PARACEL
LABORATORIES LTD.

Bulk Asbestos Analysis by EPA/600/R-93/116

Bulk asbestos testing by EPA/600/R-93/116 employs a tiered approach for the identification and quantification of asbestos fibres depending on sample matrix, the amount of asbestos present in the sample and the degree of accuracy required. Initially, each sample is analysed by Stereomicroscopy and then Polarized Light Microscopy (PLM) Calibrated Visual Estimation (CVE). For the majority of samples, these two steps are generally sufficient for identifying and quantifying major concentrations of asbestos as well as verifying the absence of asbestos fibres in most bulk samples. However, results from these steps may indicate a need for additional sample preparation and/or analytical techniques to complete and verify the analysis. The following flow chart provides a quick guide in determining the expected analytical procedure and associated Paracel analytical codes.

Stereomicroscopic Examination (Mandatory)
Classification and volume estimate.
Also determines sample homogeneity and degree of sample preparation required.

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Polarized Light Microscopy (Mandatory)
Specifies quantification and qualification of asbestos concentrations by Calibrated Visual Estimation (CVE).
Paracel analytical code: *Asbestos, PLM Visual Estimation*

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Problem Samples
(Due to sample matrix or to confirm low level asbestos content)

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Quantitative Problems

Typically, suspected asbestos containing materials (ACMs) below 1% will require further 200 Point Count (PC) analysis (LOD of 0.5%).

Note: 400 PC (LOD of 0.25%) and 1000 PC (LOD of 0.1%) will only be analyzed at client's request.

Paracel analytical codes: *Asbestos, PLM Visual Estimation; Asbestos PLM – 400 Point Count or 1000 Point Count*

Qualitative Problems

Samples which are determined to be non-friable/organically bound (NOB), including floor tiles (vinyl and asphalt), roofing materials, mastics, glazing and caulking OR problem matrices like those high in cellulose content (ie. ceiling tiles) will require matrix removal (additional preparation) prior to PLM CVE analysis.

Paracel analytical codes: *Asbestos, PLM Visual Estimation* and *Asbestos – Prep NOB*

ENVIRONMENTAL AND INDOOR AIR QUALITY TESTING SERVICES

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