

## > !!CAUTION!!

1. The electrode main body(a) contains hazardous agents. Be careful handling and use appropriate personal protective equipment. At the time to discard the internal solution after final usage, please comply with the local government's law.
2. Do not remove the label of electrode main body(a). The label is required for any case of inquiry.
3. Please be careful about removing the protective cap(b) from the electrode main body(a). Damage to white ceramics tip may cause leakage of hazardous solutions.
4. The electrode is for an 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. Don't disassemble or modify the electrode main body(a) as damage can occur and the warranty will be void.
8. The electrode has individual difference and it is sensitive to the temperature. in some cases the electrode potential may not coincide with theoretical value.
9. KOH internal solution (up to 6M) is also applicable to this electrode.

You can browse the “checking data of electrode” link to learn more:  
<http://www.als-japan.com/dl/>

Manufactured By: ALS Co., Ltd. | Distributed by: BASi  
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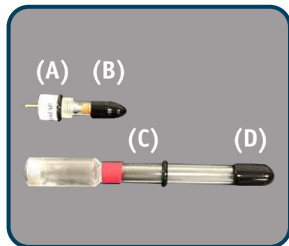


## > ALKALINE REFERENCE ELECTRODE EF-1369



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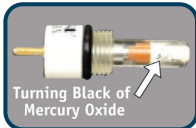
## > CONTENTS OF ELECTRODE



- A) Electrode Main Body
- B) Protective Cap (Main)
- C) Electrode Holder (with a Ceramics Liquid-Junction)
- D) Protective Cap (Holder)

## > ASSEMBLY

- > Unscrew an electrode main body(a) from an electrode holder(c). For assembling, please use rubber gloves, as shown in the photo.
- > Remove a protective cap(b) from the electrode main body(a) gently and wash a tip of the electrode main body(a) with ion-exchanged water.
- > Mercury oxide adhered on the ceramics wall during the manufacturing process can turn black, but this is not a problem for the measurement.
- > Fill the internal solution (1 M NaOH) up to the level that the tip of the electrode main body(a) is sufficiently 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.



- > Insert the electrode main body(a) to the electrode holder(c) securely. Remove the internal solution a little if it overflows from the electrode holder(c).
- > 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.
- > 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  $-80 \text{ mV} \pm 20 \text{ mV}$  ( $25^\circ\text{C}$ ) with 1 M NaOH.



## > HOW TO KEEP

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

If you don't use for a long time, disassemble the electrode. Wash the tip of the electrode body(a) with ion-exchanged 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 ion-exchanged water, soak the tip of the electrode holder(c) in ion-exchanged water and keep it in a cool dark place.

## > SEE BACK SIDE FOR WARNINGS