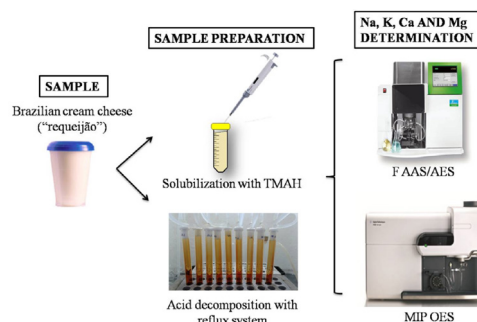


## Artigo

- 711 Use of MIP OES and F AAS/AES for determination of Ca, K, Na and Mg in Brazilian cream cheese

*Leila M. N. Diniz, Thaiane S. Carrasco, Aline L. Medina, Anderson S. Ribeiro and Adriane M. Nunes*

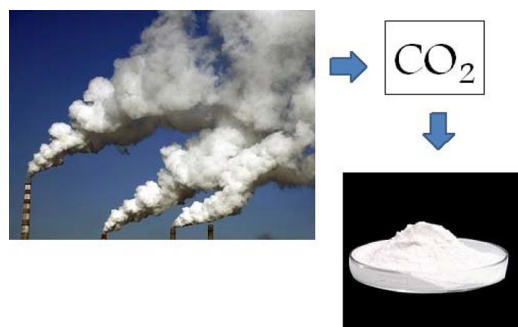
Development of two methods of sample preparation of Brazilian cream cheese ("requeijão") samples for elemental determination.



- 720 Fixação de CO<sub>2</sub> em efluente salino de indústria petroquímica

*Leonardo F. Santos, André L. A. Santos e Sônia D. F. Rocha*

CO<sub>2</sub> reaction in brines: a possible way of having carbon dioxide transformed into carbonates forms.



- 726 Equilíbrio químico e cinética enzimática da interação de α-amilase com compostos fenólicos encontrados em cerveja

*George A. V. de Oliveira e José M. S. F. da Silva*

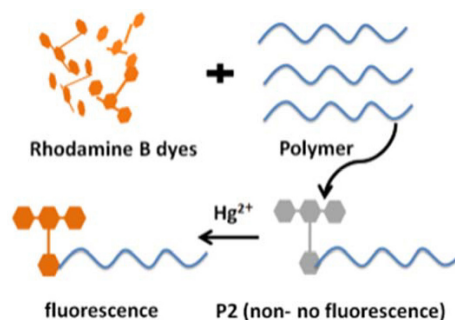
Structure of alpha-amylase showing the inhibitory interaction of chlorogenic acid with the catalytic subsite in the enzyme.



- 733 A novel rhodamine-based fluorescence chemosensor containing polyether for mercury (II) ions in aqueous solution

*Wenqi Du, Yu Cheng, Weixin Shu and Zhengjian Qi*

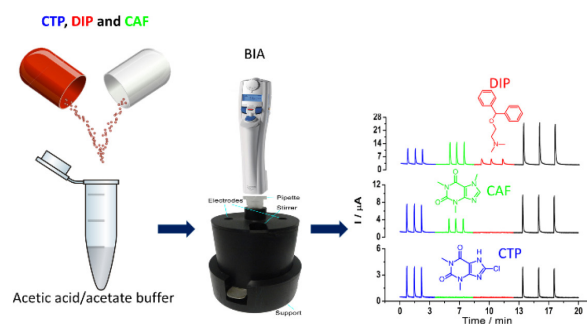
Rhodamine-based fluorescence chemosensor containing polyether for mercury (II) ions.



