

## Subject Index

### A

Acetonitrile, 115  
 Acid digestion, 231  
 Aflatoxins, 154  
 Alumina solid-phase extraction  
   cartridges, 129  
 Aluminum, 279  
 Analyzers, organic vapor,  
   evaluation, 15  
 Antimony, 231  
 Aroclor, 141  
 Aromatic hydrocarbons, 3, 141,  
   299  
 ASTM standards  
   D 3987-81: 266  
   D 4842-90: 289  
   D 4843-88: 289  
 Atomic absorption spectroscopy,  
   graphite furnace, 245  
 Atomic emission spectroscopy,  
   inductively coupled  
   plasma, 245  
 Automation  
   analytical method, 39  
   autosampler sequencing, 39  
   autosampling, 56  
   laboratory information  
     management  
     systems, 362  
   volatile organic contaminants  
     determination, 39

### B

Barium, 231

### C

Calibration, linear, 377  
 California Department of Health  
   Services, 231  
 Capillary columns, 87, 106, 154  
 Canisters, 39, 216  
 Carbamates, 115  
 Carbon molecular sieve traps, 216  
 Chain-of-custody/labeling, 315, 329

Chlorinated dibenzodioxins, 87  
 Chlorinated dibenzofurans, 87  
 Chromatography  
   chromatograms, comparison, 65  
   gas chromatography, 39, 87  
   gas chromatography/mass  
     spectrometry, 56,  
     65, 106, 206, 299  
   gel permeation  
     chromatography, 87  
   high performance liquid  
     chromatography, 115  
   high resolution gas  
     chromatography, 299  
   sorbent column packing  
     material, 206  
   supercritical fluid, 154  
 Chromium, 279  
 Coal combustion residues, 279  
 Coal tar, 154  
 Coal waste site characterization, 3  
 Column packing material,  
   sorbent, 206  
 Computers  
   analytical method, 39  
   autosampler sequencing, 39  
   autosampling, 56  
   laboratory information  
     management systems, 362  
   volatile organic contaminants  
     determination, 39

Control limits, 362  
 Creosote, 154  
 Cresols, 154  
 Cryogenically-cooled column, 39  
 Cryogenic preconcentration, 216

### D

Data quality, 339, 362  
 Data system, 56  
 Decontamination protocol, 315, 329  
 Department of Energy (See U.S.  
   Department of Energy)  
 Detection limits, 206, 377  
 Dibenzodioxins, chlorinated, 87  
 Dibenzofurans, chlorinated, 87

Dichloromethane, 115

Digestion methods

acid, 231

alternative to, 245

hot plate, 245

microwave, 245

Dioxins, 87, 154

**E**

Electron capture detector, 87

Environmental Protection Agency

(See U.S. Environmental

Protection Agency)

Environmental Survey Program

data documents for, 339

Extract cleanup, 129

Extraction tests, 289

D 3987: 266

field, 3

Soxhlet, 299

**F**

Field extraction, 3

Field instrumentation, 15

decontamination, 329

Field sampling protocol, 329

Field screening, 3

Florisil, 87, 129

Fluid chromatography,

supercritical, 154

Fluid extraction, supercritical, 3,

141

Fluorescence detection, 115

Fly ash, 279

Fractionation, 129, 299

Freeze/thaw method, 257

D 4842-90: 289

**G**

Gas chromatography, 39, 87

Gas chromatography/mass

spectrometry, 56, 65, 106,

206, 299

Gel permeation chromatography, 87

Groundwater, 154, 170

analytical model, 266

contamination, 299

**H**

Hazardous wastes (See Wastes)

Hazard Ranking System, 391

Headspace, 106

High performance liquid

chromatography, 115

High resolution gas

chromatography, 299

HNu PI 101, 15

Hydrocarbons, aromatic, 3, 141, 299

**I**

Information management systems,

laboratory, 362

Instrumentation, survey, 15

Ion activity products, 729

**L**

Laboratory information

management systems

(LIMS), 362

Leachability, 266

Toxicity Characteristic

Leaching Procedure, 257,

289, 299

Linear calibration, 377

Liquid chromatography, high

performance, 115

**M**

Mass spectra, comparison, 65

Mass spectrometer, 106

Material classification, 353

Matrices, hazardous waste, 353

Methanol field preserved sampling

method, 170

Methylene chloride, 299

Microwave preparation method, 245

Milling, effect on monolithic

wastes, 289

Mobility, chemical, 257

Modelling, analytical

groundwater, 266

Monolithic wastes  
 Toxicity Characteristic Leaching  
 Procedure  
 modification for, 289

## N

National Institute for Standards  
 Technology (NIST), 141  
 N-methylcarbamates, 115

## O

Octachlorodibenzodioxin, 87  
 Octachlorodibenzofuran, 87  
 Oils, 245  
   fuel, 299  
 Organics analysis, 206  
 Organics, mixtures, 65  
 Organics, vapors, analyzers, 15  
 Organics, volatile, 106, 170, 179  
 Organochlorine pesticides, 129,  
 141

