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Titolo	Biochar : a guide to analytical methods / / editors, Balwant Singh, Marta Camps-Arbestain and Johannes Lehmann
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ISBN	1-4863-0511-3 1-4863-0510-5
Descrizione fisica	1 online resource (321 pages) : illustrations, tables
Disciplina	662.74
Soggetti	Charcoal - Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	1 Sampling, storage and preparation of biochar for laboratory analysis -- 2 Proximate analyses for characterising biochars -- 3 Biochar pH, electrical conductivity and liming potential -- 4 Analysis of biochars for C, H, N, O and S by elemental analyser -- 5 Inorganic carbon -- 6 Dissolved carbon and LC-OCD of biochar -- 7 Determination of cation exchange capacity in biochar -- 8 Determining acidic groups at biochar surfaces via the Boehm titration -- 9 Total elemental analysis of metals and nutrients in biochars -- 10 Available nutrients in biochar -- 11 Polycyclic aromatic hydrocarbons in biochar -- 12 Analysis of biochar porosity by pycnometry -- 13 Guiding principles for measuring sorption of organic compounds on biochars -- 14 Analysis of biochars by 13C nuclear magnetic resonance spectroscopy -- 15 Analysis of biochars using benzene polycarboxylic acids -- 16 Pyrolysis-GC-MS of biochar -- 17 Analysis of biochars by hydropyrolysis -- 18 Biochar analysis by Fourier-transform infra-red spectroscopy -- 19 Carbon near-edge absorption fine structureas a tool for understanding chemical differences in biochars -- 20 X-ray photoelectron spectroscopy.
Sommario/riassunto	"Interest in biochar among soil and environment researchers has increased dramatically over the past decade. Biochar initially attracted attention for its potential to improve soil fertility and to uncouple the

carbon cycle, by storing carbon from the atmosphere in a form that can remain stable for hundreds to thousands of years. Later it was found that biochar had applications in environmental and water science, mining, microbial ecology and other fields. Beneficial effects of biochar and its environmental applications cannot be fully realised unless the chemical, physical, structural and surface properties of biochar are known. Currently many of the analytical procedures used for biochar analysis are not well defined, which makes it difficult to choose the right biochar for an intended use and to compare the existing data for biochars. Also, in some instances the use of inappropriate procedures has led to erroneous or inaccurate values for biochars in the scientific literature. Biochar: A Guide to Analytical Methods fills this gap and provides procedures and guidelines for routine and advanced characterisation of biochars. Written by experts, each chapter provides background to a technique or procedure, a stepwise guide to analyses, and includes data for biochars made from a range of feedstocks common to all presented methods. Discussion about the unique features, disadvantages and advantages of a particular technique is an explicit focus of this handbook for biochar analyses."--Amazon.com