

Fertilizer Methods List for Automated Ion Analyzers

Flow Injection Analysis



19 January 2018

Flow Injection Analysis

Ammonia

14-107-06-1-B ^R	5.0 – 180	0.5	mg N/L as NH ₃	Fertilizers	Alkaline phenol-based method. HCl digest of solid fertilizers. 630 nm. Requires a standard heater and inert probe.	3-Sep-03
14-107-06-1-C	60 – 600	1.33	mg N/L as NH ₄	Fertilizers	Salicylate/DCIC based method. 660 nm. Requires a standard heater.	21-Aug-03

Calcium

14-120-02-1-B ^R	5 – 120	0.5	mg Ca/L	Fertilizers	Determination in HCl digests (0.48M in digestate) o-cresolphthalein complexone . 600 nm.	4-Sep-03
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Chloride

14-117-07-1-A ^R	0.5-25	0.1	mg Cl ⁻ /L	Fertilizer	Mercuric thiocyanate. 480 nm. Water extracts of solid fertilizers or liquid fertilizer diluted in water. 102 samples per hour	21-Mar-17
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Kjeldahl Nitrogen (TKN)

14-107-06-2-A ^R	5.0 – 200	0.04	mg N/L	Fertilizers	Kjeldahl digests; selenium oxide catalyst Salicylate/ nitroprusside; 660 nm. Requires a standard heater.	15-Sep-03
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Nitrate + Nitrite

14-107-04-1-B	30 – 300	0.38	mg N/L	Fertilizers	Sulfanilamide/NED Cd reduction method; 520 nm. Dialysis method	15-Sep-03
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Phosphorus (Other)

14-115-01-2-B ^R	400 – 1600	0.2	mg P ₂ O ₅ /L	Fertilizers	Total P in solid fertilizers; Vanadate based method; 420 nm. HCl/HNO₃ digest; AOAC method for Total P in fertilizers and phosphate rock. Requires an internal sample loop valve.	17-Sep-03
14-115-01-2-C ^R	16.25 – 260	0.47	mg P ₂ O ₅ /L	Fertilizers	Total P in fertilizers; Vanadate based method; 420 nm. HCl/HNO₃ digests; Assoc. of Florida Phosphate Chemists method.	17-Jul-08

Potassium

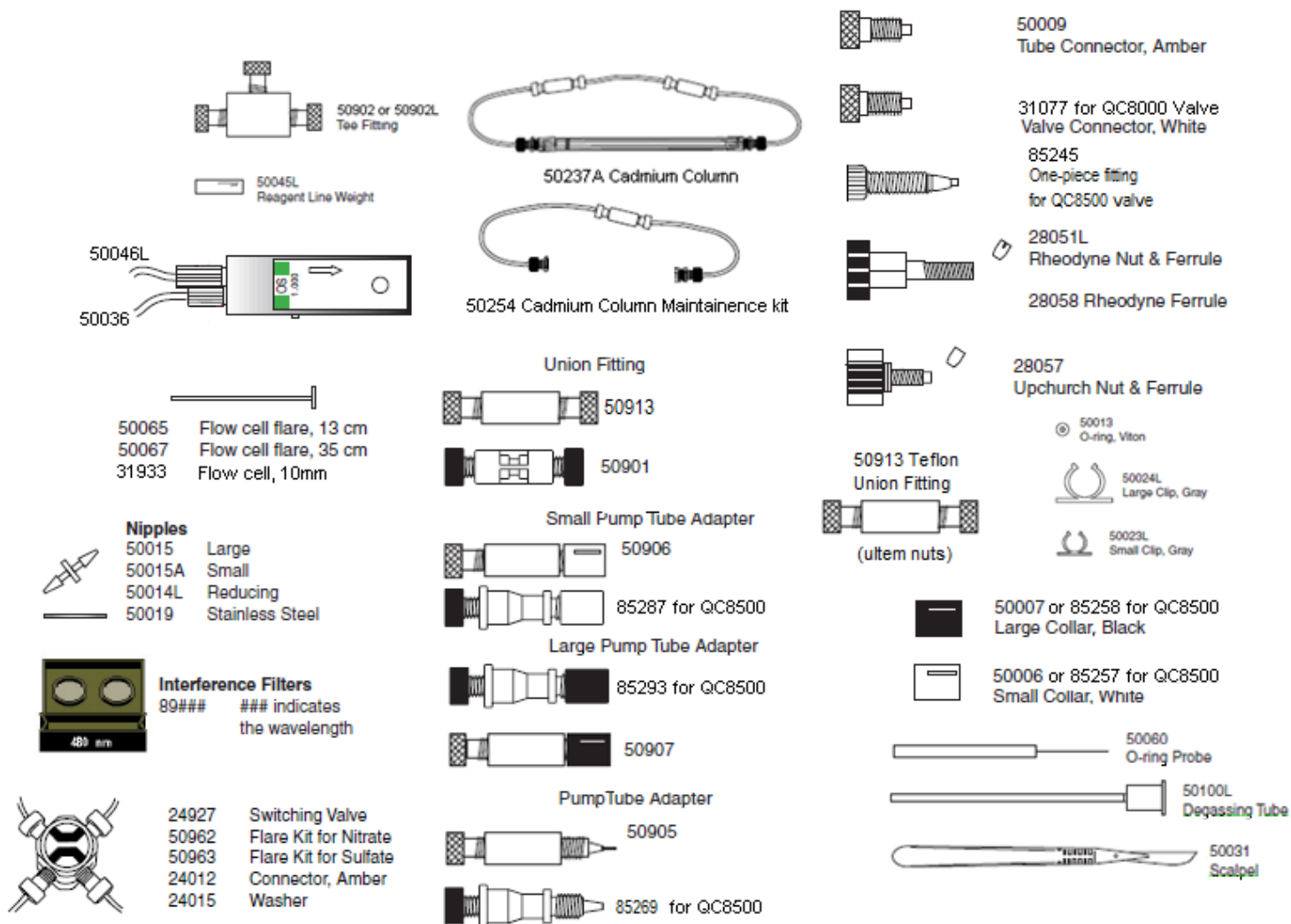
14-119-03-1-B ^R	5 – 250	0.4	mg K/L	Fertilizers	Flame emission method. HCl digests of solid fertilizer. Inert probe, Flame A.A. and direct voltage module required.	17-Sep-03
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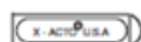
Method Matrix

