

A2LA Assessor Environmental Method Checklist

Ion Chromatography

Item	Section 1 - Personnel	Reference	Yes-No or NA	
1.1	Does the analyst(s) interviewed meet the job description position requirements, training and qualifications for performing the test? Supervisor: _____ Technician: _____	(G25)6.1		

Item	Section 2 - Equipment & Facilities	Reference	Yes-No or NA	
2.1	Is an anion guard column present to protect the separator column?	(ORDI)300.0,6.2(8/93)		
2.2	Is the anion column Dionex AS4A (Method A), Dionex AS9 (Method B) or equivalent?	(ORDI)300.0,6.2(8/93)		
2.3	Is an anion suppresser device in use?	(ORDI)300.0,9.2(8/93)		
2.4	Is the detector a conductivity cell?	(ORDI)300.0,9.2(8/93)		

Item	Section 3 - Method	Reference	Yes-No or NA	
3.1	Is baseline separation demonstrated for the analytes of interest?	(ORDI)300.0,9.2(8/93)		
3.2	Is the reagent water free of interferences at the minimum detection limit, filtered through 0.2- μ m membrane filter and having a conductance of <0.1 μ S/cm?	(SM18)4110B,3.a (1992)		
3.3	Are the stock standards stored at 4°C for less than 1 month & is the stability documented?	(ORDI)300.0,7.5(8/93)		
3.4	Is the stock standard for chlorite stored at 4°C for less than 2 weeks & stability documented?	(ORDI)300.0,9.2(8/93)		
3.5	Are working standards prepared daily for nitrite and phosphate?	(ORDI)300.0,9.2(8/93)		
3.6	Is additional concentrated eluent added to eliminate the water dip or negative peak that elutes near the fluoride peak?	(ORDI)300.0,4.2(8/93)		
3.7	Is a calibration curve prepared for each analyte using at least three concentration levels and a blank?	(ORDI)300.0,10.2 (8/93)		

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3.8	Is the linear calibration range (using sufficient number of standards to validate linearity) determined initially and every six months?	(ORDI)300.0.9.2.2 (8/93)		
3.9	Is linearity verified using a blank and at least three standards prior to analysis?	(ORDI)300.0.9.2.2 (8/93)		
3.10	Is the attenuation range of the instrument calibrated separately?	(ORDI)300.0.10.2 (8/93)		
3.11	Is the same size sample loop used for standards and samples?	(ORDI)300.0.11.3 (8/93)		
3.12	Is the sample fortified with standards and reanalyzed when the chromatography resolution fails?	(ORDI)300.0.11.6 (8/93)		
3.13	Are solids analyzed by extracting with water, stirring for ten minutes, filtering through 0.45µm membrane filter, and demonstrating efficiency by adding known standards?	(ORDI)300.0.9.2(8/93)		

Item	Section 4 - Sample Handling Practices	Reference	Yes-No or NA	
4.1	Are samples collected in plastic or glass bottles and cooled during storage without chemical preservatives for single anions?	(ORDI)300.0.8.2(8/93)		
4.2	Is the combined nitrate/nitrite preserved with H ₂ SO ₄ and reported as nitrate/nitrite?	(ORDI)300.0.8.2(8/93)		
4.3	Are the individual concentrations of nitrate and nitrite measured without preservation when the combined nitrate/nitrite exceeds 0.5 mg/L as N?	(ORDI)300.0.8.2(8/93)		
4.4	Are the holding times for nitrate, nitrite - 48 hours; for chlorite - immediately; and for bromide, chloride, fluoride, sulfate, bromate, chlorate - 28 days?	(ORDI)300.0.8.2(8/93)		
4.5	Is chlorite preserved by adding 1 mL ethylenediamine (EDA) to 1 liter samples when analysis is not started within 10 minutes?	(ORDI)300.0.8.3(8/93)		

Item	Section 5 - Quality Control Practices	Reference	Yes-No or NA	
5.1	Is a laboratory fortified blank analyzed with each batch or every twenty samples and is the recovery ± 10% of the known value?	(ORDI)300.0.9.3.2 (8/93)		
5.2	Is a laboratory fortified matrix analyzed every ten samples and is the recovery ± 10% of the amount added?	(ORDI)300.0.9.4.1 (8/93)		
5.3	Is the method detection limit determined every six months?	(ORDI)300.0.9.2.4 (8/93)		
5.4	Is an instrument performance check (IPC) & calibration blank performed immediately following daily calibration, every ten samples and at the end of the sample run?	(ORDI)300.0.9.3.4 (8/93)		

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5.5	Is the IPC within $\pm 10\%$ of the calibration?	(ORD)300.0,9.3.4 (8/93)		
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