## P

Passive venting, 216  
 Pesticides, 87  
   carbamate, 115  
   organochlorine, 129, 141  
   organophosphorus, 141  
 Petroleum waste site  
   characterization, 3  
 Photoionization detector, 15  
 Photovac TIP II, 15  
 Phthalate esters, 129  
 Polychlorinated biphenyls, 129,  
 154  
 Polycyclic aromatic  
   hydrocarbons, 3, 299  
 Polynuclear aromatic  
   hydrocarbons, 141  
 Pore waters, 279  
 Post column derivatization, 115  
 Prediction intervals, detection, 377  
 Protective equipment, personal,  
 315, 329  
 Purge and trap, 106, 170, 206

## Q

Quality assurance, for data use,  
 391  
 Quality control  
   chemical data, 339  
   data, 56  
   detection limits, 377  
   evaluation of results, 362  
   field sampling methods, 329  
   matrices classifications, 353  
   sample holding times, 179  
   samples, 329

## R

Radium contaminated soil, 266  
 Reference materials, 391  
   classification, hazardous waste  
   matrices, 353  
   standard reference materials, 141  
 Reporting environmental data, 339  
 Resource Conservation and  
 Recovery Act (See also U.S.  
 Environmental Protection  
 Agency), 154, 245, 257, 279  
   compounds in, 154  
 Reverse phase column, 115

## S

Samples  
   handling, 170  
   holding times, 179  
   management, 315  
   field, 329  
   matrices classification, 353  
   preparation method, microwave  
   assisted, 245  
   preservation, 170  
 Sampling (See also specific types)  
   automated, 56  
   data documents, 339  
   headspace device, 106  
   protocol development, 315  
 Screening, 87, 106  
   field, 3  
 Sediments, 245

## 410 WASTE TESTING AND QUALITY ASSURANCE

Sequencing, sampler, 56  
Shake extraction, 266  
Shipping, sample, 179  
Sieve traps, 216  
Silica gel, 129, 206  
Silver, 231  
Site contamination,  
    responsibility, 56  
Site specific protocols, 315  
Sludges, 245  
Soils  
    contaminated, with aromatic  
        hydrocarbons, 3  
    gas chromatography/electron  
        capture detector of, 87  
    gas determination, 39  
    microwave digestion method  
        for, 245  
    mobility studies in, 299  
    pesticide determination in,  
        115, 141  
    radium contaminated, 266  
    volatile organic compounds,  
        in, 170  
    weathering, 257  
Solid-phase extraction cartridges,  
    129  
Solubility, 279  
Sorbent trap packings, 206  
Soxhlet extraction, 299  
Spectra, mass, comparison, 65  
Spectroscopy  
    inductively coupled plasma  
        atomic emission, 245  
    graphite furnace atomic  
        absorption, 245  
Stability, volatile organic  
    samples, 179  
Standards (See also ASTM  
    standards and U.S.  
    Environmental Protection  
    Agency) field sampling,  
    329  
    reference, 391  
Storage, sample, 179  
Summa canisters, 216  
Supercritical fluids  
    chromatography, 154  
    extraction, 3, 141  
Superfund, 65  
    Potentially Responsible  
        Parties, 65

### T

Tenax/carbon molecular sieve  
    traps, 216  
Thermodynamics, 279  
Tolerance intervals, 377  
Toxicity Characteristic Leaching  
    Procedure, 257, 289, 299

### U

U.S. Department of Energy  
    Environmental Survey  
        Program, 339  
U.S. Environmental Protection  
    Agency, 3, 15, 179, 353  
    air sampling method, 39  
    Appendix VIII, 154  
    Appendix IX, 154  
    Contract Laboratory Program,  
        56, 170, 206 339, 391  
    Potentially Responsible  
        Parties, 65  
    Resource Conservation and  
        Recovery Act, 154,  
        245, 257, 279  
    Superfund, 65, 329, 391  
    SW 846, Test Methods for  
        Evaluation of Solid Waste  
        Method 3050, 245  
        Method 3050, alternative  
            to, 231  
        Method 3051, 245  
        Method 3610, 129  
        Method 3620, 129  
        Method 8240, 206  
    Toxicity Characteristic  
        Leaching Procedure  
        (SW 846, Method  
        1311), 257, 289, 299  
    modification, 289

### V

Vapors, total organic, 15  
Vent sampling, 216  
Volatile organic compounds, 39,  
    106, 170, 179, 299  
    detection limits, 377

## W

## Wastes

- Appendix VIII and IX
  - compounds, 154
- classification, 353
- coal combustion, 279
- fuel oil, 299
- hazardous, matrices, 35
- hazardous, sampling protocol
  - development, 315
- hazardous, treatment sites, 257
- metals, 231, 245
- monolithic characterization, 289

- site characterization, 3
- monolithic characterization, 289
- site characterization, 3
- sites, data in evaluating, 391
- solid, evaluation methods (See U.S. Environmental Protection Agency)
- sources, 65

## Water

- extracts, electric utilities, 279
- volatile organics in, 179, 206

## Weathering (See Freeze/thaw method and Wet/dry method)

- Wet/dry method, 257
- D 4843-88: 289