



## **Abrasive Contamination Test Modified for the Chloride Ion Abrasive Contamination Test Modified for the Chloride Ion**

Below is a modified summary to test abrasives for “Chloride” contamination. This test does not comply with ASTM D-4940: “Standard Test Method for Conductimetric Analysis of Water-Soluble Ionic Contamination of Blasting Abrasives”. See footnote if you need to comply with the standard or buy the full SACK Test from MTest.

### *Preparation of a Slurry Filtrate:*

1. Rinse Jars, stirring rods, and containers with reagent water until clean. DI or distilled water from the Drugstore or supermarket is fine.
2. Fill small jar to the neck (upper rim) with abrasive to be tested and then add to large jar.
3. Fill small jar to the neck (upper rim) with distilled water and add to large jar with abrasive.
4. Put on lid and shake to mix water with abrasive. Let sit for 1 minute and repeat.
5. Let stand for 8 minutes. This water on top is the **supernatant liquid**.
4. Extract the 5 to 10 ml of the **supernatant** into the 20cc syringe.
5. Put a filter onto the end of the syringe.
6. Using syringe with filter installed, put 3–5 ml of water into the small sample bottle.
7. Beak off both ends of the Kitagawa tube using the tool provided. (Note the hole in the bottle holder. Put the Kitagawa tube in the solution with the arrow pointing up.
8. When the sample raises up to the upper plug remove from the bottle and read the scale to the maximum of the stained layer. (Brown to pale yellow)
9. The Kitagawa tube reads in ppm.

Check with the abrasive manufacturer or the specifications to determine the maximum amount of Cl allowed. When testing for Cl – this method DOES NOT comply with the ASTM Standard and you are NOT testing for total salts.

Note – the distilled (or demineralized) water you get at any drugstore or supermarket should be free of any chlorides, This water will work for the test. If there are any questions, use a Kitagawa tube or conductivity meter to test the water. . It should show 0 chloride or less than 1  $\mu\text{S}/\text{cm}$ . (less than 1 ppm TDS).

This test can also be used with a conductivity meter to comply with the ASTM Standard. Use a conductivity meter instead of the Kitagawa Tube.