

LAQUA Electrode Technology

Born from the fusion of our technical expertise and state-of-the-art manufacturing

As a leading pH electrode manufacturer, HORIBA uses the latest technology for all your measurement needs.

Since the development of Japan's first glass electrode for pH meter, HORIBA has focused on continually improving our electrode technology, especially in materials and manufacturing. HORIBA is committed to continually explore and employ groundbreaking solutions in manufacturing next-generation electrodes so that we always provide you with the newest and best electrodes.

pH Electrode Selection Guide

pH Electrode Selection Guide		3-in-1 ELECTRODES								
		PLASTIC					STANDARD ToupH	LONG ToupH	MICRO ToupH	SLEEVE ToupH
		9651-10D / 9652-10D	9625-10D	9630-10D	9631-10D	9632-10D	9615S-10D	9680S-10D	9618S-10D	9681S-10D
Specification	Applicable temperature range (°C)	0-60 / 0-80	0-100	0-100	0-60	0-100	0-100	0-100	0-60	0-60
	Diameter (mm)	16	16	16	16	16	12	8	3	12
	Length (mm)	150	150	150	155	150	198	283	185	203

pH - Sample Conditions

Aqueous Solution	Conductivity	Normal (over 100 mS/m)	●	●	●	●	●	●	●	●
		Low (approx.10 ~100 mS/m)			●					○
		Very low (approx. 5 ~100 mS/m)			○					○
		High (approx. 5 S/m)	○	○	○	○	○	○		●
	Strong alkaline (pH 10-12)					●	○	○		○
	Strong acidity (pH 0-2) * Except HF sample					●	●			
	Quick heat change (within 50°C)		●	●	●	●				
	High viscosity (approx. 5 Pa·S)									●
	Containing non-aqueous solvent						○	○	○	○
	Suspension						○	○	○	●
Solid/ Semisolid	Inside									
	Surface									

Sample Containers	Microtube/plate (> 50 µL)								●	
	Ampule > ø4 mm								●	
	Micro container (> 2 mL)							○	●	
	Tube	ID:13 mm, L:100 ~ 150 mm						●		
	Beaker	10 mL ~ 1 L	●	●	●	●	●	○	○	○
	Large container (> 1 L)		○	○	○	○	○	●		
	Petri dish									
	Droplet									

Water	Pure/ion-exchange water (approx. 0.1 mS/m)/ Distilled water (approx. 0.5 mS/m)						○			
	Tap/drinking water (approx. 10 mS/m)		○	○	●		○			○
	Surface water				●		○			○
	Pharmaceutical water/ Environmental water/acid rain		○	○	○		○			○
Chemical reagent/ solvent	Caustic/strong acid (Except HF sample)				●		●			○
	Hydrofluoric acid				●					
	Surfactant						○			●
	Water-based paint						○			●
	Dye/coloring agent									●
Pharmaceutical/ biological sample	Protein-containing sample						○		○	●
	Medicinal preparation								○	○
	Enzyme solution							○	●	
	Tris buffer						●		○	○
	Suspension						○			●
	Agar medium									
Food	Jam						○			●
	Meat/fish/Fruit/vegetable/ Dough									
	Honey									
	Cheese/butter									
	Yogurt		○	○	○		○			○
Beverage/ seasoning	Beer		○	○	○		○			●
	Milk/Carbonated drink/juice/ sauce/soy sauce						○			●
	Mayonnaise/ketchup						○			●
Cosmetic/ lotion	Beauty cream/mascara						○			●
	Gel/soap/shampoo/Hairdye lotion						○			●
	Emulsified liquid						○			○

				COMBINATION ELECTRODES							ISFET ELECTRODES
	SLEEVE	NON-AQUEOUS	NEEDLE	PLASTIC	STANDARD ToupH	MICRO ToupH	SLEEVE ToupH	LONG	LONG ToupH	FLAT	GENERAL
	6367-10D	6377-10D	6252-10D	9425-10C	9415-10C	9418-10C	9481-10C	6069-10C	9480-10C	6261-10C	0040-10D
	0-60	0-60	0-60	0-100	0-100	0-60	0-60	0-60	0-100	0-50	0-60
	12	12	12	16	12	3	12	3	8	12	16
	150	150	150	150	198	185	203	291	283	150	190

●	●	●	●	●	●	●	●	●	●	●
	●					○				
	●					○				
			○	○		●		○		
○				○		○		○		
				●						
			●							
○	●					●				
○	●			○	○	○		○		○
	●			○	○	●		○		○
		○								
									●	●

					●					
					●		○			
					●		○	○		
							●	●		
○	○	○	●	●	○	○	○	○	○	○
			○	○				●		
									●	●
									●	●

	●			○						
	●		○	○		○				
	●			○		○				
	○		○	○		○				
				●		○				
	○			○		●				
	○			○		●				
	○			○		●				
○				○	○	●				
	○			○	○	○				
		○			●			○		
	●			○	○	●				
									●	●
	○	○		○		●			○	● (surface)
		●							○	● (surface)
	●									○ (surface)
		○							○	○ (surface)
○		○	○	○		○			○	● (surface)
○	●		○	○		●				
○	○			○		●				
	○			○		●				
	○	○		○		●				
	○			○		●				
	●			○		○				