1. Record Nr. UNINA9911019363403321

Autore	Speight James G
Titolo	Environmental analysis and technology for the refining industry / / James G. Speight
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2005
ISBN	9786610277483 9781280277481 1280277483 9780470361863 0470361867 9780471739852 0471739855 9780471739845 0471739847
Descrizione fisica	1 online resource (369 p.)
Collana	Chemical analysis ; ; v. 168
Disciplina	665.5/38
Soggetti	Petroleum refineries - Waste disposal - Environmental aspects Petroleum waste - Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Environmental Analysis and Technology for the Refining Industry; CONTENTS; Preface; PART I PETROLEUM TECHNOLOGY; Chapter 1 Definitions and Terminology; 1.1 The Environment; 1.2 Petroleum; 1.3 Classification; 1.3.1 Chemical Composition; 1.3.2 Correlation Index; 1.3.3 Density; 1.3.4 Carbon Distribution; 1.3.5 Viscosity-Gravity Constant; 1.3.6 UOP Characterization Factor; 1.4 Petroleum Products; 1.4.1 Boiling Range; 1.4.2 Environmental Behavior; 1.5 Refinery Waste; 1.5.1 Chemical Characteristics; 1.5.2 Environmental Behavior; References; Chapter 2 Composition and Properties; 2.1 Composition 2.1.1 Elemental Composition2.1.2 Chemical Composition; 2.1.3 Composition by Volatility; 2.1.4 Composition by Fractionation; 2.2 Properties; 2.2.1 Density and Specific Gravity; 2.2.2 Elemental (Ultimate) Analysis; 2.2.3 Fractionation by Chromatography; 2.2.4 Liquefaction and Solidification; 2.2.5 Metals Content; 2.2.6

Spectroscopic Properties; 2.2.7 Surface and Interfacial Tension; 2.2.8 Viscosity; 2.2.9 Volatility; References; Chapter 3 Refinery Products and By-Products; 3.1 Refinery Products; 3.1.1 Liquefied Petroleum Gas; 3.1.2 Naphtha, Gasoline, and Solvents; 3.1.3 Kerosene and Diesel Fuel 3.1.4 Fuel Oil3.1.5 Lubricating Oil; 3.1.6 White Oil, Insulating Oil, and Insecticides; 3.1.7 Grease; 3.1.8 Wax; 3.1.9 Asphalt; 3.1.10 Coke; 3.2 Petrochemicals; 3.3 Refinery Chemicals; 3.3.1 Alkalis; 3.3.2 Acids; 3.3.3 Catalysts; References; Chapter 4 Refinery Wastes; 4.1 Process Wastes; 4.1.1 Desalting; 4.1.2 Distillation; 4.1.3 Visbreaking and Coking; 4.1.4 Fluid Catalytic Cracking; 4.1.5 Hydrocracking and Hydrotreating; 4.1.6 Alkylation and Polymerization; 4.1.7 Catalytic Reforming; 4.1.8 Isomerization; 4.1.9 Deasphalting and Dewaxing; 4.2 Entry into the Environment
4.2.1 Storage and Handling of Petroleum Products4.2.2 Release into the Environment; 4.3 Toxicity; 4.3.1 Lower-Boiling Constituents; 4.3.2 Higher-Boiling Constituents; 4.3.3 Total Petroleum Hydrocarbons; 4.3.4 Wastewater; References; PART II ENVIRONMENTAL TECHNOLOGY AND ANALYSIS; Chapter 5 Environmental Regulations; 5.1 Environmental Impact of Refining; 5.1.1 Air Pollution; 5.1.2 Water Pollution; 5.1.3 Soil Pollution; 5.2 Environmental Regulations in the United States; 5.2.1 Clean Air Act; 5.2.2 Resource Conservation and Recovery Act; 5.2.3 Clean Water Act; 5.2.4 Safe Drinking Water Act
5.2.5 Comprehensive Environmental Response, Compensation, and Liability Act5.2.6 Oil Pollution Act; 5.2.7 Occupational Safety and Health Act; 5.2.8 Toxic Substances Control Act; 5.2.9 Hazardous Materials Transportation Act; 5.3 Refinery Outlook; 5.3.1 Hazardous Waste Regulations; 5.3.2 Regulatory Background; 5.3.3 Requirements; 5.4 Management of Refinery Waste; References; Chapter 6 Sample Collection and Preparation; 6.1 Petroleum Chemicals; 6.2 Sample Collection and Preparation; 6.2.1 Sample Collection; 6.2.2 Extract Concentration; 6.2.3 Sample Cleanup; 6.3 Measurement; 6.4 Accuracy 6.5 Precision

Sommario/riassunto

A timely, hands-on guide to environmental issues and regulatory standards for the petroleum industryEnvironmental analysis and testing methods are an integral part of any current and future refining activities. Today's petroleum refining industry must be prepared to meet a growing number of challenges, both environmental and regulatory.Environmental Analysis and Technology for the Refining Industry focuses on the analytical issues inherent in any environmental monitoring or cleanup program as they apply to today's petroleum industry, not only during the refining process, but al