

## ***Interactive comment on “Method development for arsenic analysis by modification in spectrophotometric technique” by M. A. Tahir et al.***

**M. A. Tahir et al.**

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### **Response to Anonymous Referee#1**

\* \* \* \* \*What was modified and improved should be stated more clearly. Particularly, if the modified method achieved the goal of the study should be more emphasized in the Results and Discussion section.

Comparison of modified techniques with other spectrometric method is given in detail at table-4 of the manuscript. What was modified is stated very clearly in the Procedure.

\* \* \* \* \*Figure 7 has not been made properly. It should show a linear relationship, if the x-axis is Arsenic concentration by Spectrophotometer. These figures should be drawn in a square box. I believe Figure 4 does not convey the intention of the authors.

Figure-7 is developed again as per these comments.

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\* \* \* \* \*Throughout the paper, statistical significance consideration is lacking. Figure 6 has any scientific meanings? More discussions should be given on these data to increase the impact of this paper.

For figure-6 statistical consideration in the form of regression equation is added.

\* \* \* \* \*Schematic diagrams should be illustrated rather than the photos in Figs. 2 & 3. So that other researchers could reproduce the experimental data.

It will be added in the manuscript.

\* \* \* \* \*Are there any obstacles for this method to be adopted as an appropriate analytical method particularly in developing countries? The authors' views on that would be highly appreciated.

The answer to this query is given in the line number 20–25.

### **Reply to Comments given by Mr. Kashi Banerjee**

\* \* \* \* \*Although certain metals i.e. chromium, cobalt, copper, mercury, molybdenum, nickel, platinum and silver interfere in the generation of arsine, the concentrations of these metals normally present in water samples do not constitute significant interferences in this method. Antimony salts in the sample form Stibine, which may interfere with color development by yielding a red color with maximum absorbance at 510 nm. The level of phosphate and chloride in groundwater is comparatively lower than the waste water and is not responsible for profound interferences specifically in this method.

\* \* \* \* \*We agree with the reference (Arsenic Chemistry: Eh-pH Diagram; Ferguson & Garvis, 1972) mentioned in the comments; however, we already have described this in lines 20–25 is equally relevant.

\* \* \* \* \*The difference in concentration is  $\pm 1$  to 2 ppb that is not noteworthy at very lower concentration as the Absorbance vs. concentration is shown in Figure 5 by this

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technique. Degree of fitness ( $R^2$ ) is 0.9958 which shows excellent analytical results.

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Interactive comment on Drink. Water Eng. Sci. Discuss., 1, 135, 2008.