

AUTOANALYZER METHODS



PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
ACETOIN	BEER	0.1-5 mg/L	1-D	oxidise FeCl ₃ distillation, 1,2-phen	90hb 10ml 88hb 6.9ml
ACETONE	MILK	0-0.8 mmol/L	G-054-92	hydroxylamine, methyl orange	52hb, 70hb, 24"dial
ACETYL-SALICYLIC ACID	see ASPIRIN				
ACID (ALPHA)	BEER		1-D-74	iso-octane n-butanol	
ACID (SULPHURIC)	CALCINAT MEDIUM	0-25 ml/L	NL-159-83	methyl orange	
ACID-CONSUMING POWER	PHARMA		1-GB	HCl, methanol, methyl orange	3"dial
ACIDITY (THYMOL BLUE)	WATER	0-500 mg/L	US-164-71	thymol blue	
ACIDITY (TOTAL)	FOOD EXTRACTS	0-4 g/L citric acid	5-l	bromophenol blue	
ACIDITY (TOTAL)	WINE	0-10 g/L as tartaric acid	G-232-99	bromocresol purple	6"dial
ACIDITY (VOLATILE)	WINE	0-0.25/2 g/L as acetic acid	G-163-96	KJ, KJO ₃	dist. bath
ACIDITY (VOLATILE)	WINE	0-1 g/L	7-F	KJ, KJO ₃	dist. bath
ACIDS (FATTY)	SOAP	150-200 mg/L	1-l-75	solvent, bromocresol green	
ACIDS (FREE FATTY)	BIOL. FLUIDS, MAN. EXTR.	2-100 uEq/L	US-284-73	cupric nitrate, diethyldithiocarbonate	
ACIDS (FREE FATTY)	MILK	0.02-1.5 mEq/L	2-S-77	manual extractphenol sod.barbitol	
ALBUMIN	SERUM	0-10%	US-322-74	bromocressol green, succinic acid	24"dial
ALBUMIN	SERUM	0-10%	US-339-28	bromocresol green	
ALBUMIN	SERUM	0-6g/dL	SF4-0030	bromocresol green	
ALCOHOL	BEER, WINE	0-4/24 vol%	G-178-96	distillation, dichromate	distillation bath, flowmeter
ALDEHYDES	AIR	0.06-3 uL/10mL	US-171-72	ferric chlorid	65hb, 90hb
ALDEHYDES	AIR	0-1 mg/L	2-ID	Nasulfitetetrachlormerc p-rosaniline	37hb
ALDEHYDES	WINE	0-500 mg/L	1/AUS	MBTH, distill N ₂ , FeCl ₃	90hb
ALKALINE PHOSPHATASE	SERUM	0-350mU/mL	SF4-0006	alkaline phosphatase substrate	12"dial, 37hb
ALKALINITY (METHYL ORANGE)	WATER	0-500 mg/L	US-111-71	methyl orange	
ALKALINITY (METHYL ORANGE)	WATER, WASTEWATER	0-0.08/0.5, 0-0.3/2 g/L CaCO ₃	G-153-95	methyl orange	37hb, 24"dial
ALKALINITY (METHYL ORANGE)	WATER, WASTEWATER	0-300/500 mg/L CaCO ₃	G-148-95	methyl orange	37hb, 24"dial
ALKALINITY THYMOL BLUE)	WATER	0-500 mg/L	US-201-72	thymol blue	
ALUMINIUM	ANTACID PHARMA	20-500 mg/dose	9-GB	xylenolorange	6"dial., 60hb
ALUMINIUM	BAYER PROCESS LIQUOR	0-1600 mg/L	US-067-70	EDTA , Fe-TPTZ	
ALUMINIUM	CRYOLITE LIQUORS	0-0.75 g/L	US-149-71	flourine remouvaurin tricarb.acid	
ALUMINIUM	MINERALS	0-300 mg/L Al ₂ O ₃	10-F	ascorbic acid, eriochr.-cyan, sodium acetate	
ALUMINIUM	STEEL	0.0002-.1%	GB-122-72	ascorbic acid, chrome azurol, sodium acetate	
ALUMINIUM	STEEL	0.002-0.1 %	US-257-73	alizarol cyan.	
ALUMINIUM	WATER	0-0.5/4 mg/L	G-291-03	cyan.cetyltrimeth. Ammonium brom	50hb
ALUMINIUM	WATER	0-0.65/2.25 mg/L	G-292-03	catechol violet	
ALUMINIUM	WATER	0-350 / 0-2500 µg/L	NL-103-71	eriochr.-cyan, ascorbic acid	
ALUMINIUM	WATER	0-800 / 0-8000 µg/L	G-381-07	eriochrome cyanine	HB
AMINO ACIDS	WATER	0-500 mg/L	G-137-95	ninhydrin	90hb

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AMINO NITROGEN	BONE TISSUE ACID HYDR.	5-100 ug/ml	US-512-77	TNBS	65hb 7.7ml
AMINO NITROGEN	CEREALS	0-20 uMol/mL	1-D-74	ninhydrin	95hb 7.7ml, 6"dial
AMINO NITROGEN	SUGAR BEET	0-25/200 mg/L N	G-389-08	ninhydrin	6"dial, 90hb
AMINO NITROGEN (FREE)	BEER, MALT	0-300 mg/L N	G-211-98	ninhydrin	90hb
AMMONIA	FERTILIZER	0 - 35/340 mg/L NH3-N	G-333-06	salicylate	37hb, 6"dial
AMMONIA	FERTILIZER	0-15/70, 0-50/300 mg/L N	G-356-06	salicylate	37hb (7.7mL)
AMMONIA	FERTILIZER	0-20/180 mg/L N	G-128-94	phenate, hypochlorite	45hb, 7.7mL
AMMONIA	FERTILIZER	0-20/180, 0-80/720 mg/L as N	G-353-06	salicylate DCI	37 hb
AMMONIA	PLANT EFFLUENTS	0-160 mg/L N	US-775-85	salicylate	37hb 7.7ml
AMMONIA	TOBACCO	0-10/80 mg/L	US-330-74	salicylate	6"dial.,37hb
AMMONIA	TOBACCO	0-4/30 mg/L NH3	G-266-01	salicylate	12"dial, 37hb
AMMONIA	WATER	0-0.125 /0-4 mg/LN	G-346-06	salicylate	37 hb
AMMONIA	WATER	0-1/11 mg/L N	G-397-08	phenate, hypochlorite	45hb 7.7mL
AMMONIA	WATER (ONLINE DIST.)	0-0.5/4 mg/L N	G-400-09	alkaline dist., salicylate, DCI	dist hb 120, 37hb 7.7mL
AMMONIA	WATER, SEAWATER	0-0.04/0.38, 0-0.35/4.2 mg/L N	G-171-96	salicylate phenol DCI	37hb
AMMONIA	WATER, SEAWATER	0-140 µg/L N	US-154-71	phenate	50hb 7.7ml
AMMONIA	WATER, SEAWATER	0-70/140 µg/L N (0-5/10 µMol)	G-327-05	o-phthalaldehyde (OPA), borate buffer, sodium st	75hb, fluorometer
AMMONIA	WATER, SEAWATER	0-70/350 µg/L N (0-5/25 µMol)	G-320-05	salicylate	37hb 5.37ml
AMMONIA	WATER, SEAWATER	0-8/150 µMol/L (0-112/2100 µg/L N	G396-08	salicylate DCI	80 hb
AMMONIA	WATER, SEAWATER, FRESH WATER	0-20/350 µg/L N	G-169-96	salicylate	hb37
AMMONIA	WATER, WASTEW., FERT., TOBACCO	0-0.5/5, 0-5/50 mg/L N	G-247-00	salicylate	12"dial, 37hb
AMMONIA	WATER, WASTEWATER	0-1.5/12, 0-5/45 mg/L N	G-145-95	phenol, hypochlorite	37hb, 24"dial
AMMONIA	WATER, WASTEWATER	0-200 , 0-800 mg/L N	US-447-76	salicylate	6"dial, 37hb 7.7mL
AMMONIA	WATER, WASTEWATER, SOIL EXTRAC	0-0.25/5, 0-2.5/25 mg/L N	G-102-93	salicylate or phenol, DCI	37hb (7.7mL), 24"dial
AMMONIA	WATER, WASTEWATER, SOIL EXTRAC	0-1/10, 0-20/125 mg/L	G-343-06	salicylate DCI	37hb, 24"dial
AMOXYCILLIN	PHARMA	0-250 mg	1-GB	copper sulphate	75hb
AMPICILLIN	PHARMA	0-1 g/L	1-GB	acetic anhydr., imidazole, HgCl3	50hb, 60hb
AMPICILLIN	PHARMA	0-1 mg/mL	2-F	iodide, iodate	37hb 7.7ml
AMYLASE (ALPHA)	BEER/MALT	0 - 100 U/L to 0-400 U/L	G-366-07	dextrin, iodine	2 x HB 50°C
AMYLASE (ALPHA)	MALT INFUSIONS	0.1-6 g/L	US-424-76	hydrolysis ferricyanide	35hb, 93hb, 3"dial
AMYLASE (ALPHA)	WHEAT EXTRACTS	0-3 mg/L	1-GB-83	dextrin, iodine	AAI 50hb, 30hb 3ml
AMYLOGLUCIDASE	FERMENTATION BROTH	0-0.2 units/mL	1-F	hydrolysis, ferricyanide	60hb, 90hb
AMYLOSE	RICE	0 - 10 / 100 mg/100 mL	G-272-01	NaOH iodine sol.	
AMYLOSE	RICE	0-0.4 mg/mL	US-238-72	NaOH iodine sol.	95hb 7.7ml
AMYLOSE	RICE		US-185-72	NaOH iodine sol.	95hb
ANTHOCYANOGENES	BEER	0-40 mg/L	G-361-06	bisulfite	blank correction
ANTHOCYANOGENES	BEER	5-150 mg/L	D-263-01	bisulfite	blank correction

