

## **Collection and preservation of hydrogeochemical and environmental samples**

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For the past years, more and more scientists have been working on research in environmental studies, trying to identify the origin of pollution or alterations in nature. When we apply this concept to water samples, special care should be taken to ensure the preservation and quality of the sample. The appearance of precipitates (such as  $\text{Fe}_2\text{O}_3$  and  $\text{ZnO}$ ) and microbiological activity are examples of problems that may occur and cause chemical modifications.

In this work, we compare sampling techniques for the analyses of some metals and anions, using ion chromatography and argon plasma atomic emission spectrometry. The inexpensive sampling technique employed is quite easily performed even in difficult field conditions. It has been used to collect samples in many locations in Brazil and results for ground and superficial water are shown and discussed. Tests were made in order to analyze suspended solids (retained by a  $0.45\ \mu\text{m}$  filter) and results are presented.