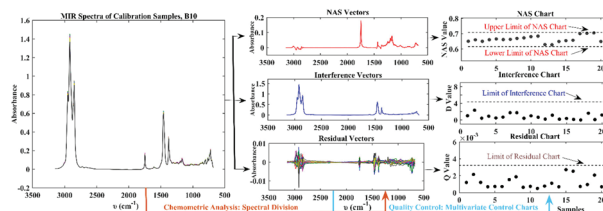


- 1 Identificação de adulterantes de biodiesel metílico de Crambe em misturas com diesel, usando FT-MIR e cartas de controle multivariadas baseadas no sinal analítico líquido

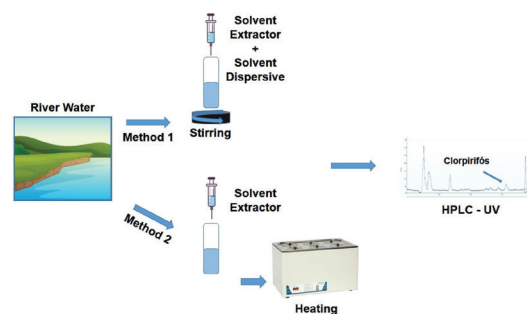
Baltazar V. Siteo, Lucas G. da Costa, Brendon A. dos Santos, Douglas Q. Santos e Waldomiro Borges Neto



The spectra of calibration samples were decomposed into three vectors: NAS, Interference and Residual. From these vectors the statistical limits were calculated and the multivariate control charts were constructed. The scalar values NAS, D and Q of each sample were plotted on the respective charts.

- 9 Desenvolvimento de metodologias analíticas para determinação de clorpirifós em amostras aquosas empregando a microextração líquido-líquido dispersiva seguida por HPLC-UV

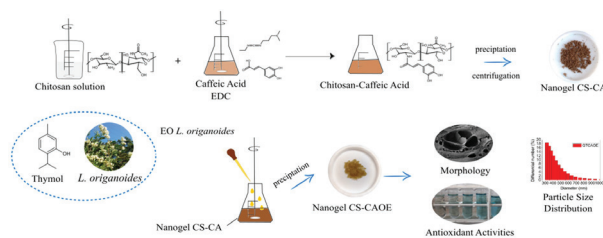
Adão S. Oliveira, Leandro Honório, Mayara L. de Matos e João B. G. de Souza



In method 1: the extraction solvent mixed with a dispersing solvent it injected into the aqueous sample. In method 2: The extractive solvent it injected and then the sample is heated. At the end, the extractive solvent is solubilized in methanol and the chlorpyrifos determined by HPLC-UV.

- 16 Nano-encapsulation of *Lippia origanoides* Kunth. essential oil by chitosan-caffeic acid nanogel

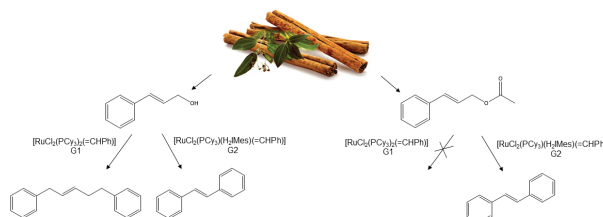
Elisa T. S. Damasceno, Regiamara R. Almeida, Stephanie Y. B. de Carvalho, Sara S. Vieira, Valdir Mano and Luiz Gustavo de L. Guimarães



Development of chitosan nanogel bound to caffeic acid, to be used in the encapsulation of the essential oil of *Lippia origanoides*, in order to enable its use as an antioxidant.

- 24 Influência do impedimento estérico de ligantes ancilares em complexos a base de Ru aplicados em metáteses do álcool e acetato cinâmlicos

Vanessa B. Vieira, Eliada A. da Silva, Valdemiro P. Carvalho Jr., Benedito S. Lima-Neto e José L. S. Sá

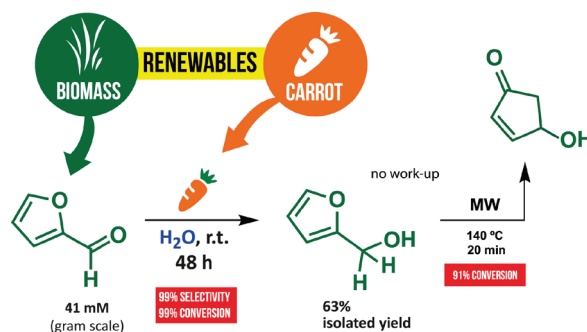


Cinnamic derivative compounds are catalyzed by Grubbs Ru-catalysts which present distinct results based on the different electronic and steric contributions of the catalysts.

