



pH / Ion-Analyser Presentation pH Calibration and Measurement

Attention: The glass bulb of the pH electrode breaks very easily! Better use Plastic pH electrodes, where the glass bulb is protected by a plastic skirt.

When using Glass pH electrodes open the Refill hole during the measurement, but close it after the use. When the Refill hole is open, keep the electrode upright.

Remove the Rubber protection cap carefully and keep it upright.

At the bottom of the Rubber protection cap is **a cotton wool ball which must be kept wet**, so please put some drops of de-ionized water in the cap before you put it on again carefully. Use Paraffin tape to seal the cap before you store the electrode.

Making a measurement: Stir the solution slowly with the electrode for about 1 minute, then stop stirring and wait till the mV signal is quite stable (about another minute).

1. Prepare 3 Buffer solutions (4, 7, 10) in three 250 ml Beakers:
Fill each of the 3 Beakers with approximately 100 ml de-ionised water, stick labels with "4", "7", "10" on the beakers, empty the capsules or sachets **completely** in each beaker and stir, till completely dissolved.
2. Have on your desk:
 - a) the 3 Calibration beakers,
 - b) one 500 ml beaker with 300 ml Tap water for rinsing the electrode shortly when moving from one beaker to another. This procedure avoids contamination by "carry over",
 - c) one empty 500 ml beaker to place the electrode in it, when not used,
 - d) one 250 ml beaker for the test sample.
3. Calibrate according to the Analyser manual
4. Measure a sample. For demonstration use Wine, Vinegar, Lemon Juice, Soft Drinks, Tap water.
Do not measure Milk or Coffee, because Protein and Fat clog the electrode and it needs cleaning with special chemicals.
5. Show how a drop of Lemon Juice changes the pH of Tap water.
Near the pH 7 point the pH value changes very strongly.