Hydroflex™ Hydrogen Reference Electrode (Model ET070)

US Patent: 5 407 555

- No external hydrogen source required
- Pressures up to 10 bar
- Temperatures up to 210 °C
- Replaceable H_2 cartridges

Description

A self–contained hydrogen reference electrode with replaceable internal hydrogen source (one cartridge included).

Compatibility

Low impedance ensures the electrode will be suitable for use with most potentiometers, pH and ISE meters, and potentiostats.

Applications

You can use the Hydroflex electrode to calibrate your everyday Ag/AgCl or calomel electrodes, or use it as the reference electrode in situations where other electrodes might not be suitable. For example, Hydroflex is particularly suitable as a reference electrode in aqueous acid or alkali solutions, in fuel cell studies, and can be used at pressures up to 10 bar and temperatures of up to 210 °C.

Theory of Operation

Traditionally, a hydrogen reference electrode requires passing hydrogen gas over a platinized platinum sheet. Configuring the platinum plate and bubbler mechanism within an electrode body is not a trivial matter, and the need for a hydrogen gas cylinder creates issues with space, expense, and safety. No wonder that workers so often resort to other types of reference electrode!

The Hydroflex electrode has an internal, replaceable, cartridge (order part number ET071) that continuously generates a low volume hydrogen flow that passes through a platinized gas diffusion electrode, resulting in a compact reference electrode without the need for a separate hydrogen source.

Hydrogen flow rate of the replaceable cartridge can be adjusted to last between 1 – 12 months (approximately), but a setting of six months is recommended for most applications.

Specifications

Length	120 mm
Diameter/material of shaft:	8 mm / PTFE
Connector:	Socket for 2 mm pin (4mm adaptor included)
Replacement H_2 cartridges:	ET071 (Set of 4)
eDAQ Pty Ltd reserves the right to alter these specifications at any time.	

Citations

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