

Soil Sampling Methodology for Lead (Pb)

Blacksmith Institute (J. Caravanos)

A. WHERE DO I SAMPLE?

- Ask yourself...am I assessing a general area OR specific source
- FOR GENERAL AREA (see diagram on next page)
 - Use representative sampling (many samples equally spaced over entire area)
 - divide area into 9-12 equal portions (cells)
 - sample in the center of each cell
 - take 3-5 sub-samples at each cell (this is to ensure adequate representation)
- FOR SPECIFIC SOURCE (outfall to a stream, pit, or a single source)
 - Take a 5 sub-samples in an area about 1 square meter or yard
- GENERAL GUIDELINES
 - Sample soil areas where children play (football fields, playgrounds, etc)
 - When in doubt collect more samples not less. We can always eliminate samples but it's usually impossible to go back and get more.

B. HOW MUCH?:

- Each sub-sample (you're collecting 3-5) should be about a volume of half your thumb
- Each sub-sample should be same volume of soil (very important)
- Avoid sampling rocks, sticks (but these will be sieved later on anyway)
- DO NOT HUNT FOR LEAD!!! Be scientific.

C. HOW DO I SAMPLE:

- Use a spoon (metal or hard plastic) to dig out sample
- Go down about 1 inch or 2-3 centimeters (again about a volume and depth of half your thumb)
- Use new spoon or use wet wipe to clean spoon between sample sites
- You do not have to clean spoon between sub-samples

D. WHERE DO I PUT SAMPLE:

- A new 50 ml centrifuge tube is recommended OR
- a small zip lock plastic bag (you may have to double bag is too thin)

E. WHAT INFORMATION DO I NEED?:

- Label each bag/tube with a unique ID number (H1, H2, H3....)
- On a separate form (see attached Excel doc), identify what the ID number means
 - H1 – Southwest corner of property
 - H5 – Entrance roadway
- Draw a site diagram that identifies sample location (use ID number on site diagram)

F. WHERE DO I SEND THEM:

- Put all samples into a larger plastic zip lock bag and squeeze out air
- Mail them back to Blacksmith
- Call or email me if you have questions
 - Jack Caravanos, 908 326-3281 home, jcaravan@hunter.cuny.edu

Guideline: 400 ppm or mg/kg for bare soil and child contact (in Finland it's 100 ppm)
1200 ppm or mg/kg for all other areas

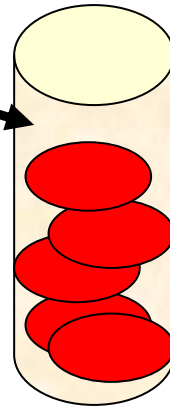


This is your sampling area. (back yard playground)

For each of the 9 areas, collect 3-5 sub-samples

Take 3-5 sub-samples from each of the 9 (or 12) areas and put into tube or plastic bag.

Each bag will be submitted as 1 analysis. All sub-samples should be approximately same volume



Typical “chain of custody” sample submittal form. See attached Excel file.

#	Sample ID#	Sample Description
1	AB1	Northwest corner by wall
2	AB2	Rear yard – south wall
3	AB3	Playground slide area
4		
5		