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ARSENIC (5)	ACID	0.4-20 mg/mL	1-GB	ascorbic acid, molybdate	
ASCORBIC ACID	see VITAMIN C				
ASPIRIN	PHARMA	0-500 mg/100mL	US-232-72	ferric nitrate	12"dial
ASPIRIN	PHARMA TABS	0.4-20 g/L	1-S-78	HCl / ethanol	3"dial
BENZOIC ACID	FOOD EXTRACTS	0-100 mg/L	3-NL-76	H ₂ O ₂ +catalyst 4-aminophenaz.	95hb 7.7ml
BENZOIC ACID	SOFT DRINKS	20-300 mg/L	2-GB-73	extract CHCl ₃ Cu, pyridine	
BENZOIC ACID	SOFT DRINKS	2-100 mg/L	1-GB	chloroform, thymol blue	
BENZOTRIAZOLE	PLATING BATHS	0.1-4 g/L	US-670-82	H ₂ SO ₄ aerosol-22, sodium acetate	UV-digestor
BENZYL ALCOHOL	PHOTOGRAPHIC SOLN	0.5-25 mL/L	1-S-77	KMnO ₄ oxid, ext.CHCl ₃ , NH ₃ OCl	2 x 60hb 6"dial
BETA-LACTAMASE INHIBITION	PHARMA	20-200 mg/L cloxacill	1-GB-82	enzymatic	37hb 2.7ml
BICARBONATE	MINERAL WATER	1.0-14% NaHCO ₃	1-I	phenolphthal.	6"dial
BILIRUBIN (TOTAL)	SERUM	0.2-10 mg/dL	US-339-18	diazotized sulfuric acid	blank channel
BITTERNESS	BEER AND WORT	0-70 ebu	G-079-93	iso-octane	
BLEACH	DETERGENTS	0-40 mg/L in extract	1-E	manual extr.direct UV	
BORON	SOIL EXTRACTS (EUF)	0-0.3 mg/L	7-GB-82	azomethine-H	37hb 7.7ml
BORON	WATER, FERTILIZER, SOIL	0-1/10, 0-5/50 mg/L	G-214-98	azomethine	24" dial, 37hb
BORON	WATER/WASTEWATER	0-1 mg/L	US-202-72	carminic acid	
BROMIDE	PLATING BATHS	0-1 g/L	1-GB-77	chloramin-T, phenol red	3"dial
BROMIDE	WATER/WASTEWATER	0-10/100, 0-25/250 mg/L Br	G-301-04	chloramin-T, phenol red	24" dial, 37hb
CAFFEINE	COFFEE EXTRACT	0.2-10 mg/mL	US-411-76	chloroform ext	
CAFFEINE	PHARMA	1.2-60 mg/100mL	US-509-77	chloroform ext	
CALCIUM	ACID DIGESTS	16-800 mg/L	US-385-75	cresolphthal.	12"dial
CALCIUM	ACID DIGESTS	5-250 mg/L	US-506-77	cresolphthal.	12"dial
CALCIUM	BREAD PROD (1M HCL)	2-100 mg/L	US-374-75	cresolphthal., diethylamine	6"dial
CALCIUM	BRINE	0-2 mg/L	4-GB-80	cresolphthal., diethylamine	
CALCIUM	FERTILIZERS, PROC SPLS	0-70/600/1800 mg/L	US-446-76	cresolphthal., diethylamine	dilution loop (for hi range)
CALCIUM	PHARMA	0-300mg/tablet	US-277-73	cresolphthal.,diethylamine	3"dial.
CALCIUM	SERUM	0-15 mg/dL	SF4-0003	cresolphthal.,diethylamine	12"dial
CALCIUM	WATER	0-200 mg/L	7-ID	methylthymol blue	
CALCIUM	WATER, ACID DIGESTS	0-10/50 mg/L	G-127-94	cresolphthal., 8-hydroxichin.	24"dial
CALCIUM	WATER, WASTE., ACID DIG.	0-12/80 mg/L	G-209-98	cresolphthalien complexone	24"dial, 37hb
CALCIUM PANTOPHENATE	VITAMIN PREPARATIONS	0.4-20 ug/mL	US-429-76	acetic acid, sodium hydroxide	24"dial, 75hb 4.7ml h-coil
CARBACHOL	OPHTHALMIC SOLUTIONS	0.004-0.2 mg/mL	US-125-71	chlorination, hypo-chlorite, iodide oxidat.	
CARBAMATES STABILITY	PHARMA	100-5000 mg/L	US-522-77	KOH, cobalt cyanate	2 x 68hb
CARBOHYDRATE	WATER	0-12.5/150 mg/L glucose	G-055-92	orcinol sulfuric acid	95hb
CARBOHYDRATES	WATER	0-100/750 mg/L	US-575-79	resorcinol	88hb
CARBON (DISSOLVED INORGANIC)	SEAWATER, FRESH WATER	0 - 2mmol/L	G-286-02	phenolphthal.	6"dial.

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CARBON (DISSOLVED ORGANIC)	ALKALINE SOLUTIONS	0-1000 mg/L C	F-004-08	acidified, gas, CO2 diff into phenolphthalein	6"dial.
CARBON (DISSOLVED ORGANIC)	WATER	0-50/120, 0-500/1200 mg/L	US-455-76	sparge persulfate UV phenolphthal.	UV-digestor, 6"dial, silicone-membr
CARBON (DISSOLVED ORGANIC)	WATER, SEAWATER	0-10 mg/L C	G-115-94	sparge persulfate UV phenolphthal.	UV digestor, 6"dial, sil.membr
CARBON (DISSOLVED ORGANIC)	WATER, WASTEWATER	0-200 mg/L	G-107-94	sparge persulfate UVphenolphthal.	UV-digestor, 6"dial, sil.membr, CO2absorber
CARBON (TOTAL INORGANIC)	WATER	0-5 mmol/L	US-266-73	release CO2 phenolphthal.	37hb 5.37ml, 6"dial, silicone-membr
CARBON DIOXIDE	SERUM	5-40 meq/L CO2	US-339-08	acidified, gas, CO2 diff into phenolphthalein	6"dial, silicone-membr
CARBON DIOXIDE	SOFT DRINKS	0-200 meq/LHCO3	US-273-73	phenolphthal.	45hb 5.37ml, 6"dial, silicone-membr.
CARBON DISULFIDE (CS2)	PLANT EXTRACTS	5-200 mg/L CS2	1-NL-85	dithiocarbamatdiethanolamine	80hb
CARBONATE SODIUM	DETERGENTS	0-1 g/L Na2CO3	G-149-95	phenolphthal.	37hb, 6"dial, CO2 absorber
CELLULASE	DETERGENTS	0-1 g/L	3-J A	potassium ferricyanide	24"dial, 45hb, 90hb
CELLULASE	FERMENTATION BROTH	0.25 u/ml	1-F	hydrolyse, glucose oxidas	50hb, 37hb
CEPHALOSPORIN	FERMENTATION BROTH	0-200 mg/L	1-I-77	nicotinamide	90hb
CEPHALOSPORIN (IODEMETRIC)	PHARMA	0-1 mg/mL	US-675-82	acetic acid, aerosol-22, hydrochl. acid	2x 37hb (7.7ml), blank channel
CHLORATE	CELL LIQUOR	0-0.5 g/L	G-186-96	ferrozine	90hb
CHLORATE	CELL LIQUOR	5-250 g/L NaClO3	3-GB-78	5M HCL, KBR, KI	55hb 4.7ml
CHLORATE (TOTAL OXIDANTS)	CELL LIQUOR	0-0.4 g/L NaClO3	G-324-05	5M HCL, KBR, KI	55hb 7.7ml
CHLORIDE	CELL LIQUOR	0-250 g/L	GB-208-78	ferric thiocyanate	
CHLORIDE	CELL LIQUOR	0-30/250 mg/L	G-325-05	ferric thiocyanate	dilution loop
CHLORIDE	CELL LIQUOR	5-500 mg/L	US-639-81	ferric thiocyanate	37hb
CHLORIDE	MEAT EXTRACTS	0-200/1500 mg/L	G-235-00	ferric thiocyanate	6"dial
CHLORIDE	MEAT EXTRACTS	0-4 %	1-ID	ferric thiocyanate	
CHLORIDE	TOBACCO	0-125/1000 mg/L	G-252-00	Mercuric thiocyanate	
CHLORIDE	TOBACCO	0-125/1000 mg/L	G-267-01	ferric thiocyanate	12"dial, 37hb
CHLORIDE	TOBACCO	0-45/250 mg/L	G-282-02	ferric thiocyanate	12"dial, 37hb
CHLORIDE	WATER	0.1-10 / 1-100mg/L	G-234-99	KNO3	Ag/AgCl electrode
CHLORIDE	WATER	0-10/20 mg/L	G-329-05	ion selective electrode	ion selective electrode
CHLORIDE	WATER	0-20/150 mg/L	G-100-93	ferric thiocyanate	
CHLORIDE	WATER	0-6/40, 0-60/400 mg/L	G-279-02	ferric thiocyanate	37hb
CHLORIDE	WATER, SEAWATER	0-20 g/L	US-217-72	ferric thiocyanate	3"dial, non-linear chm
CHLORIDE	WATER, TOBACCO	0-50/300 mg/L	GB-73-71	ferric thiocyanate	6"dial
CHLORIDE	WATER, WASTEWATER	0-10/100, 0-25/250 mg/L	G-133-95	ferric thiocyanate	24"dial, 37hb
CHLORIDE	WATER, WASTEWATER	0-7/100, 0-21/300 mg/L	G-152-95	ferric thiocyanate	37hb, 24"dial
CHLORINE	BRINE	0-5 mg/L	US-592-80	diethylphenylenediamine (DPD)	45hb 1.9ml
CHLORINE	BRINE	0-5000mg/L	US-603-80	diethylphenylenediamine (DPD)	45hb
CHLORINE (RESIDUAL)	WATER	0-0.5/3.5 mg/L	US-264-73	o-toluidine	
CHLORPHENIRAMI MALEATE	PHARMA	4-200 mg/L	US-396-76	chloroform ext	
CHOLESTEROL (TOTAL)	SERUM	8-400 mg%	GB-083-71	ferric chloridacetic acid, sulfuric acid	90hb 6.9ml (2)

