WEBER SCIENTIFIC

How to buy the "right" pH meter and electrode for your needs

1. Where are you going to use it? What is your budget?

- For the lab-bench (price range: $310 to $1,100)
- In-the-field (portable) type (price range: $175 to $530)
- Convenient pocket-size (price range: $65 to $214)

2. What sort of samples are you measuring?

- Liquids, viscous liquids, solids or semi-solids, very small samples, organics, surfaces, cheese, bread, dough, meat (recommended use information in the catalog).

3. Do you need ATC (automatic temperature control)?

- Remember that the temperature will affect the pH.
- Will there be much variation in the temperature of your samples?
- You can buy a separate pH electrode and ATC electrode or buy a triode electrode
- Some meters have auto ATC
- Non-glass probes are available for high temperature applications.
- Some meters will measure temperature and/or millivolts as well as pH

4. How much accuracy do you need?

- Bench top and portable-type models accurate ± 0.01 down to 0.002 pH units,
- Pocket models accurate ± 0.1 down to 0.01 pH units
- The Ross Ultra and PerpHect probes are made for highest accuracy

5. Do you need high degree of durability?

- Glass probes vs epoxy probes: (epoxy body with glass bulb)
- Stainless steel probes very durable
- Many portable meters are water-proof

6. Do you need an easy to use model with low maintenance?

- Re-fillable vs sealed probes must both be stored "wet".
- Refillable probes may have longer life than sealed probes.
- Stainless steel probes are very low maintenance - store dry.

7. Do I need a single or double junction electrode?

- A double junction probe is less likely to become clogged and give erroneous readings also less susceptible to erosion (by metals, proteins) for a longer life.

8. Are you concerned that your probes might become clogged?

- Ross Sure-Flow and Oakton flushable type probes can be flushed with a simple push.

9. **What supplies are needed?**

- pH buffers- 4.0, 7.0, 10.0 for calibration
- electrode storage solution
- electrode cleaning solution
- electrode reference solution (for re-fillable probes)

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