

Experiment 26: House Dust Sampling

SYNOPSIS A sampling procedure for house dust is used that is extracted from various housing authorities and from ASTM E-1728-95

INTRODUCTION

Two types of sampling procedures are used for house dust. These include wet wiping and vacuuming with a high velocity vacuum. The latter is becoming standard, however wet wiping can be convenient for owner/occupant sampling. When wet sampling is used the key is to provide an adequate control (un-used wipe). In general the relationship between wet wiping and vacuum sampling is linear, with the lead measured from wet wipes generally being higher than measured from vacuuming. It is presumed that the higher level of lead is biased for the wet wipe procedure.

PROCEDURE

1. Make a number of disposable 1 ft square (i.d.) templates from cardboard. The number should equal the number of samples to be obtained.
2. Draw a map of the house floor plan.
3. Select a room, one which is most likely to be occupied by children (living room or bed room). Draw a floor plan for the room.
4. Put on powderless gloves. Powder can cause false positives for lead.
5. Open box of wipes. Through away three to remove any contamination due to opening of the box.
6. Remove one wipe and place in a clean baggie and Label it with your name, the date, the house, the room, and title it "control #1".
7. *You should plan collecting a control for every 10 samples. When you are down you should have a minimum of three controls (in separate baggies) and a control sampling rate of 5%..*
8. Sample at the door and/or in the window sill and/or below the window sill.
9. Lay down the template, taping the outer edges in place. Remove one wipe and with gentle pressure wipe the entire surface inside the template clean, using an S motion.
10. Transfer the sample to a clean baggie and label it with your name, the date, the house, the room, the location sampled in the room, and title it with the location.
11. After 10 samples, set aside in a clean baggie and labeled as above, another control.

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

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. How was the sample stabilized to prevent losses in transit and storage? Be specific for the type of sample you have.
5. Why is the total size sampled important? Why are the common areas for sampling near windows and/or doors?
6. Attach a neatly drawn map of your sampling and attach it to your report.

Hust Dust Sampling Record

Sample I.D. # _____

Date: _____

Person Taking Sample _____

Baby Wipe Lot Number _____

Address of Housing Unit: _____

Person to Be Contacted/Phone Number _____

Circle One Answer Each:

Property type:	Rental	Non-Rental	
Room sampled	Living Room	Kitchen	Child's Bedroom
Sample type:	Surface	Washed Surface	Un-used Wipe
Paint Type:	Chipped	Intact	
Location of Sample	Window Sill	Floor near window	floor near door
Square inches sampled	_____		

Below Draw the Floor Plan of the Room.