Choose basic, advanced, or premium options based on your application

Accurate and reliable measurements across full pH scale (0-14)

Compatible with any meter accepting a BNC

Select from glass body or polymer body pH sensors

Instantly ready for use: Extended shelf life (guaranteed for one year)

One year limited warranty

The right sensor makes the difference.

Different applications require different types of pH sensors to ensure measurement accuracy and extend instrument lifetime. Select the best pH probe for your application - our probes can be used with a wide range of meters and analyzers.

This specification sheet covers:

- Polycarbonate 12mm pH electrodes
- Ultem® 12mm pH electrodes
- Glass 12mm pH electrodes
- Spear tip 12mm pH electrodes
- Flat surface 12mm pH electrodes

Recommended applications:

- Environmental Sample Testing
- Wastewater Sample Testing
- Drinking Water Sample Testing
- Education
- Research and Development
- Meats, Cheeses, and Jellies
- Soil Sample Testing
- Hydroponics
- Swimming Pools
- Aquariums
- And More!

For specific application recommendations, check out our Interactive Selection Tool!

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PLASTIC LABORATORY pH ELECTRODES
PRODUCT SPECIFICATION SHEET

Choose basic, advanced, or premium options based on your application

Virtually unbreakable with durable polycarbonate or Ultem® bodies

Compatible with any meter accepting a BNC

Accurate and reliable measurements across full pH scale (0-14)

Instantly ready for use: Extended shelf life (guaranteed for one year)

One year limited warranty

The right sensor makes the difference.

Choosing a sensor that is well-suited for your application will improve measurement accuracy and extend sensor lifetime. Select from basic, advanced, and research grade pH sensors to find the option that meets your application needs.

pH1000 Series (Basic): The pH1000 polycarbonate pH sensor is easy to use and stands up to the usual wear and tear. This sensor performs reliably in environments such as swimming pools and hydroponics.

pH2000 Series (Advanced): The pH2000 series of Ultem® pH sensors offers enhanced chemical compatibility. Great for testing samples with unknown composition, such as wastewater, these sensors feature double junction reference protection and operate at temperatures up to 80°C.

pH3000 Series (Research Grade): Our pH3000 series Ultem® pH electrodes are designed for maximum accuracy and sensor lifetime. These research grade probes stand up to aggressive chemicals and temperatures up to 100°C. The refillable design is excellent for precision measurements, even in low ionic samples.

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### SPECIFICATIONS

<table>
<thead>
<tr>
<th>pH1000</th>
<th>pH2000</th>
<th>pH2100</th>
<th>pH2200</th>
<th>pH3000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diameter</strong></td>
<td>12mm</td>
<td>12mm</td>
<td>12mm</td>
<td>12mm</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>150mm</td>
<td>150mm</td>
<td>150mm</td>
<td>150mm</td>
</tr>
<tr>
<td><strong>Reference</strong></td>
<td>Sealed</td>
<td>Sealed</td>
<td>Sealed</td>
<td>Sealed</td>
</tr>
<tr>
<td><strong>Junction Number</strong></td>
<td>Single (1)</td>
<td>Double (2)</td>
<td>Double (2)</td>
<td>Double (2)</td>
</tr>
<tr>
<td><strong>Junction Material</strong></td>
<td>Pellon</td>
<td>Pellon</td>
<td>Pellon</td>
<td>Pellon and Kynar</td>
</tr>
<tr>
<td><strong>Reference Solution</strong></td>
<td>3.5 M KCl/AgCl (gel)</td>
<td>3.5 M KCl/AgCl/KNO_3 (gel)</td>
<td>3.5 M KCl/AgCl/KNO_3 (gel)</td>
<td>3.5 M KCl/AgCl/KNO_3 (gel)</td>
</tr>
<tr>
<td><strong>Glass Shape</strong></td>
<td>Bulb</td>
<td>Bulb</td>
<td>Flat</td>
<td>Spear</td>
</tr>
<tr>
<td><strong>Body Material</strong></td>
<td>Polycarbonate</td>
<td>Ultem®</td>
<td>Ultem®</td>
<td>Ultem®</td>
</tr>
<tr>
<td><strong>Temperature Range</strong></td>
<td>0-60 degrees C</td>
<td>0-80 degrees C</td>
<td>0-80 degrees C</td>
<td>0-80 degrees C</td>
</tr>
<tr>
<td><strong>Strain Relief</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>BNC Boot</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Bulb Protection</strong></td>
<td>Slots</td>
<td>Teeth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### All Plastic Laboratory pH Electrodes

| **pH Range** | 0-14 (Na^+ error at 12.3 < pH) |
| **Response** | 95% in 1 second (bulb glass shape) 95% in 5 seconds (flat glass shape) 90% in 5-7 seconds (spear glass shape) |
| **Isopotential Point** | 7.00 pH (0 mV) |
| **Offset** | ± 0.20 pH |
| **Span** | 97% of theoretical or higher |
| **Connector** | BNC (Standard Configuration) |
| **Cable Length** | 1 meter (Standard Configuration) |

