



Introduction to the CLP Organics Data Validation Course

This course is designed to provide specific and more details on the data validation of the Organic parameters; volatiles, semi-volatiles, pesticide and PCBs. in environmental samples. The course is based on a The Superfund Analytical Methods (SFAM) SOW, specifically for the EPA Contract Laboratory Protocol (CLP) for organic analytical services. The EPA Contract Laboratory Protocol and SW-846 data package are used as the model for this course. The USEPA National Functional Guidelines for Organic Data Validation and the Data Review will be utilized.

Data validation can help solve or prevent a variety of problems. When done correctly, the data is legally defensible. It also provides confidence in lab data, risk reduction, good laboratory practice, and is cost-effective. This is entry level course and a rigorous knowledge of organic chemistry is required.

Who Should Take this Course

A broad range of environmental specialists will benefit from this course: managers, project managers, environmental scientists, chemists, biologists, program managers, risk assessment professionals, QA/QC specialists, regulators, policymakers, and legal specialists.

Course Duration- 2 days

This course is offered on-line



USEPA CLP ORGANIC DATA REVIEW COURSE OUTLINE (Volatile, Semi-volatile, Pesticide, PCB)

DAY 1

Background

What is the Superfund Program
What is the Contract Laboratory Program (CLP)
Data Validation and Superfund

Mass Spectral Principles

Ionization/Separation/Detection
Electron impact and chemical ionization
Hierarchy of molecular ionization locus
Neutral losses from molecular ions

Mass Spectral Compound Validation

Hydrocarbons, Aldehydes, Alcohols, Ketones, Aromatics, Thiols, Amines, Ethers, Aliphatic and Aromatic halides

CLP Organic Data Validation-The Interpretation

VOA

Holding Time
Chain of Custody
GCMS Instrument Performance Check
Initial Calibration
Initial Calibration Verification (ICV)
Continuing Calibration Verification (CCV)
Blanks
System Monitoring Compounds (surrogates)
Matrix Spikes/ Matrix Spike Duplicates (MS/MSD)
Laboratory Control Samples (LCS)
Internal Standards
Tentatively Identified Compounds criteria
Target Compound Identification criteria
Overall Performance

SVOA

Holding Time
Chain of Custody
GCMS Instrument Performance Check
Initial Calibration
Initial Calibration Verification (ICV)
Continuing Calibration Verification (CCV)
Blanks
System Monitoring Compounds (surrogates)
Matrix Spikes/ Matrix Spike Duplicates (MS/MSD)



USEPA CLP ORGANIC DATA REVIEW COURSE OUTLINE (Volatile, Semi-volatile, Pesticide, PCB)

Laboratory Control Samples (LCS)
Gel Permeation Chromatography Performance Check
Internal Standards
Tentatively Identified Compounds criteria
Target Compound Identification criteria
Overall Performance

DAY 2

Pesticide

Holding Time
Chain of Custody
GCMS Instrument Performance Check
Initial Calibration
Continuing Calibration Verification
Blanks
System Monitoring Compounds (surrogates)
Matrix Spikes/ Matrix Spike Duplicates (MS/MSD)
Laboratory Control Samples (LCS)
Florisil Cartridge Performance Check
Gel Permeation Chromatography Performance Check
Target Compound Identification
GCMS Confirmation
Target Compounds Quantitation
Overall Performance

PCB

Holding Time
Chain of Custody
GCMS Instrument Performance Check
Initial Calibration
Continuing Calibration Verification
Blanks
System Monitoring Compounds (surrogates)
Matrix Spikes/ Matrix Spike Duplicates (MS/MSD)
Laboratory Control Samples (LCS)
Florisil Cartridge Performance Check
Gel Permeation Chromatography Performance Check
Target Compound Identification
GCMS Confirmation
Target Compounds Quantitation
Overall Performance

Report Writing