

APPENDIX A AVAILABLE PARAMETERS AND RANGES

Table 7 DR/820 Chemistries

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Aluminum, Aluminon	Al	Al ₂ O ₃	0 - 0.800	1
Bromine	Br ₂	—	0 - 4.50	5
Bromine, AV	Br ₂	—	0 - 4.50	6
Chlorine, free, HR	Cl ₂	—	0 - 5.00	8
Chlorine, total, HR	Cl ₂	—	0 - 5.00	8
Chlorine, free	Cl ₂	—	0 - 2.00	9
Chlorine, total	Cl ₂	—	0 - 2.00	9
Chlorine, free, AV	Cl ₂	—	0 - 2.00	11
Chlorine, total, AV	Cl ₂	—	0 - 2.00	11
Chlorine, free, Test 'N Tube	Cl ₂	—	0 - 5.00	10
Chlorine, total, Test 'N Tube	Cl ₂	—	0 - 5.00	10
Chlorine Dioxide	ClO ₂	—	0 - 5.00	112
Chlorine Dioxide, AV	ClO ₂	—	0 - 5.00	113
COD, Manganese III	COD	—	20 - 1000	18
Cyanuric acid	CYACD	—	0 - 55	24
Hardness, calcium	CaCO ₃	Ca	0 - 4.00	29
Hardness, magnesium	CaCO ₃	Mg, MgCO ₃	0 - 4.00	30
Iron, Ferrous	Fe	—	0 - 3.00	33
Iron, Ferrous, AV	Fe	—	0 - 3.00	33
Iron, total, FerroVer	Fe	—	0 - 3.00	33
Iron, total, FerroVer, AV	Fe	—	0 - 3.00	33
Manganese, HR	Mn	MnO ₄ , KMnO ₄	0 - 20.0	41
Nitrate, HR, AV	NO ₃ -N	NO ₃	0 - 30.0	50
Nitrate, HR	NO ₃ -N	NO ₃	0 - 30.0	51
Nitrate, LR	NO ₃ -N	NO ₃	0 - 0.50	55
Nitrite, LR	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.350	60
Nitrite, LR, AV	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.350	62
Nitrite, TNT	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.500	63
Oxygen, dissolved, HR, AV	O ₂	—	0 - 15.0	70
pH	pH	—	6.5 - 8.5 pH	75
Phosphorous, amino acid	PO ₄	P, P ₂ O ₅	0 - 30.0	85
Sulfate	SO ₄	—	0 - 70	91
Sulfate, AV	SO ₄	—	0 - 70	92
Turbidity	FAU	—	0 - 1000 FAU	95
Volatile Acids	HOAc	—	0 - 2800	96

APPENDIX A, continued

Table 8 DR/850 Chemistries

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Aluminum, Aluminon	Al	Al ₂ O ₃	0 - 0.800	1
Bromine	Br ₂	—	0 - 4.50	5
Bromine, AV	Br ₂	—	0 - 4.50	6
Chlorine, free, HR	Cl ₂	—	0 - 5.00	8
Chlorine, total, HR	Cl ₂	—	0 - 5.00	8
Chlorine, free	Cl ₂	—	0 - 2.00	9
Chlorine, total	Cl ₂	—	0 - 2.00	9
Chlorine, free, AV	Cl ₂	—	0 - 2.00	11
Chlorine, total, AV	Cl ₂	—	0 - 2.00	11
Chlorine, free, Test 'N Tube	Cl ₂	—	0 - 5.00	10
Chlorine, total, Test 'N Tube	Cl ₂	—	0 - 5.00	10
Chlorine Dioxide	ClO ₂	—	0 - 5.00	112
Chlorine Dioxide, AV	ClO ₂	—	0 - 5.00	113
COD, HR, HR+	COD	—	0 - 1500, 0-15,000	17
COD, Manganese III	COD	—	20 - 1000	18
Cyanide	CN	—	0 - 0.240	23
Cyanuric acid	CYACD	—	0 - 55	24
Detergents	LAS	—	0 - 0.30	26
Fluoride, SPADNS	F	—	0 - 2.00	27
Fluoride, SPADNS, AV	F	—	0 - 2.0	28
Hardness, calcium	CaCO ₃	Ca	0 - 4.00	29
Hardness, magnesium	CaCO ₃	Mg, MgCO ₃	0 - 4.00	30
Iron, Ferrous	Fe	—	0 - 3.00	33
Iron, Ferrous, AV	Fe	—	0 - 3.00	33
Iron, total, FerroVer	Fe	—	0 - 3.00	33
Iron, total, FerroVer, AV	Fe	—	0 - 3.00	33
Iron, total, FerroMo	Fe	—	0 - 1.80	38
Iron, total, TPTZ	Fe	—	0 - 1.80	39
Iron, total, TPTZ, AV	Fe	—	0 - 1.80	39
Manganese, HR	Mn	MnO ₄ , KMnO ₄	0 - 20.0	41
Molybdenum, ternary complex	Mo ⁶	MoO ₄	0 - 3.00	47
Nitrogen, monochloramine and free ammonia, Salicylate	N	Cl ₂ , NH ₃	0 - 0.50	49