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OUTLINES AND DIMENSIONS

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH1000</td>
<td>Single junction, sealed polycarbonate pH electrode</td>
</tr>
<tr>
<td>pH2000</td>
<td>Double junction, sealed Ultem® pH electrode</td>
</tr>
<tr>
<td>pH2200</td>
<td>Double junction, sealed Ultem® pH electrode with spear tip for food and soil applications</td>
</tr>
</tbody>
</table>

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PLASTIC LABORATORY pH ELECTRODES
PRODUCT SPECIFICATION SHEET

OUTLINES AND DIMENSIONS

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<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH2100</td>
<td>Double junction, sealed Ultem® pH electrode with flat measurement surface for specialty applications</td>
</tr>
<tr>
<td>pH3000</td>
<td>High accuracy, research grade double junction refillable Ultem® pH electrode</td>
</tr>
</tbody>
</table>

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GLASS LABORATORY pH ELECTRODES
PRODUCT SPECIFICATION SHEET

Maximum chemical compatibility with inert glass bodies

Highly adaptable: Compatible with any meter accepting BNC

Choose basic, advanced, or premium options based on your application

Accurate and reliable measurements across full pH scale (0-14)

Instantly ready for use: Extended shelf life (guaranteed for one year)

One year limited warranty

The right sensor makes the difference.

Choosing a sensor that is well-suited for your application will improve measurement accuracy and extend sensor lifetime. Glass body sensors perform well in unpredictable chemical environments due to the inert properties of glass.

pH1400 (Basic): The pH1400 glass pH sensor is easy to use and performs reliably in applications such as hydroponics, gardening, and education.

pH2400 & pH2500 (Advanced): The pH2400 (bulb shape) and pH2500 (flat tip) electrodes are great for testing samples with unknown composition, such as wastewater. The double junction reference design prevents fouling by proteins, enzyme, and TRIS buffer.

pH3400 (Research Grade): Our pH3400 glass pH electrodes are designed for maximum accuracy and sensor lifetime. These research grade probes have high sensitivity internals for temperature responsive measurements up to 100°C. The refillable pump junction allows easy maintenance to extend the sensor’s lifetime.
### SPECIFICATIONS

#### pH1400
- **Diameter**: 12mm
- **Length**: 150mm
- **Reference**: Refillable
- **Junction Number**: Single (1)
- **Junction Material**: Ceramic Frit
- **Reference Solution**: 3.5 M KCl/AgCl (liquid)
- **Glass Shape**: Bulb
- **Body Material**: Glass
- **Temperature Range**: 0-60 degrees C
- **Strain Relief**: No
- **BNC Boot**: No

#### pH2400
- **Diameter**: 12mm
- **Length**: 150mm
- **Reference**: Refillable
- **Junction Number**: Double (2)
- **Junction Material**: Annular Ceramic and Ceramic Frit
- **Reference Solution**: 3.5 M KCl/AgCl/KNO₃ (liquid)
- **Glass Shape**: Bulb
- **Body Material**: Glass
- **Temperature Range**: 0-80 degrees C
- **Strain Relief**: No
- **BNC Boot**: Yes

#### pH3400
- **Diameter**: 12mm
- **Length**: 150mm
- **Reference**: Refillable
- **Junction Number**: Double (2)
- **Junction Material**: Ground Glass and pHASE
- **Reference Solution**: 3.5 M KCl (liquid)
- **Glass Shape**: Bulb
- **Body Material**: Glass
- **Temperature Range**: 0-100 degrees C
- **Strain Relief**: Yes
- **BNC Boot**: Yes

### All Glass Laboratory pH Electrodes
- **pH Range**: 12mm (Na⁺ error at 12.3 < pH)
- **Response**: 95% in 1 second (bulb glass shape) 95% in 5 seconds (flat glass shape)
- **Isopotential Point**: 7.00 pH (0 mV)
- **Offset**: ± 0.20 pH
- **Span**: 97% of theoretical or higher
- **Connector**: BNC (Standard Configuration)
- **Cable Length**: 1 meter (Standard Configuration)

### Universal

### Specialty

#### pH2500
- **Diameter**: 12mm
- **Length**: 150mm
- **Reference**: Sealed
- **Junction Number**: Double (2)
- **Junction Material**: HDPE and Pellon
- **Reference Solution**: 3.5 M KCl/AgCl/KNO₃ (gel)
- **Glass Shape**: Flat
- **Body Material**: Glass
- **Temperature Range**: 0-80 degrees C
- **Strain Relief**: No
- **BNC Boot**: Yes

### Bulb Protection
- Removable Guard

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GLASS LABORATORY pH ELECTRODES
PRODUCT SPECIFICATION SHEET

OUTLINES AND DIMENSIONS

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<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH1400</td>
<td>Single junction, refillable glass body pH electrode</td>
</tr>
<tr>
<td>pH2400</td>
<td>Double junction, refillable glass body pH electrode</td>
</tr>
</tbody>
</table>

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### OUTLINES AND DIMENSIONS

![Diagram of pH2500 and pH3400 electrodes]

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<tr>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>pH2500</td>
<td>Double junction, sealed glass body pH electrode with flat measurement surface for specialty applications</td>
</tr>
<tr>
<td>pH3400</td>
<td>High accuracy research grade double junction, refillable glass body pH electrode</td>
</tr>
</tbody>
</table>

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