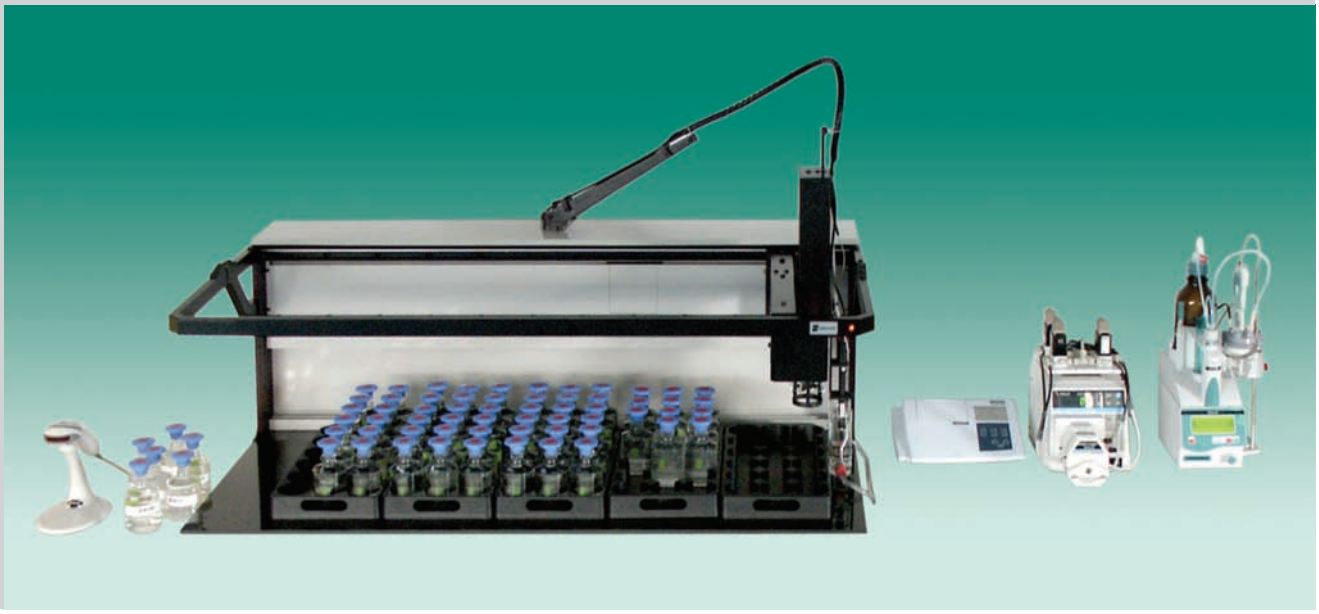
SKALAR

SP1000 Robotic analyzer

Automated analysis for pH, alkalinity, oxygen, conductivity, color and turbidity



Accurately controlling the quality of drinking water has become increasingly important. The condition of the source water from which it is drawn and the treatment it receives varies greatly from one location to another. The Skalar SP1000 Robotic Analyzer was designed specifically for monitoring this process.

The typical parameters for drinking water quality (alkalinity, pH, dissolved oxygen, conductivity, color and turbidity) can now be fully automated. The Skalar SP1000 Robotic Analyzer is an integrated unit that processes all these parameters in batches of up to 90 samples in a single, unattended analysis run (see back page for analyzing sequence).

Labor intensive applications are now automated by the SP1000. The analyzer performs a simultaneous measurement of all the parameters for each sample without operator intervention and is generally done overnight.

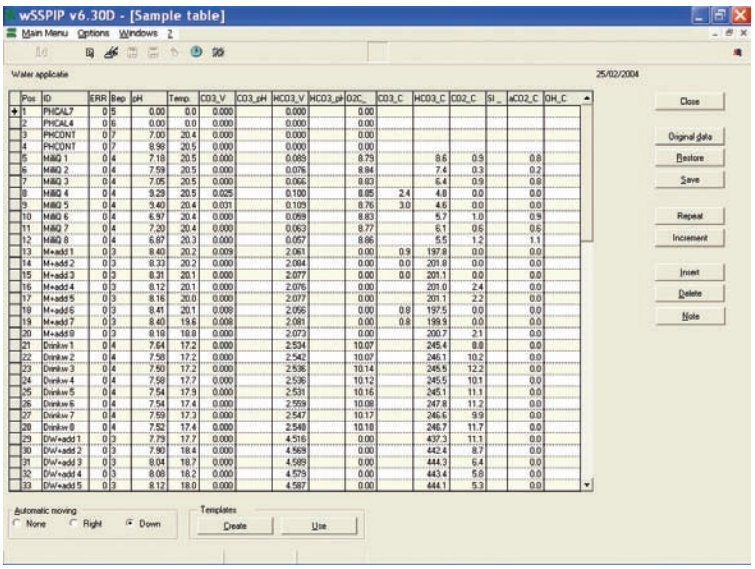
The typical sequence is as follows:

Sample table information is entered or imported directly from a LIMS. Alternatively, sample information can be entered via a barcode scanner.

First an initial calibration is performed, then the SP1000 removes the first sample cap and the initial oxygen and temperature is recorded, as this must be done instantly after the cap is removed.

Next, using a digital pump unit a part of the sample is transported to a vessel for pH analysis and automated titration for carbonate/bicarbonate. A secondary sample pick-up is used to measure turbidity, color and conductivity.

The results are displayed in a sample table spreadsheet format. Agressivity is then calculated from these results. All result information can be directly exported or printed.

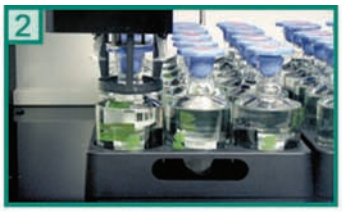


The flexible concept of the SP1000 analyzer allows the analyzing sequence to be adapted according to the users own specifications. Software and robotic processes are designed exactly to meet customer requirements.

The proven “work-horse” design of the SP1000 Robotic Analyzer will greatly increase laboratory productivity and free up the analyst for other tasks.

Drinking water analysis sequence on the SP1000. A step-by-step overview is listed below.

Fill in the sample identity: Type in keyboard, down-load from LIMS or read directly with barcode reader



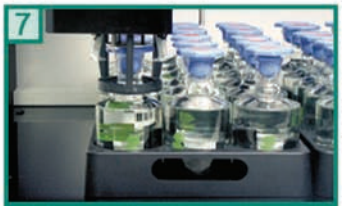
Decapping of the 300 ml sample container prior to measurement

After stirring, the oxygen concentration and temperature are measured

The titration vessel is rinsed and then filled with sample

The pH of the sample is measured in the titration vessel

Depending on the pH value either carbonate or carbonate & bicarbonate is titrated



Container is capped or the sample analysed for other optional measurements (conductivity and turbidity)

Results are calculated automatically, aggressivity can also be calculated from the results

For more information on the Drinking water application or other Skalar products please contact your local Skalar agent or Skalar’s headquarters in the Netherlands.

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