

# PREFACE



The food industry is the largest user of packaging. A food commodity makes many demands on the packaging materials – preservation, protection, distribution, safety and hygiene, adherence to legislations, growing sophistication and changing market trends, consumer convenience in product purchase and use, and above all environmental issues. Plastics have been able to meet these growing demands and have made phenomenal contribution to the food industry. The latest technologies like aseptic packaging, retort packaging, CA/MA packaging, active/intelligent/smart packaging and many others would not have been possible without the contribution of plastics.

The versatility of plastics and the advantages they offer such as preservation, protection, light weight, hygiene, cost effectiveness, ease of availability, its amenability to be produced in different forms, sizes and shapes and many others, make it an ideal material of choice for food packaging.

The ICPE (Indian Centre for Plastics in the Environment) has taken the initiative to publish this detailed encyclopaedic monograph with the objective of clearing the myths about plastic.

The success story of plastics has been spelt out in this monograph in the seven main sections dealing with various aspects of plastics packaging.

In the first section, the book begins with the profile of the Indian Food Industry and the role of plastics in conservation of national food losses. The role of plastics in modern trends in processing and packaging of foods has been highlighted and goes on to discuss the Indian Plastic Industry scenario for packaging of food and also gives the review of the specialized plastics packaging materials and systems.

In the second section, each of the chapters is devoted to a specific food group. Each chapter begins with the market data to give the reader an idea of the volume of products in that group. This is followed by the packaging requirements of the

specific food group and the role of plastics in meeting them as well as the package type and constructions used. Wherever possible, actual case studies have been included based on the study conducted at IIP, CFTRI, DFRL, CIFT, BARC and other Research Organisations.

The third section, has chapters which focus on the role and contribution of plastics in specialized packaging systems such as aseptic packaging, retort packaging, MA/CA packaging, smart/intelligent packaging, stretch wrapping/shrink packaging, micro-ovenable packages and retortable packages.

The fourth section deals with the testing and quality control of polymeric materials, food safety, compatibility and shelf-life aspects. This section also gives an insight into the Food Packaging Laws and Regulations, the National and International Standards on food packaging as well as issues related to plastic packaging and the environment measures for eco-protection.

The fifth section highlights the importance of quality control and the significance of testing. The sixth section elaborates on various ancillary materials used in food packaging.

Many sources have been referred to while preparing this monograph and the references found at the end of each chapter identify the sources from which material is drawn for this publication.

A number of experts have contributed to put this monograph together. We acknowledge their contribution in section seven. Our special thanks are also extended to those who have supplied comprehensive chapter drafts.

We believe that the information provided in the monograph will broaden the knowledge horizon of the public at large and will be a valuable asset to food industry, packaging industry, R&D institutes, students and the policy makers in the country.



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