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Nota di contenuto	Chapter 1. Potassium permanganate Oxidisable Carbon (POXC) -- Chapter 2. Water Soluble Carbon in Soils (WSC) -- Chapter 3. Soil Microbial Biomass Carbon (SMBC) -- Chapter 4. Light Fraction (LF) Carbon -- Chapter 5. Determination of soil acid hydrolysable carbohydrates -- Chapter 6. Labile pool-I and Labile pool-II carbon: 2-step Acid Hydrolysis -- Chapter 7. Hot water extractable Carbon (HWEC) -- Chapter 8. Particulate Organic Matter-Carbon and Mineral associated Organic Carbon -- Chapter 9. Determination of Water-stable aggregates Carbon -- Chapter 10. Humic acid (HA) and Fulvic acid (FA) carbon -- Chapter 11. Determination of soil organic carbon by wet digestion method -- Chapter 12. Determination of total soil organic carbon (Dry combustion method) -- Chapter 13. Total organic carbon in soil extracts: titration method -- Chapter 14. Estimation of Total Carbon and Total Nitrogen in Soil Samples by Dumas Method -- Chapter 15. Soil calcium carbonate equivalent by Volumetric Calcimeter method -- Chapter 16. Assay of soil dehydrogenase activity -- Chapter

## 17. Assay of soil Glucosidase activity.

### Sommario/riassunto

This textbook provides a thorough and systematic understanding of carbon fractions and the laboratory procedures for their estimation. It serves as both a practical lab manual and an educational guide, fostering knowledge dissemination and skill development in soil carbon research. It consolidates all procedures related to soil carbon fractionation, including active-, slow-, and passive-carbon pools into one document, with detailed methodologies. For complete and proper implementation, each method is provided with relevant chemical reactions, principles, and a step-by-step protocol in the form of flowcharts and calculations. This book is designed for streamlining the workflow for soil researchers and reducing preparation time. It promotes high-end carbon analyzers for sustainable, low-waste alternatives to traditional methods, aligning with modern environmental and agricultural resilience goals. This book is exclusively for advanced graduate students and researchers working in the field of soil science and related disciplines.