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CHOLESTEROL(DIR)	SERUM	0-500mg/dL	SF4-0026	Liebermann-Buchard	
CHOLESTEROL(ENZ:)	SERUM	0-500mg/dL	SF4-0040	cholesterol oxidase	37hb
CHROMIUM	WATER, WASTEWATER	0-1/10 mg/L	G-284-02	diphenylcarbazide	37hb
CHROMIUM (6)	WATER	0-200 ug/L	US-162-71	diphenylcarbazide	
CHROMIUM (TOTAL)	WATER	1-50 mg/L	US-619-80	hypobromide, phenol, diphenylcarbaz	90hb
CITRIC ACID	PHARMA	0.003-0.15 %	US-224-72	acetic anhydr., pyridine	95hb 7.7ml
CITRIC ACID	SOFT DRINKS	1-3 g/L	1-F	citrate lyase	
COBALT	NICKEL PLATING BATHS	8-400 mg/L	US-489-77	ammonium sulfa, sodium acetate, nitric acid	95hb 7.7ml
COD	WATER, WASTEWATER	0-200/300 mg/L	G-030-92	dichromate mercuric sulph, silver sulph	150 Liebisch therm. Block
COD (Mn)	WATER	0-10/12 mg/L O	G-332-06	permanganate	2x 93hb 7.7 mL
COD (SEMI-AUTOMAT)	WATER	0-300, 20-1000 mg/L	US-452-76	dichromate mercuric sulph, silver sulph	
COLLAGENASE	PHARMA	50-500 mg/L	G-251-00	hexapeptide, ninhydrin	2xhb, 24"dial
COLOR	BEER	0 - 12 EBC	G-260-01+D217	direct	
COLOR	WATER	5-250 units	US-181-72	natural color Pt - Co std	
COLOR	WATER, WASTEWATER	0-70/250 units (mg/L Pt units)	G-302-04	natural color Pt - Co std	37hb 5.37mL
COPPER	WATER	0-2 mg/L	US-211-72	hydroxylamine bathocuproine	
COPPER	WATER	0-4 mg/L	US-009-68	hydroxylamine neocuproine	
COPPER	WATER	1/4.5 mg/L	G-311-04	hydroxylamine bathocuproine	37hb 5.37mL
COPPER	WATER, BOILER WATER	0-150µg/L as Cu	G-236-00	zincon, pyrophosphate, acetate buffer	
COPPER (TOTAL AND SOLUBLE)	WATER (PRETREATED)	0-40 ug/L	GB-062-71	zincon	AAI 95hb
CREATINE	SERUM	0-1.4 mg/dL	SF4-0011	picric acid	12"dial
CREATINE / CREATININE	DRIED SOUP	0-50 mg/L	1-NL-76	enzymatic	AAI hb, 24"dial
CREATINE PHOSPHOKINASE	SERUM	0-200U/L	SF4-0017	diacetyl-orcin	12"dial, 37hb,45hb
CREATININE	BIOL. FLUIDS	0.3-15 mg/dl	US-339-11	alc. picrate	45hb, 24"dial
CREATININE		0-20mg%	CLIN-11	picric acid	12"dial
CYANIDE	TOBACCO SMOKE EXTRACTS	0.08-4 mg/L as HCN	GB-310-83	chloramine-T, pyridine/pyrazolone	95hb, 6"dial
CYANIDE	WATER	0-0.06/0.5, 0-0.7/6 mg/L CN	G-215-98	chlormine-T, pyridine	dist. bath
CYANIDE	WATER	0-100/1000 µg/L CN	US-312-74	chloramin-T, pyridine, barbituric acid	155 dist.bath
CYANIDE	WATER	0-50/1200 µg/L	G-368-07	chlormine-T, pyridine	60hb 7.7mL; (dist.bath)
CYANIDE	WATER	0-50/1200 µg/L CN	J-127-07	chloramin-T, pyridine, barbituric acid	dist.bath
CYANIDE	WATER	0-50/9000 µg/L	G-398-09	chlormine-T, pyridine	145 ADM, 60hb
CYANIDE FREE	PLANT EXTRACTS	4-200 µg/L	US-772-85	chloramin-T, pyridine, barbituric acid	50hb 1.38ml
CYANIDE FREE	WATER	0-25/450 µg/L	G-342-06	chloramine-T, pyridine	
CYANIDE FREE	WATER, WASTEWATER	0-100 to 0-1200 µg/L	G-359-06	chloramin-T, pyridine, barbituric acid	dist. bath,37hb
CYANIDE FREE	WATER, WASTEWATER	0-100/1000 µg/L CN	G-387-08	chloramin-T, pyridine, barbituric acid	dist. bath,37hb
CYANIDE TOTAL	WATER	0-500 µg/L	US-315-74	chloramin-T, pyridine, barbituric acid	dist. bath, UV digestor
CYANIDE, TOTAL / FREE	WATER	0 - 60 / 600 ug/L	G-259-01	chloramin-T, pyridine, barbituric acid	dist. bath, UV digestor,37hb

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CYANIDE, TOTAL / FREE	WATER, WASTEWATER	0-100/1000 µg/L CN	G-390-08	chloramin-T, pyridine, barbituric acid	dist. bath, UV digestor,37hb
DEXTRROSE	see GLUCOSE and SUGAR				
DIACETYL	BEER	0-0.25/1.5 mg/L Diac	G-118-94	p-phenylenediamine sparging	88hb
DIASTATIC POWER	MALT INFUSIONS	0.1-6 g/L	US-424-76	hydrolysis ferricyanide	35hb, 95hb, 3"dial
DIRECT BILIRUBIN	SERUM	0-10 mg/dl	SF4-0035	sulfanilic acid	
ENZYME	see PROTEASE				
ERYTHROMYCIN	PHARMA TABS	8-400 ug/mL	US-491-77		2 x 60hb
ERYTHROMYCIN	PHARMACEUTICALS	2-200 units/mL	US-567-79	oxidation of arsenomolybdat	90hb, (7.7mL)
ETHANOL	see ALCOHOL				
ETHINYL ESTRADIOL	PHARMA	0.4-20 ug/mL	US-442-76	sulfuric acid addit forming fluorescence	heating bath
ETHINYL OESTRADIOL	PHARMA	0-50/100 µg/tablet	GB-138-72	forming fluorescence	
FLUCLOXACILLIN	PHARMA	250 mg	1-GB	hydrochloric acid	75hb
FLUORIDE	WATER	0.1-3 mg/L	US-810-86	lanthanum alizarin	
FLUORIDE	WATER	0-2 mg/L	US-129-71	lanthanum alizarin distillation	dist. bath
FLUORIDE	WATER	0-2/6 mg/L	G-383-08	lanthanum alizarin	37hb 7.7mL , 24"dial
FLUORIDE	WATER	0-2/8 mg/L F	G-399-09	lanthanum alizarin	dist hb 155
FLUORIDE	WATER	0-20/200 mg/L F	G-136-95	alizarin compl.	160dist. bath
FLUORIDE	WATER	0-25/200 mg/L	US-779-86	lanthanum alizarin	
FLUORIDE ("ACTIVE")	PLATING BATHS	0-6 g/L	4-GB-84	lanthanum alizarin	6"dial
FOLIC ACID	PHARMA	0-50 mg/L	2-GB-82	KMnO4, NEDD	37hb 5.4ml
FORMALDEHYDE	AIR	0-0.2 and 0-1 mg/L	2-ID-75	chromotropic acid	37hb
FORMALDEHYDE	DETERGENTS	0-2.5% or: see remark	G-229-99	ammonium acetate, acid acetyl acetone	45hb
FORMALDEHYDE	PROCESS LIQUOR	0-2.5 %	3-J-80	acetylacetone	45hb 4.7ml
FORMALDEHYDE	TOBACCO SMOKE EXTRACT	0-3 mg/L	GB-301-83	p-rosaniline, sulfite	
FORMALDEHYDE	TOBACCO SMOKE EXTRACT	0-3/6 mg/L	G-351-06	p-rosaniline	hb, extraction
FORMALDEHYDE	WATER	0.2-10 mg/L	US-654-81	p-rosaniline	90hb 7.7ml
FORMALDEHYDE	WATER	40-2000 mg/L	US-326-74	p-rosaniline	
FRUCTOSE	FOOD EXTRACTS	0-2 g/L	3-NL-76	enzymatic hexokinase	37hb 7.7+2.3ml37hb 13.2ml
FRUCTOSE	see also SUGAR				
FRUCTOSE	WATER	0-100 g/L	4-NL	anthrone	50hb 10.6ml 3"dial
FRUCTOSE	WINE	2-80 g/L	7-D	enzymatic hexokinase	37hb 7.7ml (not necessary)
GALACTOSE	BLOOD	0-800 mg/L (0-80 mg/100mL)	G-243-00	NADH, NAD	95hb, 12"dial, fluorometer
GALACTOSE	MILK	0-2.5 g/L	1-NL-77	enzymatic	2x37hb 13.2ml2x6"dial
GERMANIUM	SEMI-CONDUCTOR	0-50 mg/L	1-F	phenylfluorone	
GLUCAN (beta)	BEER, MALT	0-300 mg/L	G-212-98	cellulflor	only glass
GLUCOSE	FOOD EXTRACTS	0-2 g/L	2-NL	enzymatic hexokinase	37hb 13.2ml, 37hb 2.3+7.7ml6"dial
GLUCOSE	FOOD, PLANT	0-0.5/6, 0-0.05/0.5 g/L	G-142-95	GOD/PAP	37hb, 24"dial

