



ISO 17289 - New ISO norm officially released for the “optical measurement method” to determine dissolved oxygen in aqueous solutions.

ISO 17289 describes the “optical method” as being equivalent to the “Winkler / jodometric” or “electrochemical” methods, for both online and lab/field measurements. This enables all users measuring dissolved oxygen to use the LDO probe and the much more reliable and user-friendly optical DO method.

ADVANTAGES of LDO technology:

- ✓ Ready to measure right after power on
- ✓ Stable reading within short time
- ✓ Reliable readings
- ✓ Longer lifetime
- ✓ Simple calibration with 100% and 0% DO standards

- ✗ No start up time
- ✗ No polarization time
- ✗ No refilling of electrolyte
- ✗ No polishing of inner electrodes
- ✗ No poisoning of inner electrodes
- ✗ No frequent change of membranes
- ✗ No specific conditioning
- ✗ No or slow stirring required



Hach LDO probes for lab and rugged for field measurements

Following the Hach-Lange tradition of environmental responsibility (e.g. our environmental recycling center in Düsseldorf), we introduced an alternative 0% DO standard in the new DIN and ISO norm. Because the existing 0% DO standard with $\text{Na}_2\text{SO}_3 + \text{CoCl}_2$ (sodium sulfite + cobalt chloride) is hazardous, Hach-Lange introduced a new recipe for a non-hazardous 0% DO standard. Read here how to prepare the safe 0% DO standard solution:

New non-hazardous 0% DO standard solution

- deionized water
- ascorbic acid
- sodium hydroxide solution, NaOH 1 mol/l

Prepare the alkaline ascorbic acid solution by dissolving 2 g ascorbic acid and 25 ml 1 mol/l NaOH in 85 ml deionized water in a vessel with stopper (in total 110 ml solution). Stir slowly for at least 3 minutes before use. Always keep the 0% DO solution closed to avoid uptake of oxygen from ambient air. Under such conditions, the solution will maintain stability for at least 6 hours.

Note, the DO probe may need up to 5 minutes or even longer to reach the 0.0% DO reading.

The new ISO 17289 Norm, in English language only, can be ordered online from:

http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=59515



Hach LDO probe for Online measurements