- 739 Amperometric determination of 8-chlorotheophylline, caffeine, and diphenhydramine in a single run

Jhonys M. Freitas, Thiago da C. Oliveira, Rodrigo A. A. Munoz and Eduardo M. Richter

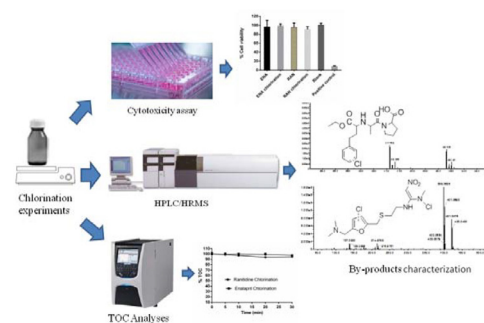
A simple method for simultaneous determination of 8-chlorotheophylline (CTP), caffeine (CAF), and diphenhydramine (DIP) using batch injection analysis with multiple pulse amperometric detection (BIA-MPA).



- 745 Characterization of enalapril and ranitidine chlorination by-products by liquid chromatography/high-resolution mass spectrometry and their toxicity evaluation

Frederico J. O. Quintão, Mariana P. de Souza, Silvana de Q. Silva, Sérgio F. Aquino and Robson J. de C. F. Afonso

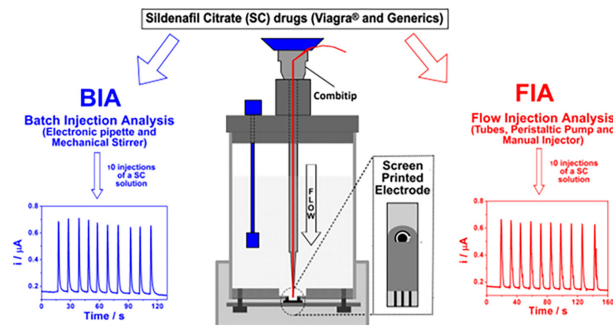
This article reports the characterization of enalapril and ranitidine chlorination by-products by liquid chromatography/high-resolution mass spectrometry and evaluation of the cytotoxicities by MTT assay.



- 752 Determinação rápida e simples de citrato de sildenafila (Viagra® e genéricos) empregando eletrodo impresso de carbono em sistemas FIA e BIA com detecção amperométrica

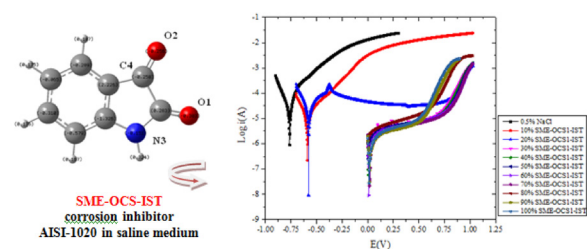
Rafael S. Backes, Tiago J. Guedes, Wallans T. P. dos Santos e Rodrigo A. B. da Silva

This work presents two hydrodynamic amperometric methods for simple and fast determination of sildenafil citrate in pharmaceutical formulations by Batch Injection Analysis (BIA) and Flow Injection Analysis (FIA) with an electrochemical cell adapted for screen printed electrodes.



- 760 Inibição à corrosão de aço-carbono em meio salino pelo heterociclo isatina veiculado em microemulsões

Ádna D. N. de Souza, Cátia G. F. T. Rossi, Tereza N. de C. Dantas, Miguel A. F. de Souza, Djalán F. de Lima, Fabrício G. Menezes e M<sup>a</sup> Aparecida M. Maciel

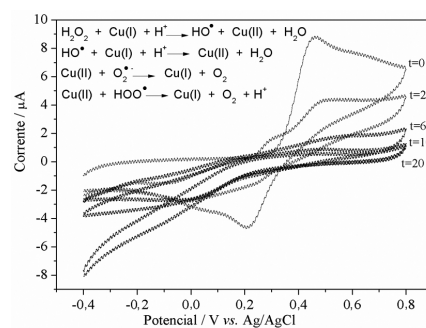


Isatin as corrosion inhibitor loaded into microemulsion o/w type systems.