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
GLUCOSE	MILK PRODUCTS	0-2.5 g/L	4-NL	enzymatic hexokinase	2 x 37hb 13.2ml2 x 6"dial
GLUCOSE	see also SUGAR				
GLUCOSE	SERUM	0-500mg/dL	SF4-0002	neocproine	6"dial,80hb
GLUCOSE	SERUM	0-500mg/dL	SF4-0036	MBTH/DMA	12"dial, 37hb
GLUCOSE	SERUM	0-500mg/dL	SF4-0046	hexokinase	6"dial, enzyme coil
GLUCOSE	SERUM	2-80 g/L	7-D	hexokinase	37hb
GLUCOSE	SUGAR BEET	0-0.26/0-2.6 g/L	G-190-97	NADP, ATP hexokinase	12"dial, 37hb
GLUCOSE-6-PHOSPHATE DEHYDR.	BLOOD	0 - 81 units per 100 mL	G-242-00	NADP, NADPH	95hb, fluorometer
GLUTAMATE (MONOSODIUM)	FERMENTATION BROTH	0 - 6 g/L	G-277-02	G.A.decarboxasphenolphthal.	40hb, 90hb
GLUTAMATE (MONOSODIUM)	FERMENTATION BROTH	0-10 g/100mL	US-210-72	hydrochloric acid, potass. di-hydrophosph.	37hb 7.7ml, 6"dial
GLUTAMIC ACID	FOOD	0-2.5 g/L	1-J-86	G.A.decarboxasphenolphthal.	50hb 10.6ml 50hb 5.4ml 6"dial
GLYCEROL	FERMENTATION BROTH	0-0.3 %	US-634-81	GDH, NAD	3"dial, 37hb 7.7ml
GLYCEROL	PHARMA	1-50, 20-1000,400-20000 mg/L	1-GB-79	periodic acid phenyl-hydrazinferricyanate	
GLYCOGEN	LIVER EXTRACTS	0-1 g/L	1-F-74	iodine / KI	
GOT	SERUM	0-300mU/mL	SF4-0010	MDH/NADH	24"dial, 37hb
GPT	SERUM	0-300mU/L	SF4-0022	LDH/NADH	2x24"dial, 2x37hb
HARDNESS (TOTAL)	BRINE	0.4-20 mg/L Ca	US-548-78	Mg-EDTA calmagite	
HARDNESS (TOTAL)	BRINE	10-500, 160-8000 mg/L CaCO3	US-425-76	Mg-EDTA calmagite	
HARDNESS (TOTAL)	WATER, WASTEWATER	0-250 mg/L CaCO3	US-165-71	Mg-EDTA, calmagite	
HARDNESS (TOTAL)	WATER, WASTEWATER	0-400mg/L CaCO3	G-244-00	Na2MgEDTA, calmagite	24"dial, 37hb
HEXOSAMINE	MEAT EXTRACTS	0-50 mg/L	G-082-93	acetylacetone, 4-dimethylaminbenzaldehyde	AAI 95hb
HEXURONIC ACID	TISSUE EXTRACT	0-100/1000mg/L	G-293-03	carbazole conc H2SO4	2x95hb, 12"dial
HEXURONIC ACID	WATER	0-100 µg/mL	G-321-05	carbazole conc H2SO4	3x 95hb 7.7mL
HISTAMINE	BIOL. FLUIDS	0-50, 0-10 ng/mL	G-018-92	solvent extr. o-phthalaldeh.	fluoromonitor
HORMONAL IODINE	SERUM	0-12µg%	CLIN-28	bromine addition	60hb
HYDRAZINE	BOILER WATER	0-1mg/L	GB-069-71	dimethylaminobenzaldehyde	
HYDRAZINE	WATER, WASTEWATER	0-200/1800 µg/L as N ₂ H ₄	G-388-08	dimethylaminobenzaldehyde	45hb
HYDROGEN CYANIDE	TOBACCO SMOKE	0-20/100 mg/L HCN	G-241-00	chloramine-T, pyridine, p-phenylenediamine	12"dial
HYDROGEN PEROXIDE	BOILER WATER	0-4 mg/L	2-F-72	phenolphthal.	
HYDROGEN PEROXIDE	MILK, WHEYPOWDERS	0-100 mg/L	3-NL-77	enzymatic	37hb 13.2ml, 12"dial
HYDROGEN PEROXIDE	PROCESS LIQUOR	0.2-10 g/L	4-S-79	extr. xylenol orangetitanium	37hb, 3"dial
HYDROGEN PEROXIDE	WATER	0.3-15 mg/L	US-539-78	titanium (IV)	
HYDROGEN SULFIDE	see also SULFIDE				
HYDROGEN SULFIDE	WATER, WASTEWATER	0.2-10 mg/L	US-801-86	paraphenylene diamine	
HYDROXIDE	CELL LIQUOR	0-150 g/L	G-322-05	methyl orange	
HYDROXIDE	CELL LIQUOR	0-175 g/L	G-185-96	methyl orange	
HYDROXIDE	CELL LIQUOR	0-250 g/L	GB-208-78	methylorange	

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
HYDROXYPROLINE	MEAT EXTRACTS	0-100 mg/L	2-NL-78	chloramin-T, 4-dimethyl-aminobenzaldehyde	75hb, 12"dial
HYDROXYPROLINE	MEAT EXTRACTS	0-6/30 mg/L	G-081-93	chloramin-T, perchlor acid, benzaledhyde	2x60hb
HYDROXYPROLINE	MEAT EXTRACTS	0-80/240 mg/L (Hydrchl.) 0-100/200 mg/L (sulf.)	G-330-05	chloramin-T, 4-dimethyl-aminobenzaldehyde	1x40hb 1x60hb
HYPOCHLORITE	CELL LIQUOR	0-12/100 mg/L	G-187-96	KJ-KJO3	
HYPOCHLORITE	CELL LIQUOR	0-3 g/L	GB-208-78	potasium iodide	
INORGANIC PHOSPHORUS	SERUM	0-10mg/dL	SF4-0004	molybdate, stannous chloride	6"dial
INSULIN	PROCESS SAMPLE		G-349-06	Biuret	37hb
INULIN	SERUM, URINE	0.2-10 mg%	US-503-77	sulfuric acid anthrone	70hb 7.7ml
IODIDE	FOOD	0.4-20 mg/L	US-530-77	cerium, arsenious acid	60hb 7.7ml
IODIDE	WATER	0-20/150 and 0-100/300 µg/L l	G-300-04	cerium, arsenious acid	24"dial, 37hb
IODINE	URINE	0-50 and 20-1000 µg/dL as l	G-223-99	cerium, arsenious acid	UV-digestor, 55hb
IRON	ACID SEAWATER	0-2/80 umol/L	G-290-03	ferrozine	37hb
IRON	WATER	0-1/8.5, 0-10/80 mg/L Fe	G-210-98	ferrozine	24"dial, 37hb
IRON	WATER	0-500 / 0-4000 µg/L	G-226-99	ferrozine	
IRON	WINE	0-25 mg/L	10-F	H2O2 oxidation	2 x 12"dial
IRON (TOT. and FREE)	WATER, SEAWATER	0-0.5/5 mg/L	G-306-04	potassium persulfate, ferrozine	UV-digestor
IRON (TOTAL)	WATER, SEAWATER	0-1/8 mg/L	US-109-71	thioglycolic digestion TPTZ	95hb 7.7ml
LACTATE DEHYDROGENASE	SERUM	0-600mU/mL	SF4-0021	NAD/LDH	37hb
LACTATE DEHYDROGENASE	SERUM	12-600 mU/mL	US-339-21	NAD lactic acid substrate	37.5hb 7.7ml
LACTIC ACID	CALCIUM SULFAT	0-4 g/L	1-F	ferric chlorid	
LACTOSE	MILK POWDER	0-2.5 g/L	3-NL	enzymatic	2 x 37hb 13.2ml
LEAD	WATER	0-20mg/L	G-001-91	paraphenylene diamine	
LIPASE	PHARMA TABS	0-20.000 units	1-D-74	hydrolysis triglycerides NADH	37hb 1.9ml, 6"dial
LITHIUM	PLATING BATHS	0.08-4 mg/L, 0.06-3%	US-579-79	flame color	
LYSINE	CEREAL, FERM BROTH	0-150 mg/L as lysine	G-206-97	enzymatic, phenolphthalein	2x37hb, 6"dial
LYSINE	CEREALS	0-0.2 g/L	1-ID-75	enzymatic gas dialysis phenolphthal.	AAI hb, 6"dial
LYSINE	FERMENTATION BROTH	0.2-2.0 g/L	US-740-84	L-lysine decarboxylase	37hb, 6"dial (gas membrane), dil loop
LYSINE	see also AMINO ACIDS				
MAGNESIUM	ANTIACID PREPS	2-80 mg/dose	5-GB	brillia yellow NaOH	12"dial
MAGNESIUM	SOIL EXTR (ACID DIGEST)	0-3 mg/L	3-NL-77	magnesium blue	
MAGNESIUM	SOIL EXTRACTS	0-30/180 mg/L	G-275-01	xylydil blue	
MAGNESIUM	WATER, SOIL EXTRACTS	0-1.5/3 and 0-10/15/90 mg/L	G-315-05	xylydil blue	24"dial, 37hb
MAGNESIUM	WATER, SOIL EXTRACTS	0-18/30 mg/L	G-338-06	xylydil blue	37hb, 12"dial
MALIC ACID	WINE	0-3 g/L	G-228-99	NAD, GOT, MTT-formazone	37hb, 6"dial
MANGANESE	SEAWATER	0-3/150 µmol/L	G-289-03	formaloxime	37hb
MANGANESE	WATER	0-3.75/30 mg/L	G-314-05	formaloxime	24"dial, 37hb
MANGANESE	WATER WASTEWATER	0-0.3/7.5 mg/L	G-303-04	formaloxime	37hb 5.37mL

