

Scale Analysis Test Kit

Carbonate, Hardness, Iron and Oil

TK8005-Z

A SAMPLE PREPARATION:

Collect a scale sample by scraping or chipping scale from the test specimen using the spoonula or a screwdriver. Place the scale sample into the mortar and grind, if necessary.

B CALCIUM CARBONATE TEST:

1. Collect a small sample of the powder and place the petri dish.
2. Add 3-5 drops of RCHA6350 and observe for gas bubble formation or fizzing. Use the hand lens to confirm.
3. Bubbles and fizzing indicate the release of carbon dioxide and the presence of CARBONATE.

C OIL TEST:

Place a sample of solution to be tested in one half of the petri dish. Add a few camphor flakes and observe. If the flakes dance around quickly, this indicates NO CONTAMINATION.

As a control, place an oil-free water sample in the other half of the petri dish. Add the same amount of camphor flakes and observe. There should be little or no oil present and the flakes should move around the dish very quickly.

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D HARDNESS TEST:

1. Place one half of the petri dish over the white card.
2. Place a small powder sample in the petri dish.
3. Add a few drops of the Hardness Buffer/Indicator onto the powder.
4. A blue color indicates no hardness or metals in the sample.
5. A purple to red color indicates hardness or metals to be present.

Note: Metal ions such as aluminum, cobalt, copper, iron and nickel can poison the hardness indicator. In high concentrations they can produce off or indistinct colors.

E IRON TESTS:

Initially check the sample for magnetic iron by using the bar magnet and petri dish.

1. Place a sample scoop of the powder into the petri dish. Place the magnet under the dish and move around. If sample follows magnet, active magnetic Iron Oxide is present.
2. Apply three drops of Iron #1 and three drops of Iron #2 onto the scale residue.

If iron is present a red color will develop on your sample. The darker the red color, the more iron present in the sample. Place the petri dish on the white laminated card to acquire a better view of the results.