Laboratory Manual of Analytical Techniques in Horticulture
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Foreword

The present manual on “Analytical Techniques in Horticulture” describes the handling of laboratory instruments, use of chromatographic techniques and the methods for the estimation of mineral elements and various biochemical and physiological constituents in fruit, vegetables, plant parts and processed fruit and vegetable products. Information in the above mentioned aspects is fragmentary and scattered at diverse sources. A great problem has been and is being experiences by the undergraduate and postgraduate students dealing with the analysis of fruits, vegetables, processed products and soils and leaf samples. The present manual is aimed at solving the above mentioned problem, as it will provide a wholesome information on all the above mentioned aspects at a single source, in a systematic manner. The language of the manual is simple and easy to understand. The figures and the illustrations have made the manual self explanatory and lucid. I hope this manual will find wide acceptability and it will definitely help in developing skills, knowledge and proficiency in the estimation of various constituents and handling of laboratory instruments. This manual will prove to be a milestone for the horticulturists, plant physiologists, biochemists, soil scientists, students, fruit and vegetable processing industries and all others engaged in analytical work. It is a praiseworthy effort on the part of the authors. I congratulate the authors for bringing out the precise and concise information.

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Preface

Today, much emphasis is given on practical training to agriculture students but no serious attempts have been made for strengthening this aspect of education. Very few manuals are available to the students and scientists working on various aspects of agriculture. Keeping this fact in view, the authors feels the necessity of bringing out a concise and precise manual on “Analytical Techniques In Horticulture”. It is hoped that manual will help the graduate and post-graduate students of horticulture, plant physiology, biochemistry, soils and scientists working in these disciplines, in addition to its usefulness to the food processing industries and quality control laboratories.

Although there are a few books on this subject, one has to study a number of original papers to get at the actual methodology. An attempt has been made to provide methods required for estimation of various biochemical and physiological constituents and mineral nutrients in fruits, vegetables, plant parts, soil and processed foods at one place.

The present manual is aimed at filling upon the important gaps between theory and practice. Part-I of the manual deals with the analytical techniques for bio-chemical constituents and physiological parameters and Part-II with the analytical procedures for processed foods. Part-III of the present manual deals with handling of some common laboratory instruments, Part-IV with the estimation of mineral elements in soil, plant parts and processed fruit and vegetable products and Part-V with the use of chromatography for separation and identification of various biochemical constituents. The authors are highly grateful to S/Sh./Dr.

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