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
MANGANESE	WATER WASTEWATER	0-1/10 mg/L	G-278-02	formaloxime	37hb
MBAS see SURFACTANTS, ANIONIC					
MENTHOL	TOBACCO	0-200 g/L	1-S-75	p-dimethylamin-benzaldehyde	95hb 10.6ml
METHIONINE	ENZYMATIC HYDROLYSATES	0-35/140 mg/L	G-207-97	nitroprusside	
MOLYBDENUM	AQUEOUS SOLUTION	0-100/800 mg/L	G-352-06	sulfuric acid ferric sulfatemethyl cellosso	37hb
NIACIN / NIACINAMIDE	see VITAMIN B3				
NICKEL	WATER	0-0.4, 13-630 mg/L	3-GB-71	dimethylglyoxime	
NICOTINE	TOBACCO	0-0.35/2 g/L	G-378-07	cyanogen chloride	12"dial
NICOTINE	TOBACCO	0-0.4/4, 0-2/10 g/L	G-217-98	cyanogen chloride	24"dial, 37hb
NICOTINE	TOBACCO	0-200/1600mg/L	G-264-01	cyanogen chloride	12"dial,37hb
NICOTINE	TOBACCO	0-200/2000mg/L	G-283-01	cyanogen chloride	12"dial, 37hb
NICOTINE	TOBACCO SMOKE	15-750 mg/L	US-243-72	cyanogen brom aniline	12"dial
NICOTINE (TOTAL ALCALOIDS)	TOBACCO	0-100/800 mg/L	G-238-00	sulphanilic acid, cyanogen chloride	12"dial
NICOTINIC ACID	MEAT EXTRACTS	0-20 mg/L	1-NL-76	cyanogen, chloride, aniline	24"dial
NITRATE	FERTILIZER	0-15/70, 0-50/300 mg/L as N	G-357-06	hydrazine NEDD	2x37 hb
NITRATE	FERTILIZER	0-18/150 mg/L N	G-339-06	hydrazine NEDD	12"dial, 37hb
NITRATE	FERTILIZER	0-62/330 mg/L N	G-334-06	hydrazine NEDD	6"dial, 37hb
NITRATE	FERTILIZER	0-7/45, 0-28/180 mg/L as N	G-354-06	hydrazine NEDD	37 hb
NITRATE	FOOD	0-0.4/3 mg/L N	G-363-06	CD NEDD	Cd-column, 24"dial
NITRATE	MEAT EXTRACTS	0-1/7.5 mg/L	US-230-72	Cd, NEDD	Cd-column, 24"dial
NITRATE	MILK	0-100 mg/L N	G-026-92	hydrazine NEDD	3"dial, 37hb
NITRATE	SOIL EXTRACTS	0.1-10 mg/L N	NL-215-91	Cd, NEDD	Cd-coil, 6"dial
NITRATE	TOBACCO	0 - 0.5 / 4.5 mg/L as N	G-280-02	hydrazine NEDD	24"dial, 37hb
NITRATE	TOBACCO	0-18/150 mg/L	G-265-01	hydrazine NEDD	12"dial, 37hb
NITRATE	TOBACCO	0-50/500 mg/L	G-237-00	hydrazine	37hb, 6"dial
NITRATE	WATER	0-0.5/0-4 mg/L	G-348-06	CD NEDD	Cd-coil, 6"dial
NITRATE	WATER	0-0.8/7.5 mg/L N	G-114-94	hydrazine NEDD	37hb
NITRATE	WATER, MEAT, WASTEW	0-0.25/2, 0-0.5/6 mg/L N	G-139-95	Cd, NEDD	24"dial, 37hb
NITRATE	WATER, MEAT, WASTEW	0-2 mg/L N	US-271-73	Cd, NEDD	24"dial
NITRATE	WATER, SEAWATER	0-1/40, 0-10/400 µmol/L as N	G-384-08	Cd, NEDD	Cd-coil, 37hb
NITRATE	WATER, SEAWATER	0-210/2240 ug/L N	F-004-07	Cd, NEDD	Cd column
NITRATE	WATER, SEAWATER	0-70/500 ug/L N	G-065-92	Cd, NEDD	Cd-column
NITRATE	WATER, SOIL EXTRACTS	0-1.2/5.6 mg/L N	G-067-92	Cd, NEDD	Cd-reductor
NITRATE	WATER, WASTEWATER	0.75/7 mg/L N	US-857-87	Cd, NEDD	2 Cd coils
NITRATE	WATER, WASTEWATER	0-0.35/2 and 0-0.85/6.5 mg/L N	G-200-97	Cd, NEDD	24"dial, 37hb, Cd column
NITRATE	WATER, WASTEWATER, SOIL EXTRAC	0.5/10 to 0-15/150 mg/L as N	G-345-06	CD NEDD	24"Dial, 37 hb
NITRATE	WATER, WASTEWATER, SOIL EXTRAC	0-0.12/1, 0-0.7/6 mg/L N	G-126-94	hydrazine NEDD	24"dial, 37hb

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
NITRATE	WATER, WASTEWATER, SOIL EXTRAC	0-0.25/2, 0-0.9/10 mg/L N	G-109-94	hydrazine NEDD	24"dial, 37hb
NITRATE	WATER, WASTEWATER, SOIL EXTRAC	0-2/20 mg/L	G-254-02	Cd, NEDD	12"dial, Cd reductor
NITRATE	WATER, WASTEWATER	0-0.25/2 mg/L 0-0.9-10mg/L	G-287-02	CD NEDD	24"dial, 37hb, 10TCd-coil
NITRATE, TOT. N	WATER, SEAWATER, PERS.DIG.	0-9/140, 0-70/1700 ug/L N	G-172-96	Cd, NEDD	Cd-column, hb37
NITRATE/NITRITE	WATER	0-1/0-10 mg/L	G-017-91	NEDD	
NITRATE/NITRITE	WATER, SOIL, WASTE	0.2-2 / 2-20 mg/L N	D-254-02	Cd column	12"dial
NITRITE	FOOD	0-0.1/2.7 mg/L N	G-362-06	NEDD	24"dial
NITRITE	MEAT EXTRACTS, WASTEWATER	0-100µg NaNO ₂ /g meat	US-231-72	NEDD	24"dial
NITRITE	WATER	0.05 to 0-1.5 mg/L	G-347-06	NEDD	
NITRITE	WATER	0-0.25/2 mg/L N	US-636-81	NEDD	
NITRITE	WATER	0-125/5000 mg/L N	G-385-08	NEDD	glassware
NITRITE	WATER, MEAT, WASTE	0-0.2/2.5, 0-0.8/6 mg/L N	G-140-95	NEDD	24"dial, 37hb
NITRITE	WATER, SEAWATER	0-10/250 ug/L N	G-062-92	NEDD	
NITRITE	WATER, SEAWATER	0-14/320 ug/L N	F-003-07	NEDD	
NITRITE	WATER, SEAWATER	0-4.2/84, 0-84/700 ug/L N	G-173-96	NEDD	37hb
NITRITE	WATER, SEAWATER	0-6/250 ug/L N	G-317-05	NEDD	37hb 5.37mL
NITROGEN	ACID DIGESTS	0-0.5/4 mg/L N	G-310-04	salicylate	37hb
NITROGEN	FERTILIZER	0-100/300 mg/L N	G-340-06	chromous/titanous, salicylate	37, 50, 95 hb, 12"dial
NITROGEN	PERSULFATE DIGESTS	0-0.25 to 0-4mg/L	G-350-06	NEDD	Cd column
NITROGEN	SEAWATER	0-80/500 µg/L as N	G-218-98	persulfate, Cd, NEDD	UV-digestor, 95hb, Cd column
NITROGEN	WATER, SEAWATER	0-150/1400 ug/L N	G-298-03	persulfate, Cd, NEDD	UV-digestor, 95hb, Cd column
NITROGEN	WATER, SEAWATER, SOIL	0-10/70 mg/L N	G-326-05	persulfate, Cd, NEDD	UV-digestor, 95hb, Cd column, 6"dial
NITROGEN (PROTEIN)	FEEDS (ACID DIGESTS)	0-40/300 mg/L N	US-506-77	salicylate nitroprusside hypochlorite	6"dial, 37hb 7.7mL
NITROGEN (TOT. KJELDAHL)	ACID DIGESTS	0-0.6/6, 0-2.5/25 mg/L N	G-188-97	salicylate nitroprusside hypochlorite	24"dial, 37hb
NITROGEN (TOT. KJELDAHL)	ACID DIGESTS	0-1.2, 2-75 mg/L	US-329-74	salicylate nitroprusside hypochlorite	37hb 7.7mL
NITROGEN (TOT. KJELDAHL)	ACID DIGESTS	0-75/100 mg/L N	G-253-00	salicylate	24"dial, 37hb
NITROGEN (TOT. KJELDAHL)	ACID DIGESTS	1-50, 20-1000 mg/L N	US-334-74	salicylate nitroprusside hypochlorite	37hb 7.7mL, 6"dial
NITROGEN (TOT. KJELDAHL)	ACID DIGESTS	20-1000 mg/L	US-385-75	salicylate nitroprusside hypochlorite	6"dial, 37hb
NITROGEN (TOT. KJELDAHL)	TOBACCO	0-10/100mg/L	G-273-01	salicylate	12"dial, 37hb
NITROGEN (TOT. KJELDAHL)	WATER, ACID DIGESTS	0-100/1000mg/L N	G-230-99	salicylate	6"dial, 37hb
NITROGEN (TOT. KJELDAHL)	WATER, SEAWATER	160-1200 µmol/L	G-225-99	salicylate nitroprusside hypochlorite	37hb
NITROGEN (TOTAL N)	FERTILIZERS, SOIL EXTR.	0-25/160 mg/L N	G-129-94	vanadylphenol	45hb
NITROGEN (TOTAL N)	WATER	0-1/10 mg/L N	G-392-08	persulfate, hydrolysis, Cd coil, NEDD	high pressure digestion, Cd coil, 45hb
NITROGEN (TOTAL N)	WATER	0-1/10 mg/L N	G-394-08	persulfate, hydrolysis, Cd coil, NEDD	high pressure digestion, Cd coil, 45hb
NITROGEN (TOTAL N)	WATER, SEAWATER	0-150/500 µg/L N	G-135-95	UV radiation, Cd column, NEDD	UV-digestor
NITROGEN (TOTAL N)	WATER, SEAWATER, SOIL EXTRACTS	0-0.25/2 mg/L N	G-157-96	UV radiation, hydrazine, NEDD	UV digestor, 95hb
NITROGEN (TOTAL N)	WATER, SOIL EXTRACTS	0-0.3/4 mg/L N	G-086-93	UV radiation, hydrazine, NEDD	UV-digestor

