The present work reports “Analytical Study of Heavy Metals in Water of Different Sources in Balco Area of Korba district” has been submitted as part of the requirements for the Ph.D degree in Chemistry at School of Physical Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh. The study has been carried out at the Dept. of chemistry, C.M.D. P. G. college from January 2009 to December 2010.

The description is organized in five parts. Chapter – 1 serves as a general introduction of the subject entitled in the research task and limitations related to the field work are discussed. The purpose of the present work and importance of water, its distribution and parameters defining water quality are put into a broader perspective. Since no relevant work is done in Balco area, Chapter – 2 of the report summarizes relevant literatures for physicochemical properties of water, influence of heavy metals and statistical analysis emphasizing correlation coefficient, %CV and WQI. The references are arranged chronologically and abbreviation format of scientific journal are adopted as per International Serial Catalogue, published by ICSUAB, Paris, France. Chapter – 3 gives the details of the experimental procedure conducted on research centre C.M.D. P.G. College, Bilaspur (C.G.) and metallic elements are assessed with the help of ICP – AES method at ANACON laboratory, Nagpur (M.S.). Chapter – 4 is endow with a tabular and graphical view to the observation recorded in the experiments. Chapter – 5 discusses the results obtained in due course of research work done along with the expected consequences. Lastly, we have discussed the relations between r and t values among various dependent and independent parameters. In the concluding part of the thesis, Executive Summary of the whole research work is given containing the impact of pollution in human beings with some suggestion by which intrusion of pollutions into water can be prevented and prescribed some simpler indigenous technologies for purification.

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