- 32 A renewable catalyst for a renewable chemical: gram-scale conversion of furfural to furfuryl alcohol by the carrot (*Daucus carota*)

Alvaro T. Omori, Marina G. Capeletto, Daniela Y. Yamamoto and Ronaldo E. de Oliveira Filho

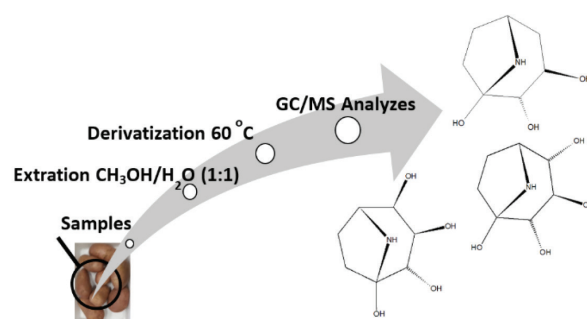
Carrot root can act as catalyst to reduce furfural to furfuryl alcohol. This low-cost reaction is conducted under eco-friendly conditions.



- 37 Calisteginas, alcalóides polihidroxilados presentes em hortaliças: frutos e tuberosas

Luís F. L. Souto e Antonio J. R. da Silva

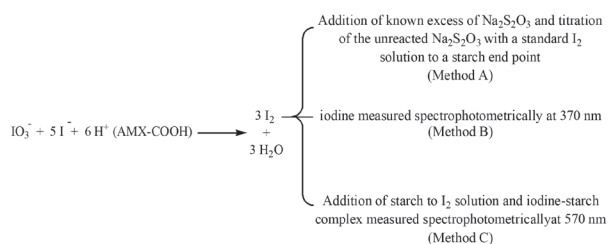
Vegetable cultivars of human consumption in Brazil have been analyzed for calystegines presence. They were found in the whole sample set.



- 44 New applications for amoxicillin determination in pure form and pharmaceuticals based on iodate-iodide mixture: titrimetry and spectroscopy studies

Nagib A. S. Qarah, Sameer A. M. Abdulrahman, Faisal K. Algethami, Kanakapura Basavaiah and Ezzouhra El-Maaiden

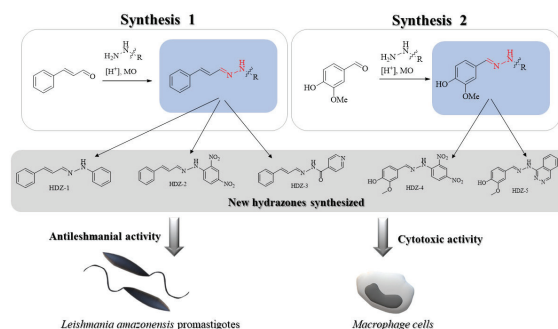
In this study, one titrimetric and two spectrophotometric methods are developed for the determination of amoxicillin (AMX) in bulk drug and dosage forms using iodate-iodide mixture reagent.



- 50 Síntese, atividade antileishmania e citotóxica de hidrazonas derivadas de aldeídos naturais

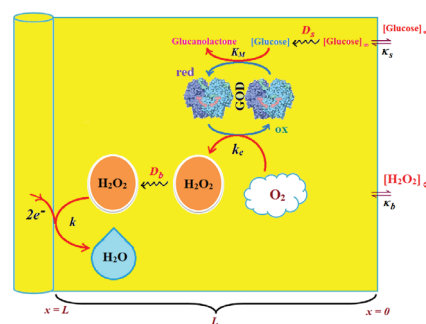
Débora C. M. de Souza, Valéria C. de Sousa, Lucas P. L. da Cruz, Sabrina M^a P. Carneiro, Michel M. de M. Alves, Fernando A. de A. Carvalho, Marcília P. da Costa, Cíntia M. Corrêa, Arlan de A. Gonsalves, Cleônia R. M. Araújo

Illustration of two routes of synthesis to obtain five new hydrazones. All the synthesized molecules were tested for antileishmanial and cytotoxic activity.



