

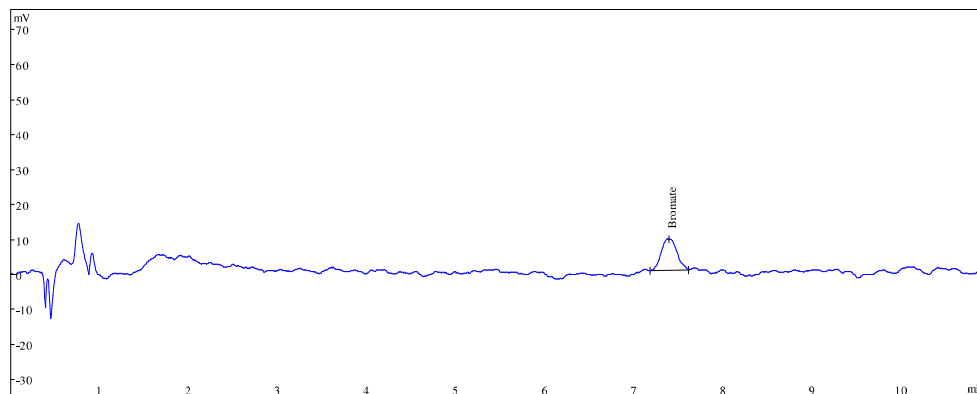
APPLICATION NOTE



