

# SP-910

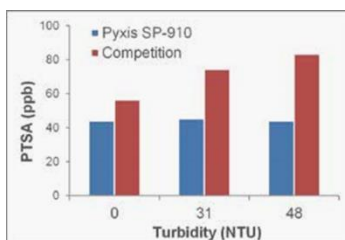
## Multi-Parameter Portable Water Analyzer

### Product Description

The SP-910 is a multi-parameter and multi-wavelength fluorometer, colorimeter and turbidimeter specifically designed Municipal, Environmental and Industrial water analysis. For industrial water treatment applications utilizing fluorescent tracer chemistries, the SP-910 is ideally suited with integrated direct read testing for Fluorescein and PTSA. The SP-910 uses industry standard colorimetric reagents (HACH® and Pyxis) and provides colorimetric measurements at 7 LED wavelengths. The SP-910 is pre-calibrated for colorimetric measurements of analyses common in industrial water treatment and other water testing in the laboratory. In multiple side-by-side validation and comparison studies, the SP-910 has proven to be statistically more accurate than other devices on the market. The SP-910 contains multiple methods compliant with USEPA guidelines for drinking water and municipal water application analysis as well as True Turbidity (White Light/InfraRed) direct read method. The SP-910 also contains numerous unique Pyxis Lab direct read and wet chemistry methods not available in other market devices.

### Key Features

- Direct Read Fluorescein and PTSA - Fluorometer
- True Turbidity Measurement – White Light / IR LED
- 7 LED wavelengths and 65+ built-in reagent-based methods
- Add User Defined Methods via uPyxis APP
- Bluetooth Enabled for Wireless Data Transfer & Firmware Updates via uPyxis
- Display a concentration-time profile curve during color development



### PTSA - Color and Turbidity Compensation

Maximum rejection to sample color and turbidity interference by Pyxis' state-of-the-art optical design and proprietary compensation algorithm.

**3-in-1** — Fluorometer  
Colorimeter  
Turbidimeter

### Specifications

Item	Parameters
PTSA	0.0 – 300.0 ppb
Fluorescein	0.0 – 600.0 ppb
Colorimeter Wavelength	365, 420, 455, 525, 560, 570, 630 nm
Turbidity Excitation Wavelength	White and IR LED
Fluorescence Excitation Wavelengths	365 / 470 nm LED
Fluorescence Emission Wavelengths	410 / 525 nm LED
Wavelength Accuracy	± 1nm
Absorbance Reproducibility	0.005 au (0 - 1.5 au) (3sigma)
Absorbance Linearity Range	0 to 1.0 au
Fluorescence Reproducibility	0.3ppb PTSA / 0.03pb Fluorescein (3 sigma)
Fluorescence Detection Limit	1ppb PTSA / 0.1ppb Fluorescein
Turbidity Range	0 – 200 NTU
Turbidity Detection Limit	1 NTU
Battery	4 AA alkaline, 6 months typical battery life
Display	Graphical LCD 160x240 pixels, visible under direct sunlight
Instrument Dimension (LxWxH)	L 265 mm x 88 mm x 62 mm
Instrument Weight	600 g without batteries
Storage Temperature	0 to 140°C (-18 – 60°C)
Operation Temperature	40 to 106 °F (4 - 41°C)
Humidity	85% at 106 °F (41 °C)
Environmental	IP67, dustproof and waterproof
Regulation	CE / RoHS

### Colorimetric and Unique Pyxis Lab Method

HACH®, Pyxis Lab and other solid/liquid reagents are directly compatible for use with the Pyxis SP-910. Both 10mL and 25mL sample vials are available for use with the Pyxis SP-910 and all tests offer live graphical display of real-time reading as test occurs. Pyxis Lab has also developed and provided numerous unique colorimetric and fluorescent test methods integrated into the SP-910 that are not available in other market colorimeters. These include Bleach Concentration Direct Read, Nitrite Dioxide Direct Read, Calcium, Alkalinity, Sulfite and Non-Hazardous Zinc. Please reference the SP-910 method procedure manual for details.