769 Estudo mecanístico das reações Fenton e cupro-Fenton por análise voltamétrica *in situ*

Leidi C. Friedrich, Carmem Lúcia P. S. Zanta, Amilcar Machulek Jr. e Frank H. Quina

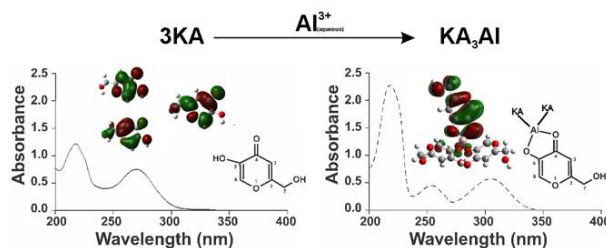
The addition of Cu(II) ions to classical Fenton reaction conditions is shown to accelerate the degradation of organic compounds. Voltammetric studies confirm the catalytic effect of catechol in the presence of Fe(III)/Fe(II) and Cu(II)/Cu(I).



774 Elucidation of the electronic spectrum changes of KA-Al<sup>3+</sup> complex by potentiometric titration, FTIR, <sup>13</sup>C RMN and quantum mechanics

Mário S. Piantavini, Alan G. Gonçalves, Ângela C. L. B. Trindade, Miguel D. Nosedá, Ana L. R. Mercê, Antonio E. H. Machado and Roberto Pontarolo

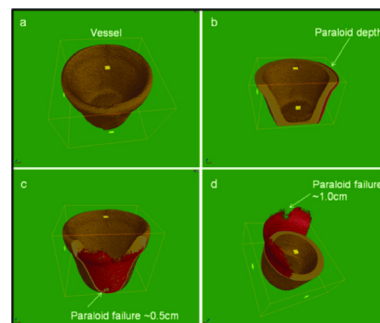
KA-Al<sup>3+</sup> complex structures were studied and characterized by potentiometric and spectrophotometric titrations. Structures have the binding site composed mainly of oxygen atoms of C4 and C5.



781 Penetração e distribuição do consolidante Paraloid® B-72 em cerâmica branca estudada por tomografia com nêutrons

Marco A. S. Pereira, Reynaldo Pugliesi, Marcos L. G. Andrade e Maria I. Prudêncio

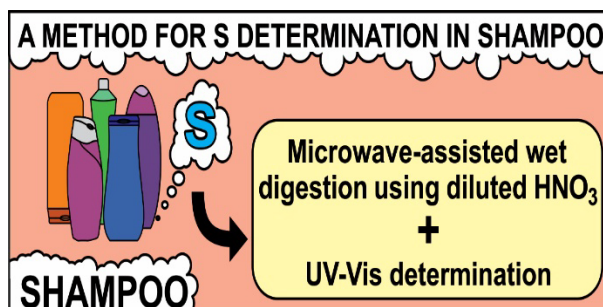
3D images of the Paraloid® B-72 distribution into the vessel maintained at air humidity of 35%.



785 Determinação de enxofre em *shampoo* por espectrofotometria UV-VIS: avaliação de métodos de preparo de amostras

Natalia J. Bielemann, Diogo L. R. Novo, Rodrigo M. Pereira, Julia E. Mello, Vanize C. Costa e Marcia F. Mesko

Determination of sulfur in shampoo by UV-Vis spectrophotometry after microwave-assisted wet digestion using diluted nitric acid.

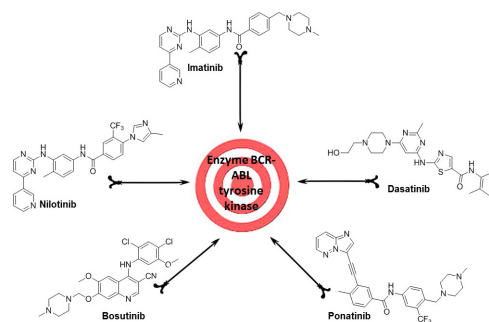


## Revisão

- 791 Sínteses e propriedades de fármacos inibidores da tirosina quinase BCR-ABL, utilizados no tratamento da Leucemia Mieloide Crônica