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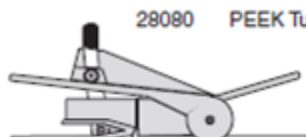
Analytical method	
FIA	
IC	

Selected Parts. Please note this is NOT a complete listing





28081
Blades for PEEK
Tubing Cutter



28080 PEEK Tubing Cutter



50021
Transmission Tubing, PVC, 0.030" ID



50029
Transmission Tubing, PVC, 0.060" ID

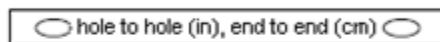


Teflon Tubing

50927 Manifold, 0.022" ID, Green
50928 Manifold, 0.032" ID
41300L Tefzel Tubing, 0.040" ID x 0.060" OD
30928 Zeus Tubing, 0.032" ID



50091 Microloop Tubing, Teflon, 16 cm
50092 Microloop Tubing, Teflon, 12.5 cm



Coils

Size	Coil Support Only	Wrapped, Teflon 0.022" ID	Wrapped, Teflon 0.032" ID
1" or 4.5 cm	50016L	50981	50916
2" or 7 cm	50018L	50982	50918
2.5" or 8 cm	50017	50983	50917
4" or 12 cm	50020	50984	50920
8" or 22 cm	50022L	N/A	50922



Alternating Coils 12 cm

Coil Support Only	Wrapped, Teflon 0.022" ID	Wrapped, Teflon 0.032" ID
50039	50985	50921



Bottles

28193L Glass Bottle, 1000 mL
35102 Glass Bottle, 2000 mL
43915 Glass Bottle, 100 mL (includes cap)



50012
O-ring Remover



50062
Drill Bit



28101L
End Plug

Pump Tubing

534XX PVC
544XX Duraprene
494XX Silicone
654XX Acidflex

XX is the number that specifies the pump tube color:

05 Orange-Yellow, 0.020" ID	13 Blue-Blue, 0.065" ID
06 Orange-White, 0.025" ID	14 Green-Green, 0.073" ID
07 Black-Black, 0.030" ID	15 Purple-Purple, 0.081" ID
08 Orange-Orange, 0.035" ID	16 Purple-Black, 0.090" ID
09 White-White, 0.040" ID	17 Purple-Orange, 0.100" ID
10 Red-Red, 0.045" ID	18 Purple-White, 0.110" ID
11 Gray-Gray, 0.051" ID	19 Yellow-Blue, 0.060" ID
12 Yellow-Yellow, 0.056" ID	

Lachat Instruments Brand Loveland, Colorado USA

United States: 800-247-7613 tel | 970-669-3050 tel | 970-461-3915 fax | sales@lachatinstruments.com | techhelp@hach.com
Outside United States: Contact the Lachat office or distributor serving you. | sales@lachatinstruments.com | intltech@hach.com
www.lachatinstruments.com

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