Experiment 25: Soil Sampling

SYNOPSIS: A soil sample procedure recommended by the Chicago Department of Health is followed. The sampling is designed to cover the largest area as well as the areas most likely to deviate in soil lead content. The sampling is also designed to create representative samples at any one given site.

PROCEDURE:

Make an area map with buildings and boundaries (sidewalks, driveways, etc.) See next page.

1. Sample two feet from building every 10 feet along the side.
2. Wipe a plastic spoon with a tissue and dig a 1 inch diameter and no more than 1 inch deep sample. Combine all samples along a given side of the building into a sealable plastic bag and label. (Date, Building, map location, student)
3. Sample play areas separately (in 10 ft intervals). Each sample is kept separate in own bag and labeled according to position on map, student, date.

REPORT In addition to materials, methods, and results, your report should include:

1. How were your samples randomized?
2. What efforts were taken to avoid contaminating the sample?
3. How were the samples labeled in order to achieve good quality control?
4. In soil sampling, what effect will the depth of sampling have on your sample (see Chapter 10, gasoline dispersion of lead)?
5. How was the sample stabilized to prevent losses in transit and storage? Be specific for the type of sample you have.
6. Attach a neatly drawn map of your sampling and attach it to your report.

Soil Sampling Record

Sample I.D. # _____

Date: _____

Person Taking Sample _____

Address of Site: _____

Person to Be Contacted/Phone Number _____

Circle One Answer Each:

Property type: Rental Non-Rental
Property type: House Park Parkway Abandoned Lot
House Sampled: Age:_____ Brick Wood Structure
Paint Type: Chipped Intact
Location of Sample Near Wall Away From Wall
Square inches sampled _____
Depth sampled _____

Below Draw the Sampling plan as a function of distance from house and street.