## Wire Method of Soil Texturing

First, you need to determine the percent clay in your sample. Take a handful of sieved soil and mix in enough water so that it is at approximately field capacity. Once it is uniformly moist, roll it into a wire that is about as thick as your little finger and as long as the width of your hand. Try to pick up the wire by one end, compare your result to the chart below. For very sandy soils, you cannot make a wire so try to make a ball slightly larger than a marble. If you can't make a ball, then there is less than 4% clay. If you can make a ball but it breaks when you bounce it, there is 4% to ~7% clay. Another helpful trick is that it takes 30% clay in a sample before the sample will have sheen; it is easier to see the sheen in the soil that sticks to your hand.

Once you have determined the amount of clay in your sample, you need to determine the percent sand in your sample. For samples that have ~20% clay or less, you first make two small balls with your sample, about the size of a pea. Set one ball aside, take the other ball, and set it in your clean cupped hand. Soak the ball and crush it with your finger, then carefully pour off the dirty water. Repeat until the water pours off clear. Now, compare what is left in your hand to the ball that you saved. For samples that have greater than 20% clay, rub the sample between your thumb and forefinger next to your ear. If you can hear a gritty sound, there is more than 45% sand. If you can't hear a gritty sound but you can feel sand in your sample, there is between 20% and 45% sand. If you can't feel any sand in your sample, there is less than 20% sand.

Finally, it is often difficult to tell the difference between very fine sand and silt. If you dare, you can rub a small bit of your sample on your teeth; very fine sand feels gritty and silt does not.

| **Clay %** | | | **Sand %** | |
|---|---|---|---|---|
| Can't make a wire | | 0-9% | Can't feel the sand | < 20% |
| Can't make a ball | 0-4% | | Feel the sand but can't hear | 20-45% |
| Ball breaks when bounced | 4-7% | | Hear the sand | 45-80% |
| Ball doesn't break when bounced | 7-9% | | Two ball method | 80-100% |
| Cannot pick up wire | | 9-12% | | |
| Wire breaks as it is picked up | | 12-18% | | |
| Wire will break if shaken lightly | | 18-25% | | |
| Wire bends with cracks | | 25-35% | | |
| Wire bends | | 35-44% | | |
| Wire does not bend | | > 44% | | |