*Liviane D. de Azevedo, Mônica M. Bastos, Andressa P. de Oliveira e Núbia Boechat*

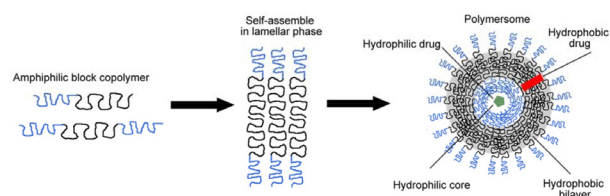
The five approved BCR-ABL Tyrosine Kinase inhibitors (TKI) used in Chronic Myeloid Leukemia (CML) are reviewed aiming the main synthetic routes, highlighting the advantages and disadvantages associated with them.



- 810 Polimerossomos *versus* lipossomos: a evolução da “bala mágica”

*Alexsandra C. Apolinário, Juliana de A. Pachioni-Vasconcelos, Adalberto Pessoa Jr. e Carlota de O. Rangel-Yagui*

Amphiphilic block copolymers can self-aggregate in solution leading to a variety of nanostructures, including vesicles known as polymersomes.

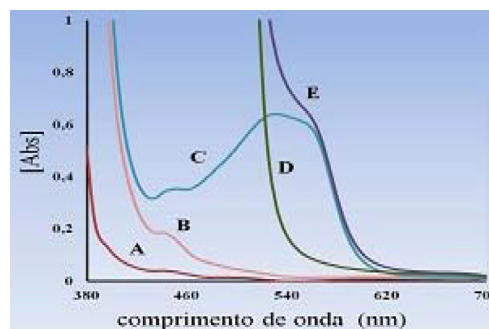


## Nota Técnica

- 818 Uso da espectrofotometria UV-Vis para diferenciar as colorações do biodiesel de palma e do corante marcador de óleo diesel

*Maria S. M. Quintino, Waldemar P. Oliveira Filho, Fábio S. Vinhado, Warley G. Santos, Rodrigo B. C. Dutra, Patrícia A. Oliveira, Patrícia K. G. Costa e Itânia P. Soares*

Spectra obtained for different mixtures of palm biodiesel/diesel fuel containing red dye show that qualitative distinction is possible.

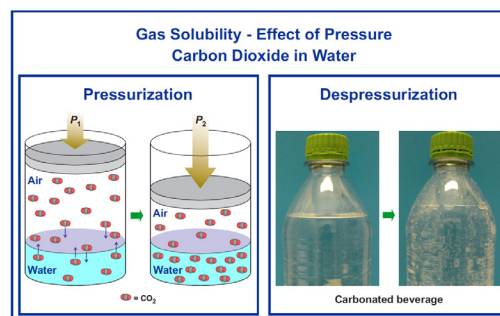


## Educação

- 824 Solubilidade e reatividade de gases

*Luciana A. Silva, Luiz S. Carvalho, Wilson A. Lopes, Pedro A. de P. Pereira e Jailson B. de Andrade*

The solubility of gases in a liquid solvent depends on the partial pressure of the gas on the liquid and on the possible liquid-gas reactions. One case that well illustrates this phenomenon is the  $\text{CO}_2$  dissolution in water in carbonated beverages.



- 833 Determinação de fosfato em refrigerantes utilizando um scanner de mesa e análise automatizada de dados: um exemplo didático para ensino de química

*Heloisa Colzani, Quethelen E. A. G. Rodrigues, Claudia Fogaça, Jane M. L. N. Gelinski, Edenir R. Pereira-Filho e Endler M. Borges*



Phosphate determination using digital images.

## Assuntos Gerais

- 840 Patent analysis: a look at the innovative nature of plant-based cosmetics

*Francine C. S. César, Fausto Carnevale Neto, Geciane S. Porto and Patrícia M. B. G. Maia Campos*

The use of plants have become a trend in cosmetic market. Patent analysis can act as complementary tool to scientific knowledge guiding innovative research in cosmetic sciences.

