

RED ROD pH ELECTRODES

Tomorrow's pH electrode has come a day early...

- **Fast Results**
- **Accurate**
- **Reliable from 0 to 100°C**
- **Drift-free**
- **Red-Rod Technology**
- **Cost-Effective**

The Red Rod pH Electrode is especially useful in cold or hot liquids where temperature variations make the average pH electrode unpredictable and unreliable. Drift and accuracy problems commonly found when using normal pH electrodes are virtually eliminated even when samples differ widely in temperature.

The Red Rod pH Electrode features symmetrically designed red rods and an unusual pH internal filling solution to guarantee pH accuracy and stability at any temperature between 0 and 100°C. Red Rod pH sensors exhibit negligible drift as well - there is no need for frequent re-calibration.

The Red Rod combination electrode is affordable and priced like a general purpose pH electrode. It is available for a fraction of the cost of a ROSS® or pHASE® pH electrode and performs even better at elevated temperatures.



You Pick the Electrode Design You Need

- Standard glass body with annular ceramic reference for general purpose use.
- Rugged epoxy body to prevent careless electrode breakage.
- Sealed reference chambers.
- Double junction reference chambers to prevent precipitation at the reference junction.
- pHFree-flow combination - free flowing liquid to liquid annular junction assures you the most stable, drift-free potentials.

Ordering Information

| Part Number | Size | Style | Body | Glass | pH | Temp. Range |
|-------------|-------------------|-----------------|------------------|-------|------|-------------|
| RR5473710 | 185mm x 4mm dia. | Micro Test tube | Refillable Glass | GX-2 | 0-13 | 0 to 100°C |
| RR5573710 | 170mm x 6mm dia. | Mini Test tube | Refillable Glass | GX-2 | 0-13 | 0 to 100°C |
| RR5673710 | 170mm x 8mm dia. | Test tube | Refillable Glass | GX-2 | 0-13 | 0 to 100°C |
| RR5733710 | 120mm x 12mm dia. | Shrouded bulb | Sealed Epoxy | GX-2 | 0-13 | -5 to 80°C |
| RR5733712 | 120mm x 12mm dia. | Shrouded bulb | Refillable Epoxy | GX-2 | 0-13 | -5 to 80°C |
| RR5773709 | 120mm x 12mm dia. | Bullet bulb | Refillable Glass | GX-2 | 0-13 | -5 to 100°C |
| RR5773710 | 120mm x 12mm dia. | Standard bulb | Refillable Glass | GX-2 | 0-13 | -5 to 100°C |
| RR5773712 | 120mm x 12mm dia. | Standard bulb | Refillable Glass | GX-2 | 0-13 | -5 to 100°C |
| RR5774710 | 120mm x 12mm dia. | Bullet bulb | Refillable Glass | GX-3 | 0-14 | -5 to 100°C |



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PHREE-FLO COMBINATION ELECTRODES



- **Fast, Accurate Results**
- **Useful in abrasive, viscous or dirty samples**
- **Reliable from 0 to 100°C**
- **Drift-free**
- **No clogging problems**
- **Red-Rod Technology**
- **Easy to clean**

The Red Rod pHree-flow combination electrode combines the best of two unique electrode designs into one body. It incorporates the fast, accurate, drift-free results of Red Rod technology with the clog-free, easy-to-clean, attributes of the pHree-flow combination.

The electrode will accurately measure pH in virtually any sample ranging from high temperatures to abrasive, viscous and dirty samples. Due to a special pH internal fill, accuracy and stability is guaranteed to within 0.02 pH units between 0 and 100°C. Should you have any problems with a dirty or clogged reference, simply push down on the cap to flush.

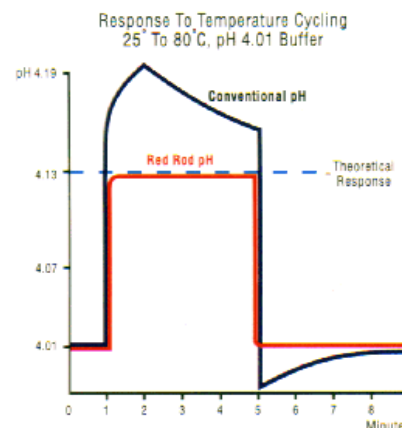
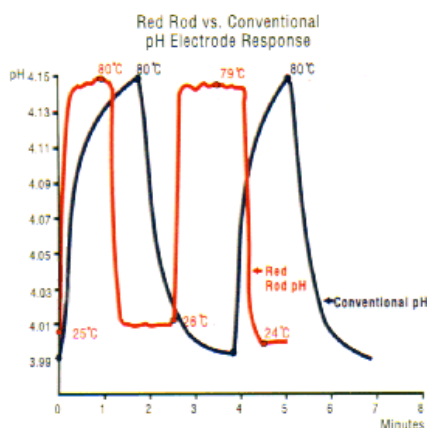
Ordering Information

| Part Number | Body | Glass | pH range | Temp Range | Junction |
|-------------|-------|-------|----------|-------------|----------------|
| RR5733703 | Epoxy | GX-2 | 0-13 | -5 to 80°C | Ag/AgCl Double |
| RR5734703 | Epoxy | GX-3 | 0-14 | -5 to 80°C | Ag/AgCl Double |
| RR5773703 | Glass | GX-2 | 0-13 | -5 to 100°C | Ag/AgCl Double |
| RR5774703 | Glass | GX-3 | 0-14 | -5 to 100°C | Ag/AgCl Double |

All electrodes 120mm x 12mm dia. Refillable. Specify cable length and connector.

Red Rod pH Electrode Response

The graph below shows how much better the Red Rod electrode responds compared to any conventional pH electrode. Two beakers of 4.01 buffer are measured in a controlled experiment - one at room temperature (or 25°C) and one heated to 75°C. pH readings are recorded every second and accuracy is referenced to the published pH values for the pH 4.01 buffer at each of these temperatures. What is quite obvious is that the Red Rod pH Electrode has superior qualities. The sample pH is registered in less than 20 seconds, the result is correct to within 0.02 pH units, and the pH stays constant at any given temperature. The pH can be measured almost as rapidly as you can dip the electrodes in the hot or cold solution.



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