## Methods Supported

Parameter	Method	Description, Corresponding HACH® PRMP Number	Range
Fluorescence - Fluorescein	Fluorescein	Fluorescein - Direct Read Fluorescence Method - Pyxis Lab	0.1 - 500.0 ppb
Fluorescence - PTSA	PTSA	PTSA - Direct Read Fluorescence Method - Pyxis Lab	1.0 - 300.0 ppb
Turbidity - True	Turbidity	Turbidity - True White Light & IR Methods - Direct Read - Pyxis Lab	1.0 - 200.0 NTU
Aluminum	Al	Aluminum Method - PRMP 1	0.02 - 0.80 ppm
Alkalinity Low Range	ALKLR	Bromophenol Blue Method - Pyxis Lab	5 - 100 ppm
Alkalinity High Range	ALKHR	Bromophenol Blue Method - Pyxis Lab	100 - 500 ppm
Azole	AZOL	Benzo/TolyTri Azole UV Photolysis Method - PRMP 3	0.7 - 16.0 ppm
Bleach Concentration - Direct Read High	BLCH	Direct Measurement Sodium Hypochlorite Concentration - Pyxis Lab	0.5 - 16.0 %
Bleach Concentration - Direct Read Low	BLCHL	Direct Measurement Sodium Hypochlorite Concentration - Pyxis Lab	0.015 - 1.5 %
Bromine	Br-T	Bromine Total - DPD	0.04 - 4.50 ppm
Calcium	Ca	Calcium - Calmagite Colorimetric Method - PRMP 29	0.08 - 4.0 ppm
Calcium Hardness	CaHR	Calcium High Range - Murexide Method - Pyxis Lab	25 - 500 ppm
C.O.D.	CODLF/CODHF	Chemical Oxygen Demand - Reactor Digestion Method	15-150 / 100-1500 ppm
Chloride Low Range	CLLR	Chloride Low Range - Turbidimetric Method - Pyxis Lab	2.5 - 40.0 ppm
Chloride High Range	CLMR	Chloride Mid Range - Turbidimetric Method - Pyxis Lab	40 - 400 ppm
Chlorine, Total - High Range	CL2HR	Chlorine Total - High Range - DPD Method - PRMP 12	0.1 - 10.0 ppm
Chlorine, Free - High Range	CL2HR	Chlorine Free - High Range - DPD Method - PRMP 12	0.1 - 10.0 ppm
Chlorine, Free - Ultra High Range	CL2UH	Chlorine Free - UltraHigh - Iodometry Method	5 - 400 ppm
Chlorine, Free - Low Range	CL-F	Chlorine Free - Low Range - DPD Method - PRMP 9	0.02 - 2.20 ppm
Chlorine, Free - TMB	CLTMB	Chlorine Free - Low Range -TMB Method - Pyxis Lab	0.02 - 1.20 ppm
Chlorine Dioxide	CLO2	Chlorine Dioxide - DPD Method - PRMP 112	0.04 - 5.0 ppm
Chlorine Dioxide - Direct Read Medium	CLO2D	Chlorine Dioxide - Medium - Direct Read Method - Pyxis Lab	7.30 - 50.0 ppm
Chlorine Dioxide - Direct Read High	CLO2H	Chlorine Dioxide - High - Direct Read Method - Pyxis Lab	200 - 1,500 ppm
Chlorine, Total - Low Range	CL-T	Chlorine Total - Low Range - DPD Method - PRMP 9	0.02 - 2.20 ppm
Cyanide	CN	Cyanide - Pyridine Pyrazalone Method - PRMP 23	0.008 - 0.240 ppm
Color - True and Apparent	COLOR	Color True and Apparent - APHA - Platinum-Cobalt Method	25 - 500 ppm
Chromium, Hexavalent	Cr6	Chromium - Hexavalent - 1,5 Diphenylcarbohydrazide Method - PRMP 13	0.01 - 0.60 ppm
Chromium, Total	CrT	Chromium - Total - Alkaline Hypobromite Oxidation Method - PRMP 15	0.01 - 0.60 ppm
Copper	CuBi	Copper - Bicinchoninate Method - PRMP 20	0.02 - 5.00 ppm