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
NITROGEN / NITRATE	WATER, SEAWATER	TN: 0-150/1400 ug/L N NO3:0-100/1000 ug/L N	G-295-03	persulfate, Cd, NEDD	UV-digestor, 95hb, Cd column
NITROGEN, TOTAL KJELDAHL	TOBACCO	0-4/60 mg/L	G-281-01	saliylate nitroprusside hypochlorite	24"dial 37hb
NITRO-GLYCERINE	PHARMA	2-100 ug/mL	US-335-74	hydrolyse in alkaline Sr(OH) ₂	50hb,12"dial
NON-IONIC SURFACTANTS	see SURFACTANTS NON-IONIC				
PAPAVERINE HCL	PHARMA	60-3000 ug/mL	US-395-76	UV absorbance	3"dial
PARA-AMINO-HIPPURIC ACID	PLASMA, URINE	0.2/20 mg/dL	US-216-72	sodium nitriten-1-naphty azo-dye	24"dial
PARACETAMOL	PHARMA TABS	0-300 mg	1-GB-73	phenol, hypochlorite	
PENICILLIN	FERMENTATION BROTH	0-30 mg/L	GB-231-79	imidazole	2x60hb
PENICILLIN	PHARMA	36-8000 units/mL	US-228-72	hydroxylamine, Fe(NO ₃) ₃	blank channel
PENICILLIN	PHARMA	60-3000 units/mL	US-562-79	iodometric	blank channel
PERMANGANATE VALUE	WATER	0-25 mg/L	1-NL	KMnO ₄ colour reduction	95hb 6.9ml (2)
PERSULFATE	ACID PERSULFAT BATHS	100-140 g/L Na ₂ S ₂ O ₈	US-662-81	ferrous sol.	37hb
PH	CAL extracts	4.1 - 5.5	G-313-05	methy red	6"dial
PH	CAL extracts	4.1 - 5.7	G-375-07	bromcresol green	glassware
PHENIRAMINE MALEATE	PHARMA	2-100 ug/L	US-532-78	cyanogen bromide, sulfanilic acid	
PHENOL	BIOL. FLUIDS	0-0.5%	4-GB	Folin Ciocalteau	3"dial
PHENOL	PHARMA	70-3500 ug/mL	US-407-76	4-aminophenaz., ferricyanide	3"dial
PHENOL	WATER	0 - 200/4000 ug/L	G-285-02	4-AAP, ferricyanide	37hb
PHENOL	WATER	0-0.1/1 mg/L	G-132-94	extraction, 4-aminophenaz.	
PHENOL	WATER	0-0.2/20 mg/L	G-360-06	4-AAP, ferricyanide	24"dial, 37hb
PHENOL	WATER	0-0.2/9 mg/L	J-128-07	4-AAP, ferricyanide	dist.bath
PHENOL	WATER	0-0.2/9 mg/L	G-369-07	4-AAP, ferricyanide	dist.bath
PHENOL	WATER	0-0.5/4, 0-6.25/50 mg/L	G-216-98	alkaline ferricynaide	dist. bath
PHENOL	WATER	0-200/1200 µg/L	G-398-09	4-AAP, ferricyanide	145 ADM, 60hb
PHENOL	WATER	0-200/500 µg/L	G-341-06	4-AAP, ferricyanide	
PHENOL	WATER	0-500 ug/L	US-127-71	4-aminophenaz., ferricyanide	dist. bath
PHENOL	WATER	0-500, 0-1300 µg/L as phenol	G-105-93	4-aminoantipyrine., ferricyanide	dist. bath
PHENOL	WATER, WASTEWE, TAP WATER	0-150/12000 µg/L	G-386-08	4-AAP, ferricyanide	dist.bath
PHENYL-ACETIC ACID	FERMENTATION BROTH	0-3 g/L	1-GB-86	extr. toluene nitrophenoxide	
PHENYLALANINE	BLOOD	0.02-0.6 mg per 100 mL	G-031-92	ninhydrin fluorescence	fluorometer
PHOSPHATE	CAL and DL extracts	0-10/80 mg/L P ₂ O ₅	G-374-07	molybdate	glassware
PHOSPHATE	CALCIUM LACTATE SOIL EXTRACTS	0-7.5/20 mg/L P	G-250-00	molybdate	24"dial, 37hb
PHOSPHATE	FERTILIZER	0-50 mg/L P ₂ O ₅ (=22 mg/L P)	US-115-71	molybdovanadat	
PHOSPHATE	FERTILIZER	0-62/500 mg/L P ₂ O ₅	G-335-06	molybdovanadat	
PHOSPHATE	SEAWATER	0-1/10 µMol/L P	G-395-08	molybdate	37hb 7.7mL
PHOSPHATE	see also PHOSPHORUS				
PHOSPHATE	SOIL	0-20/90 mg/L as P ₂ O ₅	G-344-06	molybdate	24"dial, 37hb

