



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2013_IRJPAC_8157
Title of the Manuscript:	A Rapid Spectrophotometric Method for the Determination of Trace Level Silver Using 1, 5-Diphenylthiocarbazone in Aqueous Micellar Solutions
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<u>Compulsory</u> REVISION comments	NA	
<u>Minor</u> REVISION comments	NA	
<u>Optional/General</u> comments	In the present work, the authors have developed a simple, sensitive, selective and inexpensive micellar method using Ag-dithizone complex for the determination of silver in industrial, environmental, photographic, biological and soil samples. The presence of micellar system (altered environment) avoids the previous steps of solvent extraction and reduces the cost and toxicity while enhancing the selectivity, sensitivity and molar absorptivity. The average molar absorptivity of the Ag-dithizone complex formed in the presence of the anionic SDS surfactants is almost the ten-times $1.6 \times 10^5 \text{ L. mol}^{-1} \text{ cm}^{-1}$ the value obtained in the standard method ($1.0 \times 10^4 \text{ L. mol}^{-1} \text{ cm}^{-1}$); the maxima of absorption is shifted by about 15 nm when compared with standard method, resulting in an increase in the sensitivity of the method. With suitable masking, the reaction can be made highly selective. The sensitivity in terms of molar absorptivity ($\epsilon = 1.6 \times 10^5 \text{ L. mol}^{-1} \text{ cm}^{-1}$) and precision in terms of relative standard deviation of the present method are very reliable for the determination of Ag in real samples down to (ng g^{-1}) levels in an aqueous medium at room temperature ($25 \pm 50^\circ\text{C}$). Although many sophisticated instrumentation techniques, such as pulse polarography, HPLC, NAA, AAS and ICP- MS, are available for the determination of trace amounts of Ag, present spectrophotometric methodology is cost effective (comparatively low cost of the instrument), easy handling, portable, and available in the under graduate laboratories. In view of these highlighting features the study deserves publication without revision in "International Research Journal of Pure and Applied Chemistry".	Thanks a lot to the Reviewer for his good comments.