Copper	CuLR	Copper - Porphyrine Method - PRMP 22	0.006 - 0.20 ppm
Cyanuric Acid	CYAN	Cyanuric Acid - Turbidimetric Method	7.0 - 55.0 ppm
Cyclohexylamine	CYN-F	Cyclohexylamine - Fluorescent Method - Pyxis Lab	0.0 - 1.2 ppm
Diethyl Hydroxylamine - DEHA	DEHA	Diethyl Hydroxylamine - Iron Reduction Method of Oxygen Scavengers - PRMP 25	0.009 - 0.50 ppm
Fluoride	F	Fluoride - SPADNS 2 Method - PRMP 27	0.05 - 2.00 ppm
Iron, Total FeMo	FeMo	Iron Total - FerroMO Method - PRMP 38	0.03 - 1.80 ppm
Iron, Total FePh	FePh	Iron Total - Phenanthroline Method - PRMP 33	0.03 - 3.00 ppm
Iron, Total FeSal	FeSal	Iron Total - 5 Sulfosalicylic Acid DiHydrate Method	0.05 - 5.00 ppm
Iron, Total FeTP	FeTp	Iron Total - TPTZ Method - PRMP 39	0.04 - 1.80 ppm
Iron, Total FeZi	FeZi	Iron Total - Ferrozine Method - PRMP 37	0.011 - 1.300 ppm
Magnesium	Mg	Magnesium - Calmagite Colorimetric Method - PRMP 30	0.13 - 4.00 ppm
Manganese - High Range	MnHR	Manganese - High Range - Periodate Oxidation Method	0.2 - 20.0 ppm
Manganese - Low Range	MnLR	Manganese - Low Range - PAN Method	0.02 - 0.70 ppm
Molybdenum, Molybdate - High Range	MoHR	Molybdenum/Molybdate High Range - Mercaptoacetic Method - PRMP 44	0.02 - 40.0 ppm
Molybdenum, Molybdate - Low Range	MoLR	Molybdenum/Molybdate Low Range - Ternary Complex Method - PRMP 47	0.07 - 3.00 ppm
Hydrazine	N2H4	Hydrazine - P Dimethylaminobenzaldehyde Method - PRMP 31	0.016 - 0.50 ppm
MonoChloramine - Low Range	NH2C	Mono Chloramine - Indophenol Method - PRMP 110	0.1 - 3.0 ppm
Nitrogen, Total - Low Range - Test'N Tube	N-TLR	Nitrogen Total Low Range - Test 'N Tube Method	2.0 - 25.0 ppm
Nitrogen, Total - High Range - Test'N Tube	N-THR	Nitrogen Total High Range - Test 'N Tube Method	7.0 - 150.0 ppm
Nitrogen, Ammonia	NH3S	Nitrogen Ammonia - Salicylate Method - PRMP 64	0.02 - 0.5 ppm
Ammonia Nitrogen	NH3-F	Nitrogen Ammonia - Fluorescent Method - Pyxis Lab	0.01 - 0.07 ppm
Nitrogen, Ammonia - Low Range - Test'N Tube	NH3LR	Nitrogen Ammonia - Low Range - Test 'N Tube Method	0.08 - 2.50 ppm
Nitrogen Ammonia - High Range - Test'N Tube	NH3HR	Nitrogen Ammonia - High Range - Test 'N Tube Method	1.0 - 50.0 ppm
Nickel	Ni	Nickel - PAN Method - PRMP 48	0 - 1.00 ppm
Nitrite Dioxide	NO2D	Nitrite Dioxide - Direct Read Method - Pyxis Lab	100 - 1,000 ppm
Nitrite - High Range	NO2HR	Nitrite High Range - Ferrous Sulfate Method - PRMP 59	2.0 - 150.0 ppm
Nitrite - Low Range	NO2LR	Nitrite Low Range - Diazotization Method - PRMP 60	0.005 - 0.350 ppm
Nitrate - High Range	NO3HR	Nitrate High Range - Cadmium Reduction Method - PRMP 51	0.8 - 30.0 ppm
Nitrate - Mid Range	NO3MR	Nitrate Mid Range - Cadmium Reduction Method - PRMP 54	0.2 - 5.0 ppm
Nitrate - High Range - Test'N Tube	NO3CA	Nitrate High Range - Test 'N Tube Method	0.3 - 30.0 ppm

