Measurement of pH in the Cloth Dyeing Industry

In the cloth dyeing industry, the measurement of pH is a very common activity. The colour fastness of the cloth very much depends on maintaining the pH within a specific range. The process of measuring pH of the cloth is usually performed using an indicator such as methyl red, methyl orange, phenolphthalein or others directly on the cloth. However, this is less accurate, difficult to ascertain the pH as the cloth is coloured, as well as prone to be subjective because of differences in visual determination.

Another method is measuring the pH of the dye solution which is even more common due to the difficulty of the first method. Again, this is a less selective method as it is the pH of the cloth that must be determined.

Some of the more ingenious method would be using a flat type of pH electrode together with a portable meter. The flat type of pH electrode has a flat surface at the tip. The cloth is first wet slightly and the flat portion of the electrode is rubbed on the cloth. The pH is then determined. However, most flat-type pH electrodes must be connected to a portable meter thereby making this application more expensive compared to using indicators.

Recommendations

Eutech's pHScan BNC or pH5/pH10 with ECFE72511-01B for testing the pH of cloth during dyeing is most ideal in consideration of price and performance.