

QP Fire Chloride Test Kit



How To Make Successful Measurements:

Measuring Chloride using the QPFIRE test Kit is simple. There are however several aspects of the test that require some attention to make sure some simple mistakes are not made.

Avoid Contamination:

The Chloride levels being measured are relatively low typically 1-100ppm Chloride. It is therefore imperative to ensure that the swabs, beakers and solutions do not come in contact with bare hands. If the operator has e.g. eaten a bag of crisps and handled a swab without wearing gloves that swab would give a result well above the typical acceptable level.

Ensure that clean gloves are worn at all times during the test.

Wetting the Swabs:

When swabs are dry they will not take up the sample from the surface effectively. They therefore need to be wetted with deionised water or ISAB. They must not be wetted with tap water as this has a high Chloride Concentration particularly in softened water.

The volume used per swab must be limited. If 1ml of water was used this would cause a 5% error in the result due to dilution of the sample. A sensible amount with an acceptable error is around 0.2ml per swab (typically 3-4 drops) which gives a 1% error.

Temperature Compensation:

Making adjustments to sample results post analysis is generally best avoided as this is not totally accurate. So wherever possible the temperature of the Calibration Buffers and the samples should be the same. This way there is no need for temperature correction.

If this is not possible then we provide a temperature probe to be used with the QPFIRE Meter. The temperature of the Calibration solutions and the samples can then be measured and recorded.

Calculations:

We provide an excel spreadsheet where the sample details, chloride reading, blank data and temperatures can be inputted. This will give a final value in $\mu\text{g}/\text{cm}^2$ which has been corrected for both temperature and any blank background levels.