

FIAlyzer-FLEX Methods List – April 2022

Alkalinity								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
ALK-W-20-1	1	50	0.3	g CaCO ₃ / L	50	Waters	EPA 310.2	Methyl Orange method.
Ammonia								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
NH3-W-20-1	0.01 0.5	0.5 20	0.003 0.1	mg N / L as NH ₃	60	Waters	SM 4500-NH ₃ H.	Salicylate or phenate method with gas diffusion.
NH3-W-20-3	0.01 0.5	0.5 20	0.003 0.1	mg N / L as NH ₃	60	Waters	EPA 350.1	Salicylate or phenate method with gas diffusion.
NH3-W-20-4	0.006	1	0.002	mg N / L as NH ₃	60	Waters	SM 4500-NH ₃ H.	Salicylate or phenate method.
Chloramine								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
CLNH2-W-20-1	0.01	2	0.005	mg N / L	60	Waters	N/A	Salicylate method.
Chloride								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
CL-W-20-1	0.2	20	0.05	mg Cl / L	60	Waters	SM 4500-Cl-	Ferric chloride - mercuric (II) thiocyanate method.

Cyanide

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
CN-W-20-1	1 20	500 10,000	0.3 8	µg CN / L	60	Waters	EPA 335.4	For post-distillation samples. Pyridine-barbiturate method.
CN-W-20-3	1	100	0.3	µg CN / L	20	Waters	ISO 14403:200 2E	In-line UV digestion. Isonicotinic-barbiturate method.

Hardness

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
HRD-W-20-1	5	300	2	mg CaCO ₃ / L	60	Waters	EPA 130.1	Calmagite method.

Hexavalent Chromium

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
CR6-W-20-1	1	400	0.3	µg Cr ⁶⁺ / L	60	Waters	SM 3500- Cr B.	Diphenylcarbazide method.

Iron

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
FE-W-20-1	50	500	2	µg Fe / L	60	Waters	N/A	TPTZ method.

Nitrate + Nitrite

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
NO ₃ -W-20-1	0.001	25	0.0004	mg N / L as NO _x	60	Waters	EPA 353.2	Griess method with cadmium reduction.
NO ₃ -W-20-2	0.001	25	0.0004	mg N / L as NO _x	60	Waters	SM 4500- NO ₃ F.	Griess method with cadmium reduction.

Nitrite

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
NO ₂ -W-20-1	0.0005	15	0.0002	mg N / L as NO _x	120	Waters	EPA 353.2	Griess method.

Nitrogen – Kjeldahl (TKN)								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
NH3-W-20-2	0.01 0.5	0.5 20	0.003 0.1	mg N / L as NH3	60	Waters	EPA 351.2	For TKN digests. Salicylate method with gas diffusion.
NH3-W-20-4	0.01 0.5	0.5 20	0.003 0.1	mg N / L as NH3	60	Waters	SM 4500-Norg D.	For TKN digests. Salicylate method with gas diffusion.
Nitrogen - Total								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
NO3-W-20-3	0.2	10	0.02	mg N / L	20	Waters	SM 4500-N B.	Griess method with cadmium reduction, in-line digestion.
NO3-W-20-4	1	40	0.3	mg N / L	40	Waters	N/A	For Total N/P persulfate digests (Dennis Jones). Griess method with cadmium reduction.
Phenol								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
PHNL-W-20-1	0.005 0.013	0.2 0.5	0.001 0.003	g Phenol / L	60	Waters	EPA 420.1	For post-distillation samples. 4-aminoantipyrine method.
PHNL-W-20-2	0.005 0.013	0.2 0.5	0.001 0.03	g Phenol / L	60	Waters	EPA 420.4	For post-distillation samples. 4-aminoantipyrine method.
PHNL-W-20-3	0.006	0.2	0.002	g Phenol / L	20	Waters	EPA 420.4	In-line distillation. 4-aminoantipyrine method.
Phosphate - Ortho								
Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
PO4-W-20-1	12	1000	4	µg P / L	60	Waters	EPA 365.1	Molybdenum blue method.
PO4-W-20-3	12	1000	4	µg P / L	60	Waters	SM 4500-P F.	Molybdenum blue method.
PO4-W-20-6	1 20	1000 20,000	0.4 8	µg P / L	60	Waters	SM 4500-P G.	Molybdenum blue method.

Phosphorus – Total (TP)

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
PO4-W-20-2	15	1000	5	µg P / L	60	Waters	EPA 365.1	For Total P persulfate digests. Molybdenum blue method.
PO4-W-20-4	15	1000	5	µg P / L	60	Waters	SM 4500-P H.	For Total P persulfate digests. Molybdenum blue method.
PO4-W-20-7	15	1000	5	µg P / L	20	Waters	SM 4500-P I.	For Total P persulfate digests. In-line digestion. Molybdenum blue method.

Phosphorus – Total Kjeldahl (TKP)

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
PO4-W-20-5	0.08 0.2	0.9 45	0.03 0.06	mg P / L	60	Waters	EPA 365.4	For TKP digests. Molybdenum blue method.

Silica

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
SIO2-W-20-1	0.003 0.04	1.5 20	0.0015 0.02	mg SiO2 / L	60	Waters	SM 4500-SiO2 F.	Molybdenum blue method.

Sulfate

Method number	Lower	Upper	MDL	Units	Sample / Hour	Matrix	Compliant With	Notes
SO4-W-20-1	1.5 50	25 300	0.5 6	mg SO4 / L	60	Waters	SM 4500-SO42- G	Barium chloride and methylthymol blue (MTB) method with IEX purification.
SO4-W-20-2	1.5 50	25 300	0.5 6	mg SO4 / L	60	Waters	EPA 375.2	Barium chloride and methylthymol blue (MTB) method with IEX purification.

Urea

UREA-W-20-1	0.003	1	0.001	g urea / L	60	Waters	N/A	OPA-NED method.
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