Subject Index

A
Acid Precipitation Act, 105
Acidic gases, 105, 114, 133
Acidic gas testing, 106
Adsorption, 31, 49
Aldehydes/ketones, 9
Air
  indoor, 38, 197
  pollutants, 5, 41, 75
  quality, 25, 63
  sampling, 26, 76
  velocity, 88, 203
Airborne toxics, 187
Air exchange rates, 198
Ambient air measurement (see also Samplers), 76, 113, 133
Analytical methods, 78, 187, 201
Aromatic hydrocarbons, 81
Atmospheric
  aerosol sampling, 190
  concentrations, 94, 114, 134
  sampling, 93, 135, 175
Audits, 59, 64
Automated sampling system (gas), 101, 200

B
Bottled gas mixtures, 76
Building contamination, 86

C
Calibration
  curve, 76, 112, 199
  permeation tube system, 106
  procedure, 166
  standard, 41, 58
  system, 108, 127, 145
Carbon-14 analysis, 189
Chemical ionization, 76
Chlorinated hydrocarbons, 76
Chloroform, 68
Clean Air Act, 38
Colorimetric detection, 159
Compounds (toxic)
  exposure level, 26, 88
gaseous inorganic, 114, 133, 158
gaseous organic, 26, 38, 55
halogenated, 54
semivolatile, 56, 89
stability studies, 58
volatile, 35, 60, 64
Concentrations
  atmospheric, 25, 38, 114, 134
detection limits, 93
effluent, 154
gas mixtures, 112, 207
gravimetric, 72
organic (toxic), 63, 84
parts-per-billion (ppb), 47, 59, 82
peak exposure, 84
temperature-dependent, 93
toxic, 4, 41, 201
Cost analysis, 7

D
Databases, 4, 75
Dilution systems, 108, 129, 139
Diode laser adsorption spectrometry, 135

E
Electric Power Research Institute, 204
Electrostatic precipitation, 176
Emergency response, 75
Emission factors, 5, 26, 86
Environmental controls, 4, 26
Environmental Protection Agency
  field monitoring, 81, 105, 187
  methods, 101
  regulations, 31, 37, 46
Exposure assessment, 15, 198
Extractable organic matter, 188

F
Federal Immissions Control Law, 158
Fick's law, 199
Field monitoring, 75, 154, 189
Flue gas analysis, 153, 166
Fly ash emissions, 176
G

Gas audit, 47
Gas chromatography, 41, 65, 93, 140
Gases
  carbon dioxide, 96, 127
  carbon monoxide, 9
  nitrogen, 45, 66, 96
  nitrogen dioxide, 133, 197
  mixtures, 63, 106
  oxygen, 120
  ozone, 114, 133
  sulfur dioxide, 114, 133
Gas Research Institute, 197
Gas sampling, 93, 97

H

Hazardous waste (see also Waste incineration)
  audit, 46, 53
  burn test, 38, 59
  dump site, 89
  incineration, 37, 53, 64, 173
Health factors
  effects, 7, 25
  exposure, 63, 198
  hazards, 187
  risks, 4, 38, 64
Hydrogen chloride emissions, 153

I

Industrial
  chemicals, 63, 75
  liquid emissions, 75
  processes, 85
  stack emissions, 38, 153, 158
Infrared adsorption, 161
Isomeric compounds, 75

L

Laboratory results, 8, 140
Liquid chromatography, 9

M

Mass spectrometry, 9, 47, 75
Mechanical separator, 176
Meteorological analysis, 84
Microanalysis, 193
Mobile analytical instruments, 77
Mobile monitoring, 85, 187
Monitoring (see also Sampling)
  institutional, 3
  methods, 7, 198
  programs/plans, 4, 25
  sites, 7, 29
Motor vehicle emissions, 192
Mutagenic activity (aerosols), 188

N

National Bureau of Standards calibration standards, 106, 189
  regulations, 32, 37, 56
National Institute for Occupational Safety and Health (regulations), 63
National Institute of Standards and Technology, 175
Neutron activation analysis, 175
Nondestructive testing, 175

O

Oxidized hydrocarbons, 134
Ozone destruction trap, 145

P

Particulates, 8
Pesticides, 26, 30
Photochemical smog, 142
Plume tracking, 75
Pollution control equipment, 153

R

Radiochemical separation, 176
Receptor modeling, 189
Residential wood burning, 187

S

Saltzmann’s reagent, 199
Samplers
  adsorbent tube, 31
  ambient air, 46
  atmospheric gas analyzer, 75
  bag, 31, 38, 93
  canister, 47, 93, 200
  carbon monoxide analyzer, 110
  continuous emission monitors, 153, 158
  dilution probe, 154
  dust filter, 142
  effluent analyzer, 154
  electron capture detector, 54, 65
  filter badge, 199
  flame ionization detector, 65
  flame photometric detector, 106, 116
  gas cylinders, 54, 64, 93
  gas chromatograph, 41, 47, 75, 118
  glass manifold, 60, 117
infrared analyzer, 154, 158
mass spectrometer, 9, 47
nitrogen dioxide analyzer/detector, 133, 200
permeation tube, 106
polyurethane, 9, 126
pulsed fluorescence detector, 106
quartz filter, 189
real-time monitor, 84, 198
scrubbers, 107, 133, 174
sorbent tube purge unit, 81
spiked cartridges, 59
valves, 111
water condenser, 107

Samples
gaseous, 49
pollutant, 47, 86
soil, 88

Sampling
analyses, 18
colorimetric analysis, 159, 203
cryogenic focusing, 96, 114
dynamic dilution, 105
gamma spectrometry, 175
gas filter correlation technique, 161
gravimetry, 66, 201
hydrochloric acid monitoring, 160
monitoring sites, 26, 47
neutron activation analysis, 176
precision and bias, 37, 46
thermal desorption, 89

Standards
audit, 46, 54
concentrations (ppb), 38, 47
calibration, 41
gases, 38, 63

Superfund hazardous substances list, 44
Suspended particulates, 177

T
Toxics
air, 4, 25, 47
centrations, 4, 40, 47
emissions, 7, 75
organic compounds, 28, 43, 46
particulates, 28
sources, 4, 26
threshold levels, 26
Train derailment, 87

U
Urban aerosols, 180

V
Vapor recovery, 30
Volatile compounds
organic, 4, 35, 46
sulfur, 107, 118
Volatiles, 4, 35, 46

W
Waste incineration
gas, 37, 53, 64
municipal, 153, 163, 176
solid, 153
Waste recovery, 51
Wood smoke sampling, 188