



SP-800 Portable Water Analyzer Operation Manual

Rev.B



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3 Colorimetric Measurement

3.1 Supported Methods

A wide range of colorimetric methods is supported by the SP-800 analyzer and the number of them keeps increasing with continuous development of Pyxis. See corresponding Hach® methods in Appendix A.

Table 2 List of Supported Colorimetric Methods

Abbreviated Name	Method	Method Name	Description	Range
CL-F		F-Chlorine	Free chlorine, DPD method	2.2 ppm
CL-T		T-Chlorine	Total chlorine, DPD method	2.2 ppm
CL2H		CL2High	High range, DPD method	6.0ppm
CuBi		Cu_Bicinch	Bicinchoninate, EPA approved for reporting wastewater analysis	5.0 ppm
DEHA		DEHA	Method for N,N-diethylhydroxylamine and other oxygen scavengers	0.5 ppm
Ca		Ca	Calmagite method for calcium	4.00 ppm as CaCO ₃
Mg		Mg	Calmagite method for magnesium	4.00 ppm as CaCO ₃
FePh		Fe_phenanth	Total iron using 1,10-phenanthroline, USEPA approved for reporting wastewater analysis	3.00 ppm
FeZi		FeZine	FerroZine method	1.300 ppm
FeTp		FeTptz	Total iron using TPTZ	1.80 ppm
MoHR		Mo_HighRange	High range molybdate	40.0 ppm
MoLR		Mo_LowRange	Low range molybdate using ternary complex method	3.0 ppm
NO2H		NO2H	High range nitrite, ferrous sulfate method	150 ppm as NO ₂
NO2L		NO2L	Low range nitrite, diazotization method, USEPA approved for reporting wastewater and drinking water analysis	0.350 ppm as NO ₂
PMoV		OPO4-MoV	Reactive phosphate using molybdovanadate method	30.0 ppm as PO ₄
OPO4		OPO4	Reactive phosphate using ascorbic acid molybdenum blue method, USEPA accepted for wastewater analysis	2.5 ppm as PO ₄
OrgP		Phosphonate	UV digestion and ascorbic acid reduction molybdenum blue method	7.1 ppm as PBTC
PAmi		OPO4-Amino	Reactive phosphate, amino acid reduction method	30.0 ppm
CIO2		CIO2-DPD	DPD method, USEPA accepted for reporting drinking water analysis	5.00 ppm
CIO2D		CIO2Direct	Direct method for chlorine dioxide	35.0 ppm

Abbreviated Name	Method	Method Name	Description	Range
SiHR		SiHR	High range silica	75.0 ppm as SiO ₂
SiLR		SiLR	Low range silica	1.60 ppm as SiO ₂
AZOL		Azole	UV digestion for tolyltriazole and benzotriazole	16.0 ppm
SO4		SO4	Barium sulfate turbidimetric method	70.0 ppm
POLY		Polymer	Turbidimetric method for anionic polymeric dispersant	13.0 ppm as PAA
FeMo		FeMo	Total iron method for water containing molybdate	1.80 ppm
Cr6		Cr6	1,5-Diphenylcarbohydrazide method for chromium hexavalent, USEPA accepted for wastewater analyses	0.6ppm
CrT		CrTot	Alkaline hypobromite Oxidation method for chromium total	0.6ppm
NH3S		NH3Sal	Salicylate method for nitrogen, ammonia	0.5ppm
NH2C		NH2CL	Indophenol method for chloramine mono	3.0ppm
N2H4		N2H4	p-Dimethylaminobenzaldehyde method for hydrazine	0.5ppm
MnL		MnLow	Low range manganese	0.7ppm
MnH		MnHigh	High range manganese	20.0ppm
BLCH		Bleach	Direct Method measuring sodium hypochlorite concentration	
AL		Alumi	Aluminon method for aluminum	0.8ppm
F		Floride	SPADNS method for fluoride	2.0ppm
CuL		CuPorp	Porphyrin Method for copper	0.2ppm
Zn		Zinc	Zincon method for zinc, USEPA approved for wastewater analysis	3.0ppm
S2-		Sulfide	Methylene blue method for sulfide, USEPA accepted for reporting wastewater analysis	0.7ppm
CN		Cyanide	Pyridine-Pyrazalone method for cyanide	0.2ppm
NO3M		NO3M	Middle range nitrate	5ppm as N
NO3H		NO3H	High range nitrate	30ppm as N
Ni		Ni	PAN method for nickel	1ppm
CYAN		CYAN	Turbidimetric method for cyanuric acid	55ppm
pH		pH	Phenol red method for pH	8.5