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## Methods Supported Continued

Parameter	Method	Description, Corresponding HACH® PRMP Number	Range
Peroxyacetic Acid	PAA	Peroxyacetic Acid - Iodometry Method - Pyxis Lab	25.0 - 500.0 ppm
Phosphorous, Reactive	OPO4	Phosphorous Reactive - Molybdenum Blue Method	0.05 - 2.50 ppm
Phosphonates	Orgp	Phosphonates - Persulfate UV Oxidation Method - PRMP 80	0.05 - 2.50 ppm
Phosphorous, Reactive	Pami	Phosphorous Reactive - Amino Acid Method - PRMP 85	0.20 - 30.0 ppm
Phosphorous, Total - Low Range - Test'N Tube	P-TLR	Phosphorous Total - Low Range - Test 'N Tube Method	0.06 - 3.50 ppm
Phosphorous, Total - High Range - Test'N Tube	P-THR	Phosphorous Total - High Range - Test 'N Tube Method	1.0 - 100.0 ppm
Potential of Hydrogen	PH	Potential of Hydrogen - pH - Colorimetric Method - PRMP 75	6.5 - 8.5
Phosphorous, Reactive	PMoV	Phosphorous Reactive - Molybdovanadate Method - PRMP 77	0.20 - 45.0 ppm
Polymer	POLY	Anionic Polymers - Turbidimetric Method - Pyxis Lab	2.0 - 13.0 ppm
Antimony, Trivalent	Sb3+	Antimony Trivalent - PADEP Method	0.01 - 10.0 ppm
Antimony, Total	Sb-T	Antimony Total - PADEP Method	0.01 - 10.0 ppm
Sulfide	S2-	Sulfide - Methylene Blue Method - PRMP 93	0.01 - 0.70 ppm
Silica - High Range	SIHR	Silica High Range - Solicomolybdate Method - PRMP 89	1.0 - 75.0 ppm
Silica - Low Range	SILR	Silica Low Range - Hetero Poly Blue Method - PRMP 90	0.02 - 1.60 ppm
Sulfite - Low Range	SO3LR	Sulfite - Low Range - OPA Method - Pyxis Lab	0.1 - 5.0 ppm
Sulfite - High Range	SO3HR	Sulfite - High Range - OPA Method - Pyxis Lab	5.0 - 50.0 ppm
Sulfate	SO4	Sulfate - Turbidimetric Method - PRMP 91	4.9 - 70.0 ppm
Urea	Urea	Urea - Antipyrine Method - Pyxis Lab	0.5 - 5.0 ppm
Zinc - Non Hazardous Pyxis	ZnXO	Zinc - Non-Hazardous - Xenol Orange Method - Pyxis Lab	0.2 - 3.0 ppm
Zinc	Zn	Zinc -Zincin Method	0.02 - 3.0 ppm

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## Wireless Data Transfer, Firmware Updates and Sensor Calibration via uPyxis APP

The uPyxis APP manages all Pyxis portable meter and inline sensors on mobile and desktop devices, including Apple iPhones and Samsung Android smartphones. Users may utilize the uPyxis APP to customize product name display, download custom measurement curves, transfer data log contents and update firmware to the SP-910 and all other Pyxis handheld devices. Each SP-910 is integrated with Bluetooth 5.0 and can dialog directly with uPyxis Mobile or PC devices for this purpose as well as allow users to diagnose, clean and calibrate the ST-500 PTSA inline sensor at both zero and slope points, preventing the need to calibrate the sensor through the receiving controller or PLC. **\*Note\*** The uPyxis Mobile APP is evolving rapidly and users can find the latest version at no cost on Apple iStore or Google Play.

The uPyxis Desktop APP may be downloaded at <https://pyxis-lab.com/support-2/>



## Standard Accessories

Each SP-910 comes equipped with one set of MA-24 (10mL) and MA-25 (25mL) sample vials, one 16-mm COD Vial Adapter (P/N 52214) and one MA-NEB Bluetooth USB Adapter.



16mm COD Adapter

MA-24

MA-25

MA-NEB

## Optional Hard Shell Carry Case

Pyxis Lab offers the MA-701 hard-shell carry case (P/N 50726) for those desiring ultimate mobility and protection of their SP-910.



MA-701

## Order Information

SP-910

**P/N**

50603

## Accessories

MA-NEB (*Bluetooth/USB Adapter for use with Desktops*)

MA-NEB

MA-24 (*10mL Glass Vial*)

MA-24

MA-25 (*25mL Glass Vial*)

MA-25

16mm COD Adapter (*16mm Vial Adapter for COD Testing*)

52214

MA-701 (*Hard-Shell Carry Case*)

52726

Pyxis Chlorine DPD Secondary Verification Kit (*for SP-800/SP-910*)

31102

PTSA-100 (*PTSA 100ppb Calibration Standard – 500mL*)

PTSA-100

FLUO-50 (*Fluorescein 50ppb Calibration Standard – 500mL*)

FLUO-50

FLUO-250 (*Fluorescein 250ppb Calibration Standard – 500mL*)

FLUO-250

FLUO-500 (*Fluorescein 500ppb Calibration Standard – 500mL*)

FLUO-500

Turbidity Calibration Standard – 100NTU (*Formazin Turbidity 100NTU – 500mL*)

57010

Pyxis Lab Powder Pillow Reagents

Contact Pyxis Lab