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PII: S1226-086X(17)30566-X
DOI: https://doi.org/10.1016/j.jiec.2017.10.026
Reference: JIEC 3682

To appear in:

Received date: 26-8-2016
Revised date: 26-9-2017
Accepted date: 14-10-2017

Please cite this article as: Mariam S.Arain, Tasneem G.Kazi, Hassan I.Afridi, Muhammad Bilal, Jamshed Ali, Abdul Haseeb, Application of dual cloud point extraction for the enrichment of zinc in serum samples of psychiatric patients prior to analysis by FAAS, Journal of Industrial and Engineering Chemistry https://doi.org/10.1016/j.jiec.2017.10.026

Application of dual cloud point extraction for the enrichment of zinc in serum samples of psychiatric patients prior to analysis by FAAS

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Abstract

It is reported in literature that zinc (Zn^{2+}) has antidepressant activity. In present study Zn^{2+} was analyzed in blood serum of male patients having various psychiatric disorders (schizophrenia, depression, bipolar). As it is usually present in trace levels. Hence a novel, environmental friendly, dual-cloud point extraction (*d*-CPE) method was developed for the enrichment of its trace levels in acid digested serum samples. In the first step of *d*-CPE, Zn^{2+} was complexed with 1-(2-pyridylazo)-2-naphthol (PAN), and the complex was entrapped in a nonionic surfactant (Triton X-114). After