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
PHOSPHATE	TOBACCO	0-15/100 mg/L asP	G-355-06	molybdate	12"dial, 37hb
PHOSPHATE	WATER	0-50/500 µg/L P	G-297-03	molybdate	37hb
PHOSPHATE	WATER, SEAWATER	0-124/744 µg/L P	US-155-71	molybdate	37hb 7.7mL, spec. SCICphototube -04
PHOSPHATE	WATER, SEAWATER	0-20/50 ug/L P	G-318-05	molybdate	37hb 5.37mL
PHOSPHATE	WATER, SEAWATER	0-31/310 ug/L	F-002-07	molybdate	37hb 7.7mL
PHOSPHATE	WATER, SEAWATER	0-32/160 µg/L P	G-170-96	molybdate	37hb
PHOSPHATE	WATER, SOIL, WASTE W	0-1/7.5, 0-6/50 mg/L P	G-103-93	moly blue	24"dial, 37hb
PHOSPHATE	WATER, WASTEWATER	0-1/10, 0-8/80 mg/L P	G-146-95	moly blue	37hb, 24"dial
PHOSPHATE	WATER, WASTEWATER	0-3/20 mg/L PO4	US-094-70	molybdate	37hb
PHOSPHATE (CONDENSED)	ION-EXCH COLUMN EFFL	5-220 mg/L P	US-317-74	acid hydrolyse, moly blue	12"dial, 95hb, 65hb
PHOSPHATE (TOTAL P)	WATER, SEAWATER, PERS.DIG.	0-0.06/1.5, 0-0.6/13.6 mg/L P	G-175-96	molybdate	hb37, 5.37 ml
PHOSPHORUS	FERTILIZER	0-20/180, 0-80/500 mg/L P2O5	G-358-06	molybdovanadat	
PHOSPHORUS	FERTILIZERS, FOOD	0-20/200 mg/L P2O5	G-130-94	molybdovanadat	
PHOSPHORUS (DIRECT AVAILABLE)	FERTILIZER	80-700mg/L P2O5 (306mg/L as P)	US-484-77	acid hydrolyse, moly blue	2x 95hb 10.6mL
PHOSPHORUS (TOT. KJELDAHL)	ACID DIGESTS	0-1.7/6, 0-6/50 mg/L P	G-189-97	molybdate	24"dial, 37hb
PHOSPHORUS (TOT.INORGANIC)	DETERGENTS	0-7/4000 mg/L P2O5	US-621-80	molybdovanadat	95hb
PHOSPHORUS (TOT.KJELDAHL)	ACID DIGESTS	0-0.4, 0.5-25 mg/L P	US-329-74	molybdate	37hb 7.7mL
PHOSPHORUS (TOT.KJELDAHL)	ACID DIGESTS	0-1/0-4, 0-5/20 mg/L P	G-202-97	molybdate	37hb, 24"dial
PHOSPHORUS (TOT.KJELDAHL)	FEEDS	2-100 mg/L	US-506-77	molybdovanadat	dilution loop
PHOSPHORUS (TOT.KJELDAHL)	KJELDAHL DIGESTS	0-0.6/6 mg/L P	G-092-93	molybdate	UV-digestor, 95hb
PHOSPHORUS (TOT.KJELDAHL)	WATER, SEAWATER	0-5/15 mg/L P	G-371-07	molybdate	37hb 5.4 mL
PHOSPHORUS (TOTAL P)	FERTILIZER	0-200/1000 ug/L P	G-299-03	persulfate, hydrolysis, molybdate	UV-digestor, 98hb, 40hb
PHOSPHORUS (TOTAL P)	SEAWATER	0-10 mg/L	US-093-70	acid hydrolyse, moly blue	2x90hb
PHOSPHORUS (TOTAL P)	SEAWATER	0-300/3000 µg/L P	G-219-98	Molybdate, UV	UV digestor, 90hb
PHOSPHORUS (TOTAL P)	WATER	0-0.7/8 mg/L P	G-393-08	persulfate, hydrolysis, molybdate	high pressure digestion, 75hb
PHOSPHORUS (TOTAL P)	WATER	0-0.7/8 mg/L P	G-394-08	persulfate, hydrolysis, molybdate	high pressure digestion, 75hb
PHOSPHORUS (TOTAL P)	WATER, SEAWATER	0-0.4/4, 0-0.03/0.5 mg/L P	G-179-96	UV digestion, molybdate	UV-digestor, 95hb (10.6mL)
PHOSPHORUS (TOTAL P)	WATER, SEAWATER	0-500/2000mg/L as P2O5	G-224-99	vanadate, molybdate	
PHOSPHORUS (TOTAL P)	WATER, WASTEWATER	TP: 0-200/2000 ug/L P PO4: 0-100/1000 ug/L P	G-294-03	persulfate, hydrolysis, molybdate	UV-digestor, 98hb, 40hb
PHOSPHORUS (TOTAL P) and PHOSF	SEAWATER	0-50/400 mg/L	G-296-03	acid hydrolyse, moly blue	95hb, 75 hb, 12"dial
PHOSPHORUS(P2O5)	DETERGENTS	0 - 5, 0 - 50 mg/L	G-270-01	molybdate	37hb
POLYPHENOL, TOTAL	BEER	0-200 mg/L	D-262-01	ferric ammonium citrate	
POLYPHENOL, TOTAL	BEER	0-50/200 mg/L	US-674-82	carboxy methylcellulose, ferric iron, EDTA	
POLYPHENOLS	BARLEY, MALT EXTRACTS	0.01-0.5%, 10-500 ug/mL	US-492-77	ferricyanide 4-aminoantip.	
POTASSIUM	AQUEOUS SOLUTION	0-100 mg/L	G-312-05	flame	flame photom.
POTASSIUM	CAL and DL extracts	0-10/100 mg/L K ₂ O	G-376-07	flame, no Li ref.	flame photom.
POTASSIUM	FERTILIZER	0-250 mg/L K ₂ O	G-337-06	flame	flame photom.

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
POTASSIUM	FERTILIZER	0-750mg/L	G-233-99	dual beam flame, Li reference	12"dial
POTASSIUM	FERTILIZER	0-80 mg/L	G-255-00	lanthanum oxide	24"dial, flame
POTASSIUM	FERTILIZER, SOIL EXTR.	0-400 mg/L K2O	US-722-83	flame, no Li ref.	flame photom.
POTASSIUM	FERTILIZERS, SOIL EXTR.	0-100/200 mg/L K2O	G-184-96	flame	24"dial, 37hb flame photom.
POTASSIUM	MILK	0-300 mg/L	G-025-92	Li, flame	12"dial, flame
POTASSIUM	SERUM	0-10 meq/L	SF4-0007		dial
POTASSIUM	SOIL EXTRACTS	0-20 mg/L	G-249-00	lanthanum	flame photom.
POTASSIUM	TOBACCO	0 - 400 mg/L	G-276-01	flame	flame photom.
POTASSIUM	WATER, WASTEWATER	0-10 mg/L	US-240-72	flame	24"dial, flame
PROLINE	BONE EXTRACT	2-50 ug/mL	US-514-77	ninhydrin	80hb 7.7mL
PROPYLENE-GLYCOL	GUAR	1-100 ug/L	US-699-82	hydrolysis ninhydrin	98hb, 60hb
PROTEASE	DETERGENTS	0-10 mg/L	G-111-94	casein, TNBS	55hb
PROTEASE ACTIVITY	PANCREATIN	4-200 NF units/mg	US-499-77	enzymatic (casein)	24"dial, 42hb
PROTEIN	ACID DIGESTS	0-20/200 mg/L N	G-331-05	salicylate	37hb 7.7mL, 12"dial
PROTEIN	see also NITROGEN				
PROTEIN (CRUDE)	ANIMAL FEEDS	0-150/1150 mg/L N	G-382-07	moly blue	6"dial, 37hb
PROTEIN (LOWRY)	BIOL. FLUIDS	0-20 mg%	US-286-73	Lowry	
PROTEIN (TOTAL)	PLASMA DERIVS.	0-30 g%	US-276-73	Biuret	blank channel
PYRUVATE	MILK	0-10 mg/L	G-027-92	enzymatic NADH, LDH	90hb, 2x37hb 2 x 24"dial
SALICYLIC ACID	see ASPIRIN				
SERUM IRON	SERUM	0-500µg/dL	SF4-0025	TPTZ	24"dial
SILICATE	DETERGENTS	0-3/1200 mg/L SiO2	US-621-80	moly blue	
SILICATE	WATER	0-100/5000 ug/L SiO2	G-085-93	moly blue	hb37
SILICATE	WATER	0-7.5/70 mg/L SiO2	G-101-93	molybdate	
SILICATE	WATER, SEAWATER	0-0.18/3, 0-0.6/12 mg/L SiO2	G-088-93	moly blue	
SILICATE	WATER, SEAWATER	0-0.9/1.5, 0-1.5/15 mg/L SiO2	G-177-96	molybdate, ascorbic acid, oxalic acid	37hb
SILICATE	WATER, SEAWATER	0-1.2/24 mg/L SiO2	F-001-07	molybdenum blue	
SILICATE	WATER, SEAWATER	0-90/2600 ug/L SiO2	G-319-05	molybdenum blue	37hb
SILICATE	WATER, WASTEWATER	0-4/45, 0-25/250 mg/L SiO2	G-147-95	moly blue	37hb (7.7mL), 24"dial
SILICATE	WATER, WASTEWATER	0-5/30, 0-23/200 mg/L SiO2	G-151-95	moly blue	37hb, 24"dial
SODIUM	FERTILIZERS, SOIL EXTR.	0-100/200 mg/L Na	G-184-96	flame	24"dial, 37hb flame photom.
SODIUM	MILK	0-180 mg/L	G-025-92	Li, flame	12"dial, flame
SODIUM	SERUM	0-160meq/L	SF4-0007		dial
SORBIC ACID	FOOD PRODUCTS	0 -0.1 %	US-343-74	release sorbicMgSO4, K2Cr2O2	90hb 7.7ml, 6"dial, silicone-membr.
SORBIC ACID	FOOD PRODUCTS	0-100 mg/L	1-NL-75	distillation, dichromate, thiobarb.acid	95hb 3.04ml,95hb 7.7ml
SORBITOL	FOOD PRODUCTS	0-60 %	1-NL-76	enzymatic	37hb 5.4 ml, 3"dial
STARCH	FOOD PRODUCTS	0-1.5 g/L	1-NL-81	enzymatic	55hb 7.7ml, 37hb 7.7ml, 12"dial

