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### YSI TruLab pH/ISE 1320 Laboratory ISE Benchtop Meter

Dual channel meter for dual measurement of pH, mV (ORP) or ISE

The TruLab® pH/ISE 1320 benchtop meter is the ideal laboratory instrument for reliable measurements with automatic documentation for GLP compliance. The 1320 benchtop is an accurate, easy-to-use solution for the measurement of pH/mV/ISE in the laboratory. The 1310 has internal memory and is available with or without a built-in printer. Stored data can be sent to a PC via USB or to an optional built-in printer available on the 1320P.



TruLab 1320P

**Repeatable/Efficient** - the instrument's AutoRead function indicates when a stable measurement is reached improving repeatability.

**Convenient/Reliable** - data can be printed directly from the instrument via the integrated printer or exported via USB.

#### Parameters:

- pH
- mV (ORP/Redox)
- Temperature

#### ISEs:

- Ammonia
- Ammonium
- Bromide
- Cadmium
- Calcium
- Chloride
- Copper
- Cyanide
- Fluoride
- Iodide
- Lead
- Nitrate
- Potassium
- Silver/Sulfide
- Sodium



TruLab 1320

- Simultaneous dual measurement of pH, mV (ORP) or ISE and temperature (2-channel benchtop meter)
- Easy-to-read backlit display with text menu for easy operation
- Fast data transfer via USB in .csv or ASCII format or the optional integrated printer
- Continuous Monitoring Control (CMC) function for monitoring the ideal measuring range for pH measurements based on the last calibration
- 1, 2, 3, 4 or 5 point calibration for pH
- 2, 3, 4, 5, 6 or 7 point calibration for ISE, also non-linear
- BNC connection for pH, mV; 2 banana connections - 1 for external temperature sensor, 1 for external reference if using a half cell
- 3-year warranty
- GLP/AQA compliant
- Wide selection of electrodes

### TruLab Electrodes

TruLine - single-junction pH electrodes or ORP electrodes. Choice of epoxy or glass body, with temperature compensation or without, flat glass, piercing tip, and refillable or non-refillable.

Science - robust, double-junction pH electrodes available with temperature compensation, with ground or platinum junction.

IoLine - triple-junction pH electrodes with Iodine/Iodide reference for specialized applications, refillable with temperature compensation.

## TruLab pH/ISE 1320 Instrument Specifications

	Range	Resolutions	Accuracy ( $\pm 1$ digit)
pH	-2.0 to 20.0; -2.00 to 20.00; -2.000 to 19.999	0.1; 0.01; 0.001	$\pm 0.1$ ; $\pm 0.01$ ; $\pm 0.005$ (temp of test sample 15 to 35°C; within a range of $\pm 2$ pH of the calibration point)
mV	-1200 to 1200.0; -2500 to 2500	0.1; 1.0	$\pm 0.3$ ; $\pm 1.0$ (temp of test sample 15 to 35°C)
ISE (mg/l, mg/kg, mmol/l, ppm, %)	0.000 to 9.999; 10.00 to 99.99; 100.0 to 999.9; 1000 to 999999	0.001; 0.01; 0.1; 1	
( $\mu\text{mol/l}$ )	0.000 to 9.999; 10.00 to 99.99; 100.0 to 999.9; 1000 to 9999	0.001; 0.01; 0.1; 1	
Temperature	-5 to 105°C (23.0 to 221°F)	0.1	$\pm 0.1$

