

Items	Methods	Measuring Ranges	Response	Accuracy & Repeatability	Interferences
Acidity	T	depending on sample volume + titer conc	5-10 min	3% / 2%	
Alkalinity	T	depending on sample volume + titer conc	5-10 min	3% / 2%	
Aluminum	F	0,1-1 mg/L		3% / 2%	Cu, Fe(III),F
Aluminium	F	0,002-0,07mg/L		5% / 3%	Fe, Cu
Amine	F	0,1-3 mg/L	5-10 min	3% / 2%	phenolic compounds
Ammonia	F	0,01-1 mg/L	20 min	3% / 2%	S,turbidity,colour
Ammonia	DP+Std Addition	0,5-20(50)mg/L	5 min	3% / 2%	no free Chlorine
Ammonia	DP	0,05-5 mg/L 0,05-10 mg/L N	5 min	5% / 2%	
Arsen	F	0,005-0,1mg/L	2 h	10% / 5%	
Cadmium	Dig+F	0,05-1 mg/L	1 h	5% / 3%	
Calcium	F	5-200 ppb	5min	2% / 2% of full range	no Barium or Strontium
Calcium	T	depending on sample volume + titer conc	5-10 min	3% / 2%	
Calcium	T	depending on sample volume + titer conc	5-10 min	3% / 2%	
Caustic see Alkalinity					
Chloride	P	5-100 mg/L	10 min	5% / 2%	
Chloride high	P+Std-Addition	1000-20000 mg/L	10 min	3% / 2%	
Chlorine free	F	0,005-0,3 mg/L	5-10 min	3% / 2%	oxidising substances Br,I;Permangante;JO3 ClO2;NO2; Chromate;MnO2
Chlorine free	T	depending on sample volume + titer conc	10 min	3% / 2%	any other oxidizing components
Chlorine total	F	0,005-0,5 mg/L	5-10 min	3% / 2%	oxidising substances Br,I;Permangante;JO3 ClO2;NO2; Chromate;MnO2
Chlorine Dioxide	T	depending on sample volume + titer conc	10 min	3% / 2%	any other oxidizing components
Chromium III	T+Dig + T	0,5-50 mg/L	20 min	5% / 2%	MnO4; elemental halides; iodide must be absent
Chromate see Hex Chromium					
Hex Chromium	F	0,005-1,5 mg/L	20 min	5% / 2%	amount of >10mg/L of iodate,KMnO4, Hexacyanoferrat(III)

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Hex Chromium	T	0,5-50 mg/L	10 min	5% /	MnO ₄ ; elemental halides; iodide must be absent
Chromium total	Dig + F	0,01-5 mg/L	20 min	3% / 2%	MnO ₄ ; elemental halides; iodide must be absent
Chromium total	Dig + T	0,5-50 mg/L	20 min	5% /	MnO ₄ ; elemental halides; iodide must be absent
CODcr	T	5-100 mg/L	20 min	5% / 2%	chloride (>5 mg/L)
CODcr high	T	250~5000 mg/L	20 min	5% / 2%	Chloride >250 mg/L
CODcr 25000	T	1250~25000 mg/L	20 min	5% / 2%	Chloride >1000 mg/L
Copper	Std-addition	0,5-3 mg/L	10 min	5% / 2%	
Cyanide	Dig+Dist + T	0,1-10 mg/L	30 min	5% / 2%	
Cyanide total	Dig+Dist+StdAdd	1-10 mg/L	30 min	5% / 2%	
Fluoride	P	1-10 mg/L	10 min	5% / 3%	
Fluoride	DP;STD-multipl	0,1-1000 mg/L	3-5 min	5% / 3%	
Fluoride	STD-Substraction	>1000 mg/L	3-5 min	5% / 3%	
Fluoride	Titration	>10g/L	5-10 min	3% / 2%	
Hardness, total	T	5-500mg/L total Hardness	10- 15 min	3% / 2%	
Hardness	T	1-10°dH	20 min	3% / 2%	
Hex Chromium see Chromate					
Hydrazine	F	0,1-1 mg/L	15 min	3% / 2%	colour, turbidity
Hydrazine	P	0,01-0,05 mg/L	1 min	5% / 3%	
Hydrazine	P	0,01-0,2 mg/L	1 min	5% / 3%	
Iron , low	F	0,05-0,5 mg/L	20 min	3% / 2%	Ni;Zn;Cu;CN<2mg/L;Cl<20mg;TOX<1mg
Iron	F	0,01-1 (10)mg/L	20 min	3% / 2%	Ni;Zn;Cu;CN<2mg/L;Cl<20mg;TOX<1mg
Iron	T	0,5-10 mg/L	10 min	5% / 2%	
Iron dissolved	T	0,5-10 mg/L	10 min	5% / 2%	
Mercury	Dig+T	0,05-1mg/L	1h!		
Mercury	Dig+F	>1mg/L			
Magnesium	F	5-200 ppb	5 min	2% / 2% of full range	no Barium or Strontium

