

pH / Redox Electrode shelf Life

All pH and ORP (Redox) electrodes contain an electrolyte solution, gel or polymer that has a limited life, both in operation and on the shelf.

The shelf life of a pH or Redox sensor depends on its storage conditions. Under the best of conditions, electrodes may last well over twelve months on the shelf. The practical limit you should expect is six months to a year, when the electrode is properly stored. This does not mean that the electrode cannot be used after that date.

For diffusion type sensors (gel filled, non-flow) the storage boot may be dried out during storage. This may result in evaporation of the water inside the electrode causing high impedance of the reference cell. If pH or Redox electrodes are not to be used immediately and are to be stored for a period of time they will need to be periodically checked to ensure they remain wetted. We would suggest that this procedure is carried out every 3-4 months to ensure the electrodes remain in a wetted state.

Klay Instruments do not supply any pH electrodes that are over 12 months old, However carrying out the storage procedure below there is no reason for an electrode not to be usable after this period.

Dehydration of the bulb will temporarily impair the electrodes performance, if allowed to dry out this state is not reversible and the electrode will need to be replaced.

Note: Never permit the pH/Redox electrode to dehydrate or dry out.

Electrode Storage

If pH electrodes are not to be used immediately and are to be stored for a period of time they will need to be periodically checked to ensure they remain wetted. We would suggest that this procedure is carried out every 3-4 months to ensure the electrodes remain in a wetted state.

Remove the black storage boot at end of electrode containing storage solution (3.8 molar KCL) by unwinding the black sealing tape from the sensor housing.

Re-wet the fibre pack inside the storage boot with 3.8 Molar potassium chloride (KCL) saturated solution or if this is not available use a quantity of 4pH buffer solution. For longer periods the 3.8 Molar KCL solution should be used. **Note: Do not store the electrode in deionised water (DI)**

Re-seal the storage boot with a new piece of electrician's tape that is cut long enough to provide between 3 to 5 complete wraps. If not sealed with tape this will only serve for short-term storage protection.

Ensure new electrodes that are purchased are rotated in the stores to ensure the older ones are used first.