



Minimum Sample Volumes Orion Micro pH Electrode and Micro ATC Probe

The table below displays the minimum sample volumes necessary for use of the Orion 8220BNWP Ross™ Micro pH Electrode and Orion 928007 Stainless Steel Body Micro ATC probe in various sample vessels. Volume required ensures the reference junction of the pH electrode is covered with sample and tip of micro ATC probe is submerged.

When using both probes in the same vessel, it is recommended to secure the pH electrode in the swing arm holder (Orion 090043) and place the ATC probe through the smaller center hole so both probes can easily fit into the vessel.

To measure both pH and temperature of a sample volume less than that listed in the last column of the table below, use the Orion 8220BNWP Ross™ Micro pH Electrode with an Orion PerpHecT Meter (model 350 or 370). By selecting the LogR feature, temperature is determined based on the resistance of the pH sensor, without the need for a separate ATC probe.

Sample Vessel	Size	volume required (µL)		
		pH only	Temperature (ATC) only	pH and Temp
Test Tube	10 X 75mm	50	30	2000
	13 X 100mm	1000	50	5000
	16 X 150 mm	200	100	11000
	13 X 124mm (screw cap)	8000	300	15000
Falcon Tube	30 X 115mm (50mL)	200	100	200
	15 X 120mm (15mL)	50	50	3000
Well Plate	96 wells (8 X 10mm each)	75	50	75
	96 wells (8 X 11mm each)	100	50	100
	384 wells (3 X 7mm each)	15	10	n/a
Vial	13 X 40mm (2mL)	200	150	200
	5 X 34mm (2mL)	250	100	n/a
	9 X 45mm (4mL)	400	300	35000
	7 X 30mm (1mL)	70	40	70
Eppendorf Tube	3 X 7mm (0.5mL)	15	5	20

Note: n/a indicates vessels which are too small to fit both probes at the same time.