- 58 Analytical expressions for the concentration and current in the reduction of hydrogen peroxide at a metal-dispersed conducting polymer film

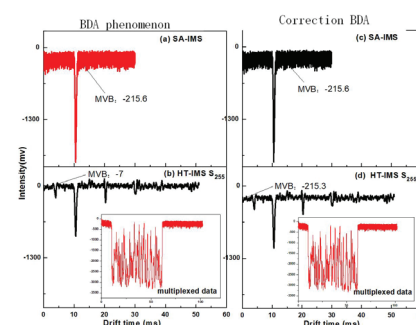
Rajagopal Swaminathan, Kothandapani Venugopal, Muthuramalingam Rasi, Marwan Abukhaled, Lakshmanan Rajendran



Schematic diagram for the reduction of hydrogen peroxide to water.

- 66 Analysis of the baseline drift artifact in Hadamard transform separation techniques

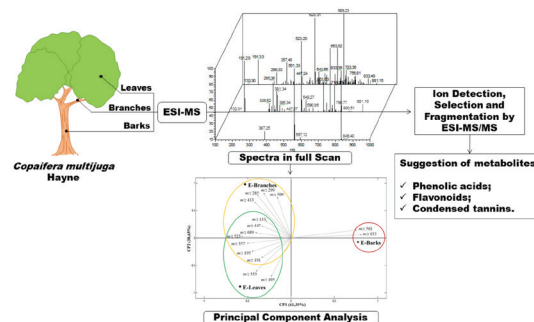
Yan Hong, Jingming Su, Chaoli Tang, Chaogun Huang, Sheng Liu and Yannan Chu



Analyzing and removing the base drift phenomenon of Hadamard transform technique.

- 72 Perfil metabólico dos extratos polares das folhas, galhos e cascas de *Copaifera multijuga* Hayne (copaíba mari-mari da amazônia) por ESI-EM

Davi S. Oliveira, Leandro S. Lima, Ananda S. Antonio, Larissa S. M. Wiedemann e Valdir F. Veiga-Junior

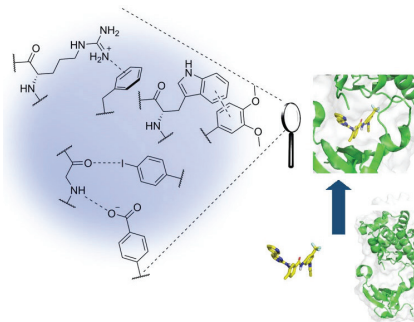


Polar extracts of *Copaifera multijuga* plant parts (leaves, branches and barks) were analysed by direct insertion in ESI-QqQ-MS and MS² fragmentation. Several polyphenols were suggested and the metabolic profiles analysed by PCA.

Revisão

- 78 Há algo novo no reconhecimento molecular aplicado à química medicinal?

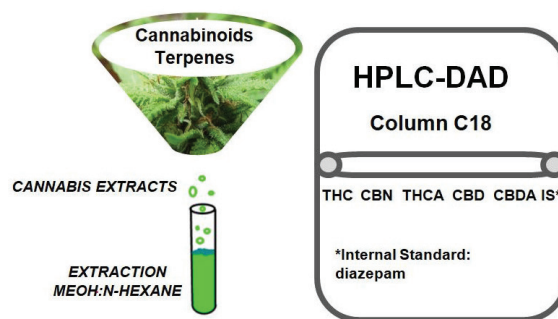
Harold H. Fokoue, Pedro S. M. Pinheiro, Carlos A. M. Fraga e Carlos M. R. Sant'Anna



Molecular recognition of a ligand by its target is essential. Are there are new insights in molecular interactions to explore for improvement of the ligand affinity with its target?

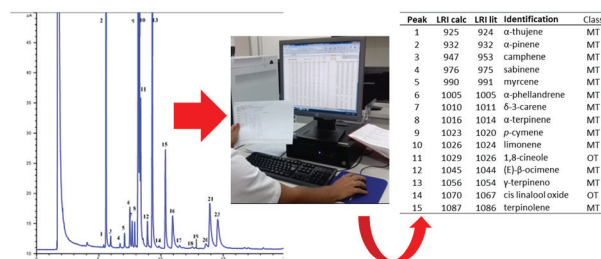
Nota Técnica

- 90 Quantificação de canabinoides em extratos medicinais de *Cannabis* por cromatografia líquida de alta eficiência
Virgínia M. Carvalho, Andrey F. L. Aguiar, Leopoldo C. Baratto, Fábio L. C. Souza e Ernesto D. Rocha



Cannabinoids were extracted by solvents and ultrasound. The samples were refrigerated and centrifuged to separate the lipids. Cannabinoids were separated and quantified by HPLC method.

