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Basic regularities of the extraction of iron (III) by melt of low melting organic substances and the study of the influence of concomitant metals in the matrix

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The extraction of iron (III) by melt of low melting organic substances is investigated with such extractants as palmitic acid, 8-hydroxyquinoline and their mixture. A method that combines the atomic absorption determination of iron (III) and the extraction of the low-melting organic substances is proposed and the influence of large amounts of concomitant metals to iron on its analytic signal is studied. The quantitative extraction was obtained with the electrochemical atomization in a graphite furnace of the atomic absorption spectrometer from artificial mixtures in optimal conditions. Results show that a large excess of concomitant elements have a significant influence on the value of the atomic absorption of iron (III). This indicates the necessity for pre-extraction separation of copper (II), zinc (II) and cadmium (II).

Biography

Issayeva S graduated in the Chemical Faculty of Moscow State University and completed her Candidate of Science degree in Analytical Chemistry at the Chemistry Department of Al-Farabi Kazakh National University (Almaty, Kazakhstan). She is currently Teaching Assistant in the Chemistry and Biology Department, School of Science and Technology, Nazarbayev University (Astana, Kazakhstan). She has 16 publications in journals and conferences.

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