

Subject Index

A

Additives, 17, 24, 221, 239
 Analysis, perfect, 1
 Analytical laboratory, 1
 Asphaltenes, 51
 ASTM D 5453, 137
 ASTM D 5623, 164
 ASTM D 6920, 152
 ASTM D 7039, 116
 Atomic emission detection, 221
 Atomic fluorescence spectrometry, 207

C

Combustion cold vapor atomic absorption spectrometry, 196
 Combustion/oxidation UV-fluorescence detection, 137
 Comprehensive two-dimensional gas chromatography, 221
 Contaminant particles, analysis, 71
 Crude oil, 51, 108, 181, 196

D

Diesel fuel, 17, 59, 85, 116, 137
 ultra-low sulfur, 116, 137, 152
 Doubly curved crystal optics, 116
 Dual plasma sulfur chemiluminescence detector, 164

E

EDXRF, 128
 Electrochemical sensors, 152
 Electrothermal atomic absorption, 59
 Elemental analysis, 98, 232
 Energy dispersive x-ray spectrometer, 98
 Engine oils, 239
 Exhaust catalyst, 239, 255
 Exhaust emissions, 239, 255

F

Fast on-line/at process sulfur determination, 137
 Filter furnace electrothermal atomic absorption spectrometry, 59
 Fluoride, 232

Fluorine, 232
 Fossil fuels, 207
 Fuels, 108, 221
 analysis, 98, 232

G

Gas chromatography, 221
 Gasoline, 17, 59, 85, 137, 223
 low sulfur content, 128
 ultra-low sulfur, 152
 Gasolines, 221

H

Hetero-atom speciation, 221
 Hydrocarbons, sulfur determination, 164

I

Inductively coupled plasma atomic emission spectrometry, 17, 24, 33, 71
 Inductively coupled plasma-mass spectrometry, 33, 42, 51
 Interlaboratory crosscheck programs, 85
 Ion chromatography, 42
 Ion-selective electrode, 232

J

Jet fuel, 59, 221

L

Liquid chromatography, 42
 Lower limits of detection, 98
 Low thermal mass gas chromatography, 164
 Lubricants, 232
 Lubricating grease, 24, 98

M

Maltenes, 51
 Mercury, 181, 196, 207
 volatile, 181
 Microflow nebulizer, 51
 Microwave digestion, 33
 Monochromatic wavelength dispersive x-ray fluorescence, 116

N

Neutron activation analysis, 181
 NIST 1084a, 51
 NIST 1085b, 51
 NIST 1634c, 51
 Nitrogen converters, 152
 Nuclear magnetic resonance spectroscopy, 255

O

On-line process analyzers, 152
 Organic solvents, 51
 Oxidative combustion, 232

P

³¹P Nuclear magnetic resonance spectroscopy, 255
 Petroleum and petrochemical products, 33, 183, 207
 Phosphorus emission index, 239, 255
 Phosphorus volatility, 239, 255
 Pipeline, 108
 Pneumatic nebulizer, 17, 51
 Polarization, 128
 Polarized energy dispersive x-ray spectrometry, 128
 Pooled limit of quantification, 116
 Pyro-electrochemical on-line ultra low sulfur analyzer, 152

Q

Quality management, 1

R

Rapid sulfur analysis, 137
 Refinery, 108
 Refining, 181
 Rotating disc electrode spectrometer, 71
 Rotrode filter spectroscopy, 71
 Round robin test, 128

S

Sample preparation, 33
 Selby-Noack volatility test, 255
 Selenate, 42
 Selenite, 42
 Selenium, 42
 Selenocyanate, 42
 Speciation, 181
 Spray chamber, 17, 51
 Sulfur, 108, 116, 128, 164, 221
 analysis, 85
 ultralow, in diesels, 85
 Sulfur chemiluminescence detection, 164
 Sulfur/nitrogen chemiluminescence, 232

T

Thermal oxidation, 152
 Trace metals, 51, 59
 Transverse heated filter atomizer, 59

U

Ultrasonication, 181
 Ultra-trace metals, 42, 51
 U. S. EPA 7473, 181
 Used oil analysis, 71

W

Wavelength dispersive x-ray spectrometer, 98
 Wear metals, 17
 Wear particles, analysis, 71

X

X-ray fluorescence spectrometry, 98
 X-ray spectrometry, 98
 X-ray transmission, 108

Z

Zinc dithiophosphates, 239, 255