

## ACKNOWLEDGMENTS

The author wishes to express his deep and sincere gratefulness to Prof. A. Bose, D.Sc., F.N.A. for his keen interest and constant valuable guidance during the whole period of work and in the preparation of the thesis. The author is highly indebted to Dr. M. Chowdhury, Professor in Physical Chemistry, Presidency College, Calcutta for suggesting the problem. The whole work done by the author and the preparation of the thesis would not have been possible without Dr. Chowdhury's sincere help and encouragement, wherever necessary. He is very much thankful to Dr. U. S. Ghosh for his most valuable suggestions and discussions. He is grateful to his many other friends and co-workers, particularly to Dr. S. Bera, <sup>M/S</sup> R. K. Mukherji, M. Saha, D. Mukherji and S. Bagchi.

The author is grateful to the authorities of the Presidency College for the permission to use VSU-2 spectrophotometer and <sup>to</sup> Sindri Fertilizer Corporation, Sindri ~~for~~ allowing him to use ~~their~~ e.s.r. spectrometer.

He is grateful to the authorities of the Indian Association for the Cultivation of Science <sup>in awarding a</sup> Senior Fellowship, ~~and for~~ <sup>providing</sup> library and laboratory facilities. Thanks are also due to Mr. M. K. Basak for his careful typing of the thesis.

Ranjit Kumar Shaha