APPENDIX A, continued

Table 8 DR/850 Chemistries (Continued)

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Nitrogen, monochloramine and free ammonia, Salicylate, AV	N	Cl ₂ , NH ₃	0 - 0.50	49
Nitrate, HR, AV	NO ₃ -N	NO ₃	0 - 30.0	50
Nitrate, HR	NO ₃ -N	NO ₃	0 - 30.0	51
Nitrate, LR	NO ₃ -N	NO ₃	0 - 0.50	55
Nitrite, LR	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.350	60
Nitrite, LR, AV	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.350	62
Nitrite, TNT	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.500	63
Nitrogen, Ammonia, Salicylate	NH ₃ -N	NH ₃ , NH ₄	0 - 0.50	64
Nitrogen, Ammonia, LR, TNT	NH ₃ -N	NH ₃	0 - 2.50	66
Nitrogen, Ammonia, HR, TNT	NH ₃ -N	NH ₃	0 - 50	67
Nitrogen, Total Inorganic, TNT	N	NH ₃	0 - 25.0	68
Oxygen, dissolved, HR, AV	O ₂	—	0 - 15.0	70
Oxygen, dissolved, LR, AV	O ₂	—	0 - 1000 µg/L	71
Ozone, LR, AV	O ₃	—	0 - 0.25	72
Ozone, MR, AV	O ₃	—	0 - 1.50	73
Ozone, HR, AV	O ₃	—	0 - 0.75	74
pH	pH	—	6.5 - 8.5 pH	75
Phosponates	PO ₄	—	0-125	80
Phosphorous, PhosVer 3	PO ₄	P, P ₂ O ₅	0 - 2.50	79
Phosphorous, PhosVer 3, AV	PO ₄	P, P ₂ O ₅	0 - 2.50	79
Phosphorous, total, PhosVer 3	PO ₄	P, P ₂ O ₅	0 - 2.5	79
Phosphorous, acid hydrolyzable, PhosVer 3	PO ₄	P, P ₂ O ₅	0 - 2.5	79
Phosphorous, PhosVer 3, TNT	PO ₄	P, P ₂ O ₅	0 - 5.0	82
Phosphorous, total, PhosVer 3, TNT	PO ₄	P, P ₂ O ₅	0 - 3.50	82
Phosphorous, acid hydrolyzable, PhosVer 3, TNT	PO ₄	P, P ₂ O ₅	0 - 5.00	82
Phosphorous, amino acid	PO ₄	P, P ₂ O ₅	0 - 30	85
Silica, LR	SiO ₂	—	0 - 1.60	90
Sulfate	SO ₄	—	0 - 70	91
Sulfate, AV	SO ₄	—	0 - 70	92
Sulfide	S	—	0 - 0.70	93

APPENDIX A, continued

Table 8 DR/850 Chemistries (Continued)

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Suspended Solids	SuSld	—	0 - 750	94
Tannin and Lignin	tanic	—	0 - 9.0	98
Toxicity	Toxic	—	0 - 100% Inhibition	61
Turbidity	FAU	—	0 - 1000 FAU	95
Volatile Acids	HOAc	—	0 - 2800	96
Zinc	Zn	—	0 - 3.00	97

