethoxyphenyl)-porphyrin-Fe(III) (FeMeOPP) was used. To establish the optimum composition of the membrane, different ionic additives (mol.% relative to ionophore) were used.