

Non-friable, Organically Bound (NOB) Bulk Material - 198.6 / 198.4

STEREOMICROSCOPE EXAMINATION at (10x – 40X)

Assess homogeneity, determine if material has distinct layers
Characterize material (protruding fibers?)

SCANNING

The identification of asbestos in this step must be noted on the analysis sheet.

GRAVIMETRIC REDUCTION

ORGANIC REDUCTION

~200 mg sample, Furnace / ashing @ 480 until mass stabilizes (1-4 hr)
Weigh ash residue, Calculate % loss of organic material

ACID REDUCTION

HCL + ash residue for 15 minutes (removes carbonates), Filter
Dry and Weigh residue, Calculate % loss of acid-soluble material

* Filter residue prepared for PLM analysis for NOBs (198.6, Sec. 4.1-4.4) may be used for TEM grid preparation so that 198.4, Sec. 4.1 – 4.4 does not have to be repeated

Asbestos detected by Scanning

No asbestos detected by scanning (on any of 4 slides)

POLARIZED-LIGHT MICROSCOPY (PLM-198.6)

Prepare 4 Slides / Oil 1.550 RI typical / 400X

TRANSMISSION ELECTRON MICROSCOPY (TEM-198.4)

Prepare 2 Grids / 10,000X

POINT COUNTING

4 asbestos pts on a minimum of 4 slides
(up to 8 slides minimum) (Sec. 5.2.2)

50 pts on each of 8 slides

Calculate % asbestos fibers

> 1% REPORT as ACM

Identify type of asbestos
(and % identified)
(198.6, Sec. 6.3.2.5)

Identify total % asbestos
(198.6, Sec. 6.3.2.6)

≤ 1% REPORT as Inconclusive

** Disclaimer required **
(198.6, Sec. 6.3.2.2)
TEM is the only reliable method
to declare an NOB as Non-ACM (198.4, 6.3.2.2)

**“Inconclusive – Asbestos detected at Unquantified Percentage”
(198.6, Sec. 6.3.2.1)
**“Inconclusive – No Asbestos detected”
(198.6, Sec. 6.3.2.3)
**“Inconclusive – Trace types (and % identified)”
(198.6, Sec. 6.3.2.4)

TRANSMISSION ELECTRON MICROSCOPY (TEM-198.4)

Prepare 2 Grids / 10,000X

> 1% REPORT as ACM

Identify type / % of asbestos
(198.4, Sec. 6.3.2.5)

Identify total % of asbestos
(198.4, Sec. 6.3.2.6)

≤ 1% REPORT
Conflicting Results

For samples that had ≤ 1% asbestos
by TEM but had asbestos protruding
fibers identified during initial scan
Additional sampling and analysis required
(198.4, Sec. 6.3.2.3 & Sec. 4.1.3)

≤ 1% REPORT Non- ACM

Samples that are negative by TEM
must be verified with PLM analysis
(2 slides from the original residue)
and also found to be negative
(198.4, Sec. 6.3.2.2 & Sec. 4.1.3)

≤ 1% REPORT as ‘TRACE’

Identify type of trace asbestos
detected at 1% or less
(198.6, Sec. 6.3.2.4)