Table 9 DR/890 Chemistries

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Aluminum, Aluminon	Al	Al ₂ O ₃	0 - 0.800	1
Boron	B	H ₃ BO ₃	0 - 1.60	4
Bromine	Br ₂	—	0 - 4.50	5
Bromine, AV	Br ₂	—	0 - 4.50	6
Chlorine Dioxide, MR	ClO ₂	—	0 - 50	7
Chlorine, free, HR	Cl ₂	—	0 - 5.00	8
Chlorine, total, HR	Cl ₂	—	0 - 5.00	8
Chlorine, free	Cl ₂	—	0 - 2.00	9
Chlorine, total	Cl ₂	—	0 - 2.00	9
Chlorine, free, AV	Cl ₂	—	0 - 2.00	11
Chlorine, total, AV	Cl ₂	—	0 - 2.00	11
Chlorine, free, Test 'N Tube	Cl ₂	—	0 - 5.00	10
Chlorine, total, Test 'N Tube	Cl ₂	—	0 - 5.00	10
Chlorine Dioxide	ClO ₂	—	0 - 5.00	112
Chlorine Dioxide, AV	ClO ₂	—	0 - 5.00	113
Chromium, Hexavalent	Cr ⁶	CrO ₄ , Cr ₂ O ₇	0 - 0.60	13
Chromium, Hexavalent, AV	Cr ⁶	CrO ₄ , Cr ₂ O ₇	0 - 0.60	14
Chromium, total	Cr	—	0 - 0.60	15
COD, LR	COD	—	0 - 150	16
COD, HR, HR+	COD	—	0 - 1500, 0 - 15000	17
COD, Manganese III	COD	—	20 - 1000	18
Color	Pt Co	—	0 - 500 APHA color	19
Copper, Bichinchoninate	Cu	—	0 - 5.00	20

APPENDIX A, continued

Table 9 DR/890 Chemistries (Continued)

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Copper, Bichinchoninate, AV	Cu	—	0 - 5.00	21
Copper, porphyrin	Cu	—	0 - 210.0 µg/L	22
Cyanide	CN	—	0 - 0.240	23
Cyanuric acid	CYACD	—	0 - 55	24
DEHA	DEHA	—	0 - 500 µg/L	25
Detergents	LAS	—	0 - 0.30	26
Fluoride, SPADNS	F	—	0 - 2.00	27
Fluoride, SPADNS, AV	F	—	0 - 2.00	28
Hardness, calcium	CaCO ₃	Ca	0 - 4.00	29
Hardness, magnesium	CaCO ₃	Mg, MgCO ₃	0 - 4.00	30
Hydrazine	N ₂ H ₄	—	0 - 500 µg/L	31
Hydrazine, AV	N ₈ H ₄	—	0 - 500 µg/L	32
Immunoassay, PCB	—	—	threshold	42
Immunoassay, TPH	—	—	threshold	42
Immunoassay, TPH in water	—	—	threshold	42
Iron, Ferrous	Fe	—	0 - 3.00	33
Iron, Ferrous, AV	Fe	—	0 - 3.00	33
Iron, total, FerroVer	Fe	—	0 - 3.00	33
Iron, total, FerroVer, AV	Fe	—	0 - 3.00	33
Iron, total, Ferrozine	Fe	—	0 - 1.300	37
Iron, total, FerroMo	Fe	—	0 - 1.80	38
Iron, total, TPTZ	Fe	—	0 - 1.80	39
Iron, total, TPTZ, AV	Fe	—	0 - 1.80	39
Manganese, HR	Mn	MnO ₄ , KMnO ₄	0 - 20.0	41
Manganese, LR	Mn	MnO ₄ , KMnO ₄	0 - 0.700	43
Molybdenum, Molybdate, HR	Mo ⁶	MoO ₄	0 - 40.0	44
Molybdenum, Molybdate, HR, AV	Mo ⁶	MoO ₄	0 - 40.0	44
Molybdenum, ternary complex	Mo ⁶	MoO ₄	0 - 3.00	47
Nickel, PAN	Ni	—	0 - 1.000	48
Nitrogen, monochloramine and free ammonia, Salicylate	N	Cl ₂ , NH ₃	0 - 0.50	49
Nitrogen, monochloramine and free ammonia, Salicylate, AV	N	Cl ₂ , NH ₃	0 - 0.50	49
Nitrate, HR, AV	NO ₃ -N	NO ₃	0 - 30.0	50

APPENDIX A, continued

Table 9 DR/890 Chemistries (Continued)

