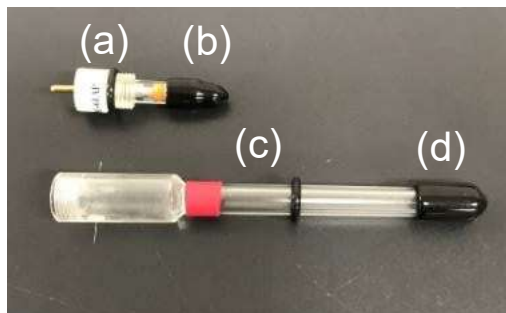


013694 RE-61AP Reference electrode for alkaline solution

1. Contents



- (a) Electrode main body
- (b) Protective cap (main)
- (c) Electrode holder (with a ceramics liquid-junction)
- (d) Protective cap (holder)

Please prepare an alkaline internal solution before use. In this manual, 1 M NaOH solution is used as an example.

2. Assembly

- 2.1 Take an electrode main body(a) out of the packaging.

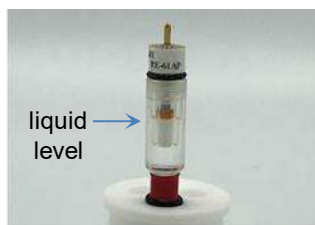
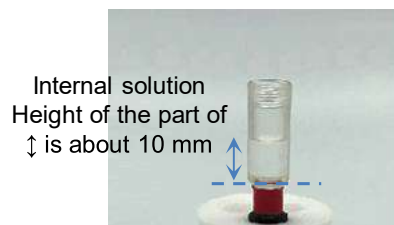
*For assembling, please use rubber gloves, as shown in the photo.

- 2.2 Remove a protective cap(b) from the electrode main body(a) gently and wash a tip of the electrode main body(a) with pure water.

*Mercury oxide adhered on the ceramics wall during the manufacturing process can turn black, but this is not a problem for the measurement.

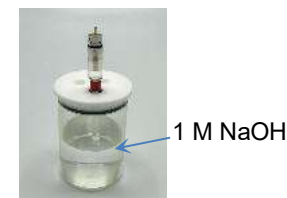
- 2.3 Fill the internal solution (1 M NaOH) up to the level that the tip of the electrode main body(a) is immersed. If you see air bubbles in the electrode holder(c), remove the bubbles by shaking the electrode holder(c). The air bubbles may cause the incorrect electrode potential.

- 2.4 Insert the electrode main body(a) to the electrode holder(c) securely. Be careful not to overfill the electrode holder(c) with the internal solution.

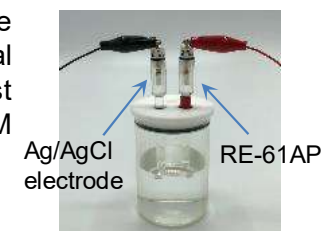


- 2.5 Before use, soak the electrode in an identical solution with the internal solution (1 M NaOH) for a day to stabilize the electrode potential.

*Do not use glass containers for alkaline solution.



- 2.6 The electrode potential can be checked with an electrometer and a typical reference electrode (Ag/AgCl) in the same solution as the internal alkaline solution. The electrode potential against the Ag/AgCl is $-80 \text{ mV} \pm 20 \text{ mV}$ (25 °C) with 1 M NaOH.



3. How to keep

After use, wash the tip of the electrode with pure water, soak it in 1 M NaOH solution and keep it in a cool dark place.

If don't use for a long time, disassemble the electrode. Wash the tip of the electrode body(a) with pure water, wipe off the water, attach the protective cap(b) and keep it in a cool dark place. Replace the internal solution of the electrode holder(c) with pure water, soak the tip of the electrode holder(c) in pure water and keep it in a cool dark place.

!!CAUTION!!

1. The electrode main body(a) contains hazardous agents. Be careful handling. At the time to discard the internal solution after final usage, please comply with the local government's law.
2. Do not remove a label of the electrode main body(a). The label is required for any case of inquiry.
3. Forcibly removing the protective cap(b) from the electrode main body(a) may damage the ceramic tip and cause leakage of hazardous substances.
4. The electrode is for alkaline solution measurement. Do not use in organic solvent.
5. Use the electrode at room temperature and atmospheric pressure.
6. Avoid a strong shock to the electrode.
7. Do not disassemble the electrode main body(a) or perform processing such as soldering. It may cause damage to the electrode or leakage of harmful substances. In that case, we cannot guarantee.
8. The electrode has individual difference and it is sensitive to the temperature, in some case the electrode potential may not coincide with theoretical value.
9. KOH internal solution (up to 6 M) is also applicable to this electrode.

You can browse the checking data of electrode in below URL.

<https://www.als-japan.com/dl/index.html>

BAS Inc.

<https://www.als-japan.com> email: sales@als-japan.com