10 Appendix A.

Pyxis Method and Hach® Method Number (PRMP) Cross Reference

Abbreviated Method Name	Method Name	Corresponding Hach © method	Hach Method Number
CL-F	F-Chlorine	Chlorine, Free, DPD, PRMP 9	8021
CL-T	T-Chlorine	Chlorine, Total, DPD, PRMP 9	8167
Cl2H	Cl2High	High Range DPD Chlorine, No sample change needed	10070
CuBi	Cu_Bicinch	Copper, Bicinchoninate, PRMP 20	8506
DEHA	DEHA	DEHA, Iron Reduction Method for Oxygen Scavengers, PRMP 25	8140
Ca	Ca	Calcium: Calmagite Colorimetric Method, PRMP 29	8030
Mg	Mg	Magnesium: Calmagite Colorimetric Method, PRMP 30	8030
FePh	Fe_phenanth	Iron, 1,10 phenanthroline, PRMP 33	8008
FeZi	FeZine	Iron, FerroZine, PRMP 37	8147
FeTp	FeTptz	Iron, TPTZ, PRMP 39	8112
MoHR	Mo_HighRange	Molybdenum, High Range, Mercaptoacetic Acid, PRMP 44	8036
MoLR	Mo_LowRange	Molybdenum, Low Range, Ternary Complex, PRMP 47	8169
NO2H	NO2H	Nitrite, High Range, Ferrous Sulfate, PRMP 59	8153
NO2L	NO2L	Nitrite, Low Range, Diazotization, PRMP 60	8507
PMoV	OPO4-MoV	Phosphorus, Reactive, Molybdovanadate, GRMP 77	8114
OPO4	OPO4	Phosphorus, Reactive, Orthophosphate Ascorbic Acid, GRMP 79	8048
OrgP	Phosphonate	Phosphonates, Persulfate UV Oxidation, PRMP 80	8007
PAmi	OPO4-Amino	Phosphorus, Reactive, Amino Acid, GRMP 85	8178
ClO2	ClO2-DPD	Chlorine Dioxide, DPD, PRMP 112	10126
ClO2D	ClO2Direct	Chlorine Dioxide, Direct Reading, PRMP7	8345
SiHR	SiHR	Silica, High Range, Silicomolybdate, PRGM 89	8185
SiLR	SiLR	Silica, Low Range, Heteropoly Blue, PRMP 90	8186
AZOL	Azole	Benzotriazole, UV Photolysis, PRMP 3	8079
SO4	SO4	Sulfate. PRMP 91	8051
POLY	Polymer	Turbidimetric method for anionic polymers	N/A
FeMo	FeMo	Iron, for cooling water with molybdenum-based treatment, PRMP 38	8365

Cr6	Cr6	Hexavalent chromium, 1,5-Diphenylcarbohydraide Method, PRMP 13	8023
CrT	CrTot	Chromium total Alkaline Hypobromite Oxidation Method, PRMP15	8024
NH3S	NH3Sal	Ammonia Salicylate Method, PRMP 64	8155
NH2C	NH2Cl	Indophenol Method for MonoChloramine, PRMP 110	10171
N2H4	N2H4	P-Dimethylaminobenzaldehyde Method for Hydrazine, PRMP 31	8141
MnL	MnLow	Low Range Manganese PAN Method, PRMP 43	8149
MnH	MnHigh	High Range Manganese, Periodate Oxidation Method, PRMP 41	8034
BLCH	Bleach	Direct Method measuring sodium hypochlorite concentration	N/A
Al	Alumi	Aluminon Method for Aluminum, PRMP 1	8012
F	Floride	SPADNS 2 Method for Fluoride, PRMP 27	8029
CuL	CuPorp	Porphyrin Method for Copper, PRMP 22	8143
Zn	Zinc	Zincon Method for Zinc, PRMP 97	8009
S2-	Sulfide	Methylene Blue Method for Sulfide, PRMP 93	8131
CN	Cyanide	Pyridine-Pyrazalone Method for Cyanide, PRMP 23	8027
NO3M	NO3M	Middle range nitrate, PRMP54	8171
NO3H	NO3H	High range nitrate, PRMP51	8039
Ni	Ni	PAN method for nickel, PRMP48	8150
CYAN	CYAN	Turbidimetric method for cyanuric acid, PRMP 24	8139
pH	pH	Phenol red method for pH, PRMP 75	10076

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