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Nota di contenuto	Foreword; Preface; Contents; Contributors; Abbreviations; Part I Total Diet Study Methodology; Chapter 1: Total Diet Studies-What They Are and Why They Are Important; Introduction; What Are Total Diet Studies?; What Information Do Total Diet Studies Provide?; How Do Total Diet Studies Differ from Other Surveillance Programs?; Why Are Total Diet Studies Important?; Where to Start?; References; Chapter 2: The Origin of Total Diet Studies; Introduction; Early Monitoring Activities; The First Studies of the Total Diet; Total Diet Studies Go Global; References Chapter 3: Risk Analysis Paradigm and Total Diet StudiesIntroduction; Role of International Organizations; Components of Risk Analysis; Risk Assessment; Risk Management; Risk Communication; References; Chapter 4: Overview of Dietary Exposure; General Principles; Interpreting Results of Dietary Exposure Assessments; Food Consumption Data; Food Balance Sheets; Household Inventories; Household Food Use Data; Individual Consumption Studies; Food Chemical Concentration Data; Overview of Methods Used to Estimate Consumer Exposure; Acute Dietary Exposure Assessments Chronic Dietary Exposure AssessmentsTiered Approaches; Screening Levels; Progressive Levels; Characterizing Uncertainty and Variability;

Deterministic Versus Distributional Exposure Estimates; Conclusion; References; Chapter 5: Scope, Planning and Practicalities of a Total Diet Study; Introduction; Objectives of a Total Diet Study; Management of a Total Diet Study; Components of a Total Diet Study; Planning Meetings; Indicative Budget; Scope of the TDS Food List; Which Chemical Analyses to Use?; Which Organic Chemical Analyses?; Which Inorganic Analyses?; Analytical Considerations
Analytical Plan: Food Group Composite or Individual Foods ApproachSampling; Sample Preparation; System Pre-test/Pilot Test; Data Evaluation; Reanalyses; Consumption Data; Exposure Estimates: Use a Tiered Approach; Risk Characterization; Analytical Data Reports; Interpretative Report and/or Papers; Peer Review; Effective Risk Communication; TDS Management; Standard Operating Procedures (SOPs); Revising the TDS; TDS Project Timeline; Conclusion; References; Chapter 6: Preparing a Food List for a Total Diet Study; Introduction; Which Foods and How to Describe Them?; Construction of a Food List Objectives of the TDSAvailability of Food Consumption Data; Budget; Compositing of Food Samples; Practical Considerations When Constructing a Food List; Useful Resources; Food Nomenclature; Yield Factors and Edible Coefficients (see http://toolbox.foodcomp.info/ToolBox_RecipeCalculation.asp); References; Chapter 7: Selecting Chemicals for a Total Diet Study; Introduction; Chemical Agents in Food; Criteria for Setting Priorities; Chemicals Recognized as Health Risks to the Population; Chemicals Recognized as Highly Toxic, But Exposure Is Uncertain; Recommendations for Priority Chemicals Conclusions

Sommario/riassunto

Total Diet Studies is intended to introduce the total diet study (TDS) concept to those involved in assuring the safety of the food supply from chemical risks (e.g., government agencies and the food industry) as well as to a wider audience of interested parties (e.g., development agencies and consumer organizations). It presents the various steps in the planning and implementation of a TDS and illustrates how TDSs are being used to protect public health from the potential risks posed by chemicals in the food supply in both developed and developing countries. The book also examines some of the applications of TDSs to specific chemicals, including contaminants and nutrients. The goal of a TDS is to provide baseline information on levels and trends of exposure to chemicals in foods as consumed by the population. In other words, foods are processed and prepared as typically consumed before they are analyzed in order to best represent actual dietary intakes. Total diet studies have been used to assess the safe use of agricultural chemicals (e.g., pesticides, antibiotics), food additives (e.g., preservatives, sweetening agents), environmental contaminants (e.g., lead, arsenic, cadmium, radionuclides), processing contaminants (e.g., acrylamide, polycyclic aromatic hydrocarbons, chloropropanols), and natural contaminants (e.g., aflatoxins) by determining whether dietary exposures to these chemicals are within acceptable limits. Total diet studies can also be applied to certain nutrients where the goal is to assure intakes are not only below safe upper limits, but also above levels deemed necessary to maintain good health. International and national organizations, such as the World Health Organization, the European Food Safety Agency, and the US Food and Drug Administration recognize the TDS approach as one of the most cost-effective means of protecting consumers from chemicals in food, for providing essential information for managing food safety, including food standards, and for setting priorities for further investigation and intervention. About the Editors Gerald G. Moy: For over twenty years, Dr. Moy served as a staff scientist with the World Health Organization

and was primarily responsible for the exposure assessment of chemical hazards in food, including coordination of total diet studies at the international level. Although retired, he remains active as a food safety adviser for various national and international organizations. Richard W. Vannoort: A senior scientist with the Institute of Environmental Science & Research Ltd (ESR), Dr. Vannoort has been the scientific project leader of the last five New Zealand Total Diet Studies. He is an internationally recognized expert on TDSs and has been a technical adviser to many countries, including numerous international and regional TDS training courses sponsored by the World Health Organization.