

FIELD TEST	ORGANIC SOIL MATERIAL (OSM)	MUCKY MINERAL SOIL (MMS)	MINERAL SOIL MATERIAL (MSM)
<p>1. Soil Color Moist: * Dark and very dark colors confirm the presence of organic matter in soil. Soil color alone is not a definitive test for OSM or MMS.</p>	<p>Have dark and very dark soil colors** with values of 3 or less and chromas of 2 or less. Fibric and hemic material, may have colors with values of 4 and chromas of 3 and 4. Inconclusive test.</p>	<p>Have very dark soil colors ** with values of less than 3 and chromas of 2 or less. Inconclusive test.</p>	<p>Have a broad spectrum of soil colors including black. Soil colors with values greater than 3 and chromas greater than 2 are most often MSM. Inconclusive test.</p>
<p>2. Air Dry Soil Color: *** For this test smear a very moist soil sample onto a sheet of white paper and let dry.</p>	<p>Retains most of its moist dark color. Inconclusive test.</p>	<p>Retains some of its dark color, typically with values of 4 or less and chromas of 2 or less. Inconclusive test.</p>	<p>Turns a light color with values or 5 or higher and chromas of 3 or higher. Inconclusive test.</p>
<p>3. Fiber Content, Unrubbed: The percentage of visible fibers observed with a hand lense in an undisturbed state. Before conducting this test remove all live roots. Live roots do not count as soil organic matter.</p>	<p>Has a high fiber content, typically greater than 1/3 by volume, and is loose and/or fluffy. Reliable test for fibric and hemic material when used in combination with Test 6.</p>	<p>Has a low fiber content or lacks fibers. Inconclusive test.</p>	<p>Lacks fibers or has a very low fiber content. Inconclusive test.</p>
<p>4. Soil Strength: **** For this test take a very moist but not saturated clod from the side of pit and squeeze in one's fist using strong pressure. The clod should be about the size of a lemon.</p>	<p>Soil material oozes out freely from between one's fingers. Reliable test for sapric material when used in combination with Tests 1 and 5.</p>	<p>Soil material has a slight to moderate tendency to ooze between one's fingers. Reliable test when used in combination with Tests 1, 2, and 5.</p>	<p>Soil material forms a solid mass and no soil material oozes from between one's fingers. Reliable test when used in combination with Tests 5 and/or 6.</p>
<p>5. Gritty Feel: For this test rub a very moist sample in one's palm using moderate thumb pressure.</p>	<p>After 5 rubs retains its greasy, slippery feel with no grittiness. This test is unreliable if the soil is predominantly silt and clay size particles.</p>	<p>Initially has a creamy, smooth feel that after 3 to 5 rubs has an underlying gritty feel. This test is unreliable if the soil is predominantly silt and clay size particles.</p>	<p>Has a gritty feel after 1 or 2 rubs. This test only works well when there are sand size particles present (s, ls, sl, and l). This test is unreliable if the soil is predominantly silt and clay size particles.</p>
<p>6. Air-dry Weight: For this test form a moist sample of soil into a mass about the size of a lime and let dry for 1-2 days.</p>	<p>Soil sample becomes significantly lighter in weight and retains most of its original dark color. If well decomposed organic matter (sapric) the mass often shrinks in size. Inconclusive test.</p>	<p>May lose a noticeable amount of its original weight and retains some of its dark color. When held up to the light, one can often see the glisteny reflection off the mineral soil particles. Inconclusive test.</p>	<p>Retains a significant amount of its original weight and turns considerably lighter in color. Inconclusive test.</p>

USE OF THIS CHART: Depending on the site, determining the organic matter content of a soil can be difficult with significant differences between experienced professionals. Most often one field test does not provide a reliable determination in all situations. For best results, a combination of two or more field tests is recommended.

* Organic matter is a strong coloring agent in the soil and as little as 3 to 5 percent can turn a mineral soil black
 ** Soils formed in tidal marshes often have OSM and/or MMS with higher values and/or chroma.
 *** Soils with dark mineralogy will retain their dark color when dry.
 **** Refer to reverse side for soil strength information.

Compiled by Peter C. Fletcher