

OBSERVABLE PHYSICAL PROPERTIES

Topics:

- A. Soil Texture
- B. Assignment 3:
 - 1. Worksheet – Due at the end of this session

Handouts:

- Soil texture triangle
- Soil texture “feel” method flow chart

Assignment

You will be given known samples to familiarize you with the techniques employed when measuring soil physical properties. You will also be given 2 unknown samples for soil texture. Use the “feel” method to determine texture (see Handout) Fill out the assignment sheet and hand it in at the end of the session.

- A. Soil Texture
 - a. Twelve Textural Classes
 - i. Based on sand, silt and clay percentages
 - ii. Textural Triangle
 - b. Methods for Measuring Soil Texture
 - i. “Feel” Method (we will use this method, see handout)
 - Helpful Hints:*
 - Be consistent
 - Do not over moisten sample
 - Compare and contrast similar textural classes
 - Keep right hand clean so you can shake your client’s hand!
 - ii. Sieve
 - iii. Hydrometer (demonstrated)¹
 - iv. Mastersizer

¹ Hydrometer method from: Campbell, G.S, D.R. Nielsen, R.D. Jackson, M.M. Mortland, and A.Klute (editors). 1986. Methods of Soil Analysis, Part 1: Physical and Mineralogical Methods, Second Edition. American Society of Agronomy, Madison WI.

Name:
Date:
Section:

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1. Use Figures 1 and 2 to calibrate your fingers using known samples.
2. Given the following unknown samples, determine soil texture using the feel method.

Texture

Unknown Soil 1 _____

Unknown Soil 2 _____

3. Use textural triangle to determine textural class when given the percentage of soil separates.

Sand	Silt	Clay	Texture
60%	30%	10%	_____
20%		20%	_____
	30%	50%	_____
50%	10%		_____