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Nitrate, HR	NO ₃ -N	NO ₃	0 - 30.0	51
Nitrate, Cd reduction, MR, AV	NO ₃ -N	NO ₃	0 - 5.0	53
Nitrate, Cd reduction, MR	NO ₃ -N	NO ₃	0 - 5.0	54
Nitrate, LR	NO ₃ -N	NO ₃	0 - 0.50	55
Nitrate, TNT, chromotropic acid finish	NO ₃ -N	NO ₃	0 - 30.0	57
Nitrogen, TN, TNT, chromotropic acid	N	NO ₃ , NH ₃	0 - 25	58
Nitrite, HR	NO ₂	NO ₂ -N, NaNO ₂	0 - 150	59
Nitrite, LR	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.350	60
Nitrite, LR, AV	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.350	62
Nitrite, TNT	NO ₂ -N	NO ₂ , NaNO ₂	0 - 0.500	63
Nitrogen, Ammonia, Salicylate	NH ₃ -N	NH ₃ , NH ₄	0 - 0.50	64
Nitrogen, TKN with Nessler finish	TKN	—	0 - 150	65
Nitrogen, Ammonia, LR, TNT	NH ₃ -N	NH ₃	0 - 2.50	66
Nitrogen, Ammonia, HR, TNT	NH ₃ -N	NH ₃	0 - 50	67
Nitrogen, Total Inorganic TNT	N	NH ₃	0 - 25.0	68
Nitrogen, Total, HR, TNT	N	NH ₃	10 - 150	69
Oxygen, dissolved, HR, AV	O ₂	—	0 - 15.0	70
Oxygen, dissolved, LR, AV	O ₂	—	0 - 1000 µg/L	71
Ozone, LR, AV	O ₃	—	0 - 0.25	72
Ozone, MR, AV	O ₃	—	0 - 0.75	73
Ozone, HR, AV	O ₃	—	0 - 1.50	74
pH	pH	—	6.5 - 8.5 pH	75
Phosphonates	PO ₄	—	0 - 125	80
Phosphorous, Molybdovanadate	PO ₄	P, P ₂ O ₅	0 - 45.0	77
Phosphorous, Molybdovanadate, AV	PO ₄	P, P ₂ O ₅	0 - 45.0	78
Phosphorous, PhosVer 3	PO ₄	P, P ₂ O ₅	0 - 2.50	79
Phosphorous, PhosVer 3, AV	PO ₄	P, P ₂ O ₅	0 - 2.50	79
Phosphorous, total, PhosVer 3	PO ₄	P, P ₂ O ₅	0 - 2.5	79
Phosphorous, acid hydrolyzable, PhosVer 3	PO ₄	P, P ₂ O ₅	0 - 2.5	79
Phosphorous, PhosVer 3, TNT	PO ₄	P, P ₂ O ₅	0 - 5.0	82

APPENDIX A, continued

Table 9 DR/890 Chemistries (Continued)

PARAMETER	Primary Form	Alternate Forms	Test Range of Primary Form (mg/L or as noted)	Program number
Phosphorous, total, PhosVer 3, TNT	PO ₄	P, P ₂ O ₅	0 - 3.50	82
Phosphorous, acid hydrolyzable, PhosVer 3, TNT	PO ₄	P, P ₂ O ₅	0 - 5.00	82
Phosphorous, amino acid	PO ₄	P, P ₂ O ₅	0 - 30.0	85
Phosphorus, Reactive, HR, TNT	PO ₄ ³⁻	P, P ₂ O ₅	0 - 100.0	86
Phosphorus, Total, HR, TNT	PO ₄ ³⁻	P, P ₂ O ₅	0 - 100.0	87
Silica, UHR	SiO ₂	—	0 - 200	88
Silica, HR	SiO ₂	—	0 - 75.0	89
Silica, LR	SiO ₂	—	0 - 1.60	90
Sulfate	SO ₄	—	0 - 70	91
Sulfate, AV	SO ₄	—	0 - 70	92
Sulfide	S	—	0 - 0.70	93
Suspended Solids	SuSld	—	0 - 750	94
Triazole, Benzotriazole	BENZO	TOLY	0 - 16.0	3
Triazole, Tolytriazole	TOLY	BENZO	0 - 16.0	3
Tannin and Lignin	Tanic	—	0 - 9.0	98
Toxicity	Toxic	—	0 - 100% Inhibition	61
Turbidity	FAU	—	0 - 1000 FAU	95
Volatile Acids	HOAc	—	0 - 2800	96
Zinc	Zn	—	0 - 3.00	97