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Manganese, low	F	0,05-0,5 mg/L	20 min	3% / 2%	Ni;Zn;Cu;CN<2mg/L;Cl<20mg;TOX<1mg
Manganese	F	0,01-1(10) mg/L	20 min	3% / 2%	Ni;Zn;Cu;CN<2mg/L;Cl<20mg;TOX<1mg
Nitrate-N	P	1-10 mg/L N	10 min	5% / 3%	
Nitrate-N	Std-addition+DP	2,5-50 mg/L N	15 min	5% / 3%	if much disturbing ions
Nitrate-N	Dig+DP	2,5-50 mg/L N	25 min	5% / 2%	
Nitrate	P	1-10 mg/L	10 min	5% / 2%	Chloride
Nitrite	F	0,01-1 mg/L	10 min	5% / 2%	
Nitrogen-Total N	Dig+DP	0,5-50 mg/L N	35 min	5% / 2%	
Nitrogen-Total N	Dig+P- 1 point Std Addition	0,5-50 mg/L N	35 min	5% / 2%	destroy Chloramin-T or oxidants with Fe(II)
Oxygen, dissolved	T	depending on sample volume + titer conc	5-10 min	3% / 2%	any other oxidizing components
Pb	F	0,1-3 mg/L	15 min	3% / 2%	
Pb	Std Addition	0,3-3 mg/L	10 min	5% / 2%	
Permanganate index PMI	Dig+BackT	10-500 mg/L	15 min	5% / 2%	
Phenol	T	0,5-50 mg/L	10 min	5% / 2%	
Phenol	F	0,1-5 mg/L	10 min	5% / 3%	important: no disturbing agents
Phenol True	Dist+T	0,5-50 mg/L	10 (+Dist)min	5% / 2%	
Phenol True	Dist+F	0,1-5 mg/L	30 min	5% / 3%	Cl<500mg/L
Phosphate ortho	F	0,05-5(20)mg/L P	20 min	3% / 2%	
Phosphate ortho	F	0,05-1,5 mg/L P	20 min	3% / 2%	Si
Phosphate ortho	T	1-50 mg/L P	10 min	3% / 2%	
Phosphate Total	Dig+F	0,1-3 mg/L	20 min	5% / 2%	Si
Silica	F	0,01-500mg/L	10 min	3% / 2%	PO ₄ , As
Silver	T	depending on sample volume + titer conc	10 min	3% / 2%	
Silver	F	0,002-0,03mg/L	long /40 min		Cu,Hg,Pd;Au

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Sodium	P	0,001-1 mg/L	5 min	5% / 3%	
Sulfates	P	5-100 mg/L(10g/L)	10 min	5% / 2%	
Sulfides	Amperom	0,1-25 mg/L	10 min	3%/ 2%	
Sulfides	T	depending on sample volume + titer conc	10 min	3%/ 2%	
Sulfite	T	depending on sample volume + titer conc	10 min	3%/ 2%	all reducing components (Fe ²⁺ ;S;Cr ³⁺ ..)
Urea	T	>0,5 mg/L	10 min	5% / 2%	
Zinc	T	0,5-5 mg/L	10 min	3% / 2%	

for Information:

T: Titration F: Fotometric DP:Direct Potentiometry STD Addtition: Standard addition Dig: Digestion	P: Potentiometric STD Substraction: standard addition substraction	Dist: Distillation STD-multipl: Standard addition multi-points		Back T: Back Titration Amperom: Amperometric	1 point Std Addtition: one point Standard addition
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