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
STARCH	TOBACCO, FOOD, PLANTS	0-0.2/0-1.6g/L	G-271-01	iodine	
SUCROSE	see also SUGAR				
SUGAR	see also DEXTROSE, SUCROSE,	GLUCOSE, FRUCTOSE			
SUGAR (INVERT)	see also SUGAR (REDUCING)				
SUGAR (REDUCING)	FOOD EXTR, TOBACCO	0-0.6/5 g/L (0-0.06/0.5%)	US-142-71	ferricyanide	95hb, 12"dial
SUGAR (REDUCING)	TOBACCO	0-0.6/4 g/L	G-377-07	ferricyanide	12"dial, 95hb 7.7mL
SUGAR (REDUCING)	TOBACCO	0-2.5/7.5 g/L	G-239-00	hexacyanoferrate	6"dial, 90hb
SUGAR (REDUCING)	WINE	0-20/30 g/L	G-143-95	neocuproine	95hb, 6" dial
SUGAR (TOTAL AND REDUCING)	TOBACCO EXTRACTS	total: 0-1g/L as glucose	G-245-00	invertase, alkaline ferricyanide	12"dial, 55hb, 95hb
SUGAR (TOTAL and/or REDUCING)	TOBACCO	0-0.4/3 mg/L	G-227-99	p-hydroxy benzoic acid hydrazide	95hb, 85hb, 6"dial (PFA coil)
SUGAR (TOTAL OR REDUCING)	TOBACCO	0-1000 mg/L as glucose	G-246-00	ferricyanide	2xhb, 12"dial
SUGAR (TOTAL/RED)	TOBACCO	0-0.5/3 g/L (0-0.05/0.3%)	G-141-95	ferricyanide	1x95hb, 1x90hb, 12"dial
SULFATE	FERTILIZER	0-1g/L	US-288-73	BaCl ₂ alk meth blue	column
SULFATE	PLATING BATHS	0-6 g/L H ₂ SO ₄	11-GB-84	barium, EDTA wash	40+40 sampler
SULFATE	SOIL EXTRACTS	0-40/0-200mg/L	US-590-80	BaCl ₂ gum arab	
SULFATE	WATER	0-10 mg/L as SO ₄	US-226-72	thymol blue ion-exchange BaCl ₂	column
SULFATE	WATER	0-200mg/L	NL-146-79	BaCl ₂ , MTB	24"dial, column
SULFATE	WATER, WASTEWATER	0-20/200 mg/L SO ₄	G-061-92	ion-exchange, BaCl ₂ alk meth blue	ion-exchange column
SULFATE	WATER, WASTEWATER	6-50, 16-200 mg/L SO ₄	G-159-96	2-aminoperimidine	6"dial
SULFIDE	see also HYDROGEN	SULFIDE			
SULFIDE	WATER	0-2/12, 0-0.5/4 mg/L	G-213-98	dimethyl	24" dial, 37hb
SULFIDE	WATER; SEAWATER	0-0.15/1.5 and 0-1.5/15 mg/L S	G-372-07	methylene blue	37hb 5.4mL
SULFIDE	WATER; SEAWATER	0-7/50, 0-20/150 umol/L	G-193-97	FeCl ₃ , p-dimethylamin benzaldehyde	
SULFITE	see also SULFUR DIOXIDE				
SULFITE	WATER	0-3 mg/L SO ₃	US-173-72	formaldehyde rosaniline	
SULFUR DIOXIDE (FREE)	BEER	0-15/90 mg/L	G-261-01	formaldehyde rosaniline	24"dial, 37hb
SULFUR DIOXIDE (FREE)	WINE	0-20/150 mg/L SO ₂	G-161-96	p-rosaniline, formaldehyde	37hb, 3"dial
SULFUR DIOXIDE (TOTAL)	BEER	0-10 mg/L	G-365-06	p-rosaniline, formaldehyde	37hb, 95hb, 24"dial
SULFUR DIOXIDE (TOTAL)	WINE	0-25/250 mg/L SO ₂	G-162-96	p-rosaniline, formaldehyde	37hb, 3"dial
SULFUR DIOXIDE (TOTAL)	WINE	0-300 mg/L	G-144-95	formaldehyde rosaniline	95hb, 6"dial
SURFACTANTS ANIONIC	DETERGENTS	0.5-25 %	3-E	dimidium brom. chloroform ethanol	
SURFACTANTS ANIONIC	WATER	0-0.5/5 mg/L SDS	G-258-01	chloroform, methylene blue	extraction coils, 2 phase separators
SURFACTANTS ANIONIC	WATER	0-1mg/L	G-093-93	chloroform methylene blue	
SURFACTANTS ANIONIC	WATER	0-50/500 ug/L	G-370-07	chloroform, methylene blue	extraction coils, 2 phase separators
SURFACTANTS ANIONIC	WATER	0-50/500 ug/L and 0-0.5/5 mg/L	G-367-07	chloroform, methylene blue	extraction coils, 2 phase separators
SURFACTANTS NON-IONIC	DETERGENTS	0-500 mg/L(0-5%)	4-E-82	iodine / KI	
SURFACTANTS NON-IONIC	ISOPORPANOL	0-240 mg/L	G-091-93	sodium picrate	

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PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
TANNIN	WINE	0-2 g/L	1-AUS	tungstate phos-moly acid(Folin-Denis)	
TETRACYCLINE	PHARMA	0-400 mg/L	1-GB	heat in HCl	90hb 7.7ml
THIOCYANATE	WATER	0-0.5/2 mg/L SCN	G-391-08	ferric	
THYROXINE	PHARMA	0-60 mg/L, 0-6 mg/tab	US-584-79	reduction of Ceric yellow	50hb 7.7mL
TITANIUM	MINERALS	0-25 mg/L TiO ₂	1-F	chromotropic acid	
TOT. BILIRUBIN	SERUM	0-10meq/L	SF4-0018	mixed diazo	
TRIGLYCERIDES	LIVER EXTRACTS	10-500 mg/100mL	US-496-77	lipase NADH/NAD	6"dial, blank channel
TRIGLYCERIDES(ENZ.)	SERUM	0-500 mg/dL	SF4-0039	lipase, glycerol	2x6"dial, 4x37hb
TYROSINE	BIOL. FLUIDS	0-4 %	1-GB-79	ninhydrin	80hb 3ml, 3"dial
URANIUM	WATER	2-100 mg/L	US-357-75	bromo-PADAP	
URANIUM	WATER	2-50 mg/L	US-460-76	H ₂ O ₂ oxidation	45hb
UREA	FERTILIZER	0-100/700 mg/L N	GB-229-79	dimethylaminobenzaldehyde	
UREA	MILK	0-200/1600 mg/L N ₂ H ₄	G-134-95	diacetylmonoxime	90hb, 3"dial
UREA	WATER, SEAWATER	0-300/900 ug/L urea	G-166-96	diacetylmonoxime ferric	2x 95hb
UREA	WATER, SOIL EXTRACTS	0-3/45 mg/L	US-600-80	diacetylmonoxime ferric	95hb
UREA NITROGEN	BIOLOGICAL FLUIDS	0 - 12.5 to 0- 100 mg/dL	G-373-07	diacetylmonoxime ferric	87°C
UREA NITROGEN	SERUM	0-100mg/dL	SF4-0001	diacetylmonoxime	6"dial, 90 hb
URIC ACID	FOOD PRODUCTS	20-1000µg/100mL	US-474-77	phosphotungstic acid	24"dial, 50hb
URIC ACID	SERUM	0-12 mg/dL	SF4-0013	phosphotungstic acid	12"dial,
VITAMIN A	MILK PRODUCTS	0-1 mg/L	3-GB	saponify KOH extr. hexane fluorometer	AAI 75hb
VITAMIN A	PHARMA	50-150 iu/mL	US-580-79	saponify KOH extr. hexane UV absorbance	
VITAMIN B1 (THIAMINE)	FOOD EXTRACTS	0-0.15 mg/L	US-479-77	ferricyanide, fluoro-meter (thiochrome)	
VITAMIN B1 (THIAMINE)	PHARMA	10-100 ug/mL	US-204-72	ferricyanide	3"dial
VITAMIN B2 (RIBOFLAVIN)	FERMENTATION BROTH	0-0.4 mg/L	US-587-79	natural fluorescence	24"dial
VITAMIN B2 (RIBOFLAVIN)	FOOD PRODUCTS	0-0.4 mg/L	US-140-71	natural fluorescence	24"dial
VITAMIN B2 (RIBOFLAVIN)	PHARMA	1-10 mg/tablet	US-205-72	natural fluorescence	6"dial
VITAMIN B3 (NIACIN)	FOOD PRODUCTS	0.1-5 ug/mL	US-156-71	cyanogen brom, sulfanilic acid	24" dial
VITAMIN B3 (NIACINAMIDE)	PHARMA	20-1000 ug/tablet	US-205-72	cyanogen brom, sulfanilic acid	12" dial
VITAMIN B6 (PYRIDOXINE)	PHARMA	2.5-50mcg/mL	US-204-72	benzoquinoneimine	24" dial
VITAMIN C (ASCORBIC ACID)	FOOD EXTRACTS	0-0.1 g/L	US-365-75	N-bromosuccin.	37hb 7.7mL, 12"dial
VITAMIN C (ASCORBIC ACID)	MILK	0-200 mg/L	G-028-92	indophenol	24"dial
VITAMIN C (ASCORBIC ACID)	PHARMA	0-0.5 g/L	US-221-72	diazotise 4-methoxy2-nitroaniline	6"dial
VOLATILE ACIDITY	TOBACCO	0-200/1400 mg/L	G-269-01	KJ, KJO3	dist. bath
VOLATILE ACIDITY	WINE	0-0.25/2 g/L as acetic acid	G-169-96	KJ, KJO3	dist. bath
VOLATILE BASE (TOTAL)	TOBACCO EXTRACTS	0-65 mg/L as NH ₄	G-240-00	NaOH, glycerol, acid, iodide/iodate	150dist. Bath
VOLATILE BASE (TOTAL, as NH ₄)	TOBACCO EXTRACTS	0-4/30 mg/L N	G-222-98	salicylate, hypochlorite, dist.	37hb, 95hb
VOLATILE BASE TOTAL	TOBACCO	0-25/120 mg/L NH ₄	G-124-94	salicylate	dist. bath, 6"dial, 37hb

AUTOANALYZER METHODS



PARAMETER	SAMPLE	RANGE	NO	CHEMISTRY	HARDWARE
VOLATILE BASE(TOTAL)	TOBACCO	0-10/75 mg/L NH4	G-268-01	KJ, KJO3	dist. Bath
ZINC	WATER	0-10/60 mg/L	G-316-05	zincon, cyanide	37hb
ZINC	WATER	16-630 mg/L Zn	G-072-93	zincon, cyanide	