

FACT SHEET

Specific Conductance

What is it?

Specific conductance is the ability of the water to conduct electricity. Pure water does not conduct electricity. By measuring specific conductance of water one can measure the amount of salts and minerals in the water. Specific conductance does not identify what is in the water, but gives a rough measure of how much stuff is in it. Specific conductance results are reported in $\mu\text{mho/cm}$.

Are there other names for it?

Specific conductance goes by several names the most common besides specific conductance is conductivity or electrical conductivity. It is sometimes abbreviated as EC or SC.

Where does it come from?

Specific Conductance comes from dissolved minerals and salts in the water.

Why should I be concerned about it?

Specific conductance is a good indicator of overall water quality. While it doesn't tell what is there it does give an approximation of how much stuff is there. The higher the specific conductance value the greater likelihood that there is something harmful in your water. For water with a specific conductance above $700 \mu\text{mho/cm}$ it is probably a good idea to do further testing to determine what is in your water.

Once you have gotten a specific conductance value on your water it can be used as a baseline. At some time in the future you can measure a specific conductance on your water and compare it to your baseline value. If the specific conductance has changed very little, then you can fairly safely assure that there are no major salt and mineral content changes, thus minimizing future analysis costs. Some parameters like nitrate, trace metals, and bacteria will still need to be analyzed as a small change can have a big impact on water quality.

What effect will boiling have on it?

Boiling water will not remove specific conductance and will only serve to concentrate the salts and minerals and increase the specific conductance.

How do I remove it?

It is not practical to discuss removing specific conductance from water. Different methods are used to remove different salts and minerals. To remove the specific conductance from your water you will first need to do further analysis to identify what is present in your water and then evaluate treatment options.