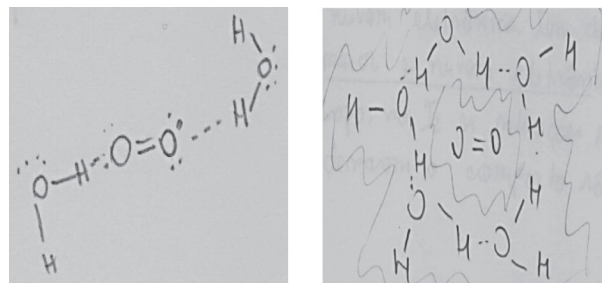
- 98 Um conjunto de planilhas eletrônicas para identificação e quantificação de constituintes de óleos essenciais
Humberto R. Bizzo, Eduardo G. Barboza, Marcelly C. S. Santos e Paola E. Gama



Electronic sheets for fast data handling on both qualitative and quantitative analyzes of essential oils.

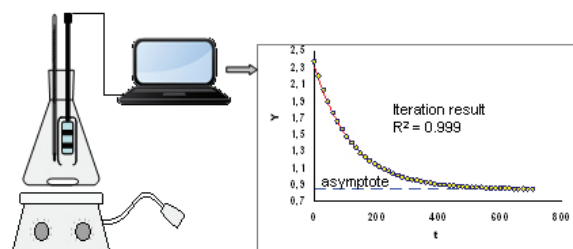
Educação

- 106 Interações intermoleculares e o fenômeno da solubilidade: explicações de graduandos em química
Marianna M. Junqueira e Flavio A. Maximiano



This article analyses the students' answers and representations about intermolecular interactions involved between oxygen gas and water.

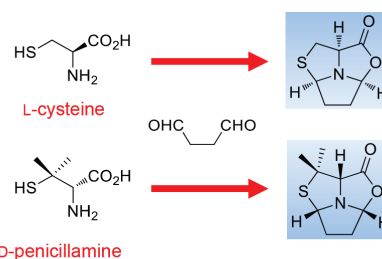
- 118 Practical aspects of the analysis of the progression curves of first and pseudo-first order reactions
Joanna Nackiewicz, Józef Hurek and Aneta Wróbel



Conductometric monitoring of the basic hydrolysis of an ester using a digital data acquisition kit. The progress curve with the trend line calculated based on the iteratively determined asymptote.

- 123 One-pot diastereoselective synthesis of chiral tricyclic L-cysteine and D-penicillamine derivatives: a laboratory experiment

Maria I. L. Soares, Susana M. M. Lopes, Dina Murtinho and Teresa M. V. D. Pinho e Melo

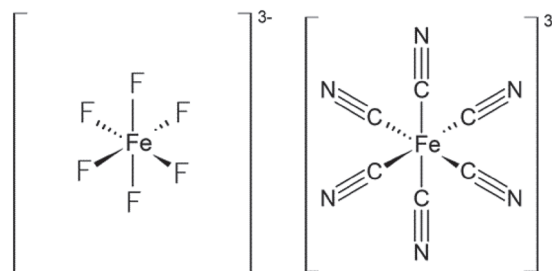


A one-pot diastereoselective synthesis of thiazolidine-ring fused systems derived from enantiomerically pure amino acids is described as an experiment to be carried out by upper-division undergraduate students in a laboratory classroom.

- Stereoselective synthesis
- Multi-step reaction mechanism
- Simple isolation procedure
- Two lab sessions

- 127 Uso da teoria do funcional de densidade na análise de spin crossover em aulas de química inorgânica

Karina de C. Pougy e Sérgio de P. Machado



Predicting spin crossover through Density Functional Theory and using in Inorganic Chemistry classes.

Carta ao Editor

- 131 A surpreendente trajetória de um livro rebelde
- Silvio Cunha*