## TruLab pH/ISE 1320 & pH/ISE 1320P Additional Specifications

Power Supply	4 alkaline AA batteries (~150 hours with illumination, 1000 without); universal power supply; compatible with 4 NiMH AA rechargeables**		
Manual Temperature Input	-25 to 130°C (-13 to 266°F) in increments of 1		
Display	Backlit graphic display		
Memory	5,000 data sets auto logging; 500 data sets manual logging		
Calibration			
pH	1, 2, 3, 4 or 5 point with or without autobuffer recognition; USA and NIST and 22 pre-programmed buffer sets		
ISE	2 to 7 points		
ISE Measurement	Blank value correction, increment methods: Known addition (single); Known subtraction; Sample addition; Sample subtraction; Known addition (double)		
Storage	-25 to 65°C (-13 to 149°F)		
Weight	1320 0.8 kg (1.8 lbs)	1320P 1.0 kg (2.0 lbs)	
Dimensions	1320 230 L x 190 W x 80 H mm (9.0 x 7.5 x 3.2 in)	1320P 280 L x 230 W x 80 H mm (11 x 9.0 x 3.2 in)	
Certifications	CE, cETLus; electrical protective class III; IP43		
Warranty	3 years		

## Ordering Information

1GA340Y	TruLab pH1320 pH/mV/ISE benchtop meter with BNC two channel input, data storage and USB data transfer. Includes universal power supply, stand, manual, software and USB cable.		
1GA340PY	TruLab pH1320P pH/mV/ISE benchtop meter with BNC two channel input, data storage, USB data transfer and integrated thermal printer. Includes universal power supply, stand, manual, software and USB cable.		
400350	TruLine pH15; pH electrode with temperature, single-junction, 3 in 1, refillable, glass shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm.*		
400351	TruLine pH 17; pH electrode no temperature, single-junction, combination, refillable, glass shaft with 1-m cable, BNC connector.*		
400352	TruLine pH 26; pH electrode with temperature, single-junction, 3 in 1, gel electrolyte, epoxy shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm.*		
400353	TruLine pH 25; pH electrode no temperature, single-junction, combination, gel electrolyte, epoxy shaft with 1-m cable, BNC connector.*		
400354	TruLine pH 27; pH electrode no temperature, single-junction, combination, flat glass membrane for surface measurements, glass shaft with 1-m cable, BNC connector.*		
400355	TruLine ORP 50; ORP electrode no temperature, single-junction, refillable, glass shaft with 1-m cable, BNC connector.*		
400356	TruLine ORP 51; ORP electrode no temperature, single-junction, gel electrolyte, epoxy shaft with 1-m cable, BNC connector.*		
400357	TruLine pH 21; pH electrode no temperature, single-junction, combination, spear tip membrane, epoxy shaft with 1-m cable, BNC connector. Dimensions = tapered to spear tip		
400358	IolLine - 3 in 1; pH electrode with temperature, triple-junction, Iodine/Iodide reference, 3 in 1, refillable, glass shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm.*		
400359	IolLine Micro - 3 in 1; pH electrode with temperature, triple-junction, Iodine/Iodide reference, 3 in 1, refillable, Micro electrode, glass shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm. Dimensions = 200 mm overall length (tapered); 12 mm OD to 6 mm OD (tapered)		
400360	Science pH-T; pH electrode with temperature, double-junction, Platinum junction, 3 in 1, glass shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm. Dimensions = 170 mm length; 12 mm OD		
400361	Science pH-T-G; pH electrode with temperature, double-junction, 3 in 1, ground joint junction, glass shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm. Dimensions = 170 mm length; 12 mm OD		
400362	Science pH-T-Micro; pH electrode with temperature, double-junction, 3 in 1, Platinum junction, Micro electrode, glass shaft with 1-m cable, BNC connector, 1 banana plug, NTC 30 kOhm. Dimensions = 200 mm overall length (tapered); 12 mm OD to 5 mm OD (tapered)		
400363	ScienceLine Temp 135; temperature sensor, stainless steel, 1 banana plug, NTC 30 kOhm. Dimensions = 120 mm length; 4 mm OD		
400364	ScienceLine Temp 136; temperature sensor, glass, 1 banana plug, NTC 30 kOhm. Dimensions = 120 mm length; 6 mm OD		

\*Dimensions = 120 mm length; 12 mm OD

\*\* Instrument will not charge the rechargeable batteries

## YSI

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