

SYMPOSIUM ON SPECTROCHEMICAL ANALYSIS  
FOR TRACE ELEMENTS

## INTRODUCTION

BY D. L. TIMMA<sup>1</sup>

One of the functions of Committee E-2 on Emission Spectrochemical Analysis is to keep informed regarding the latest advances in its field. To this end from time to time symposia on one of the many aspects of emission spectroscopy are arranged at which the latest developments in a particular area are presented. In the past, symposia have been held covering light sources, X-ray fluorescence, flame photometry, and mass spectrometry.<sup>2</sup>

In recent years it has become more and more apparent that important scientific advances have been attained because analytical methods have been developed for estimating very low concentrations of certain elements. Today whole industries are greatly influenced because of the ability to determine or control trace

amounts of elements present in materials. These newly perfected techniques have found application in such diverse fields as medicine, animal nutrition, metallurgy, plant nutrition, and geological exploration. Research in the semiconductor and transistor fields has shown the great importance of knowledge of the presence and concentration of elements present at increasingly lower levels in supposedly pure materials. In a similar manner atomic energy research has placed greater and greater demands upon the analyst to provide data concerning elements at concentration levels which a few years ago defied determination.

Because of this growing interest in trace analysis and because emission spectroscopy is one of the few methods available for analytical work at trace levels, this symposium was arranged for presentation at the Annual Meeting of the Society in 1957. By bringing together a group of speakers from widely differing fields of scientific endeavor who have worked on the problem of spectrochemical analysis for traces, it is hoped that this symposium will serve to transfuse new techniques and ideas.

<sup>1</sup> Head, Department of Control, Research Division, Mead Johnson and Co., Evansville, Ind., formerly Research Group Leader, Monsanto Chemical Co., Creve Coeur, Mo.

<sup>2</sup> Symposium on Spectroscopic Light Sources (1947), Symposium on Fluorescent X-ray Spectrographic Analysis (1953), Symposium on Flame Photometry (1951), and Symposium on Chemical Analysis of Inorganic Solids by Means of the Mass Spectrometer (1951). (Issued as separate technical publications *ASTM STP Nos. 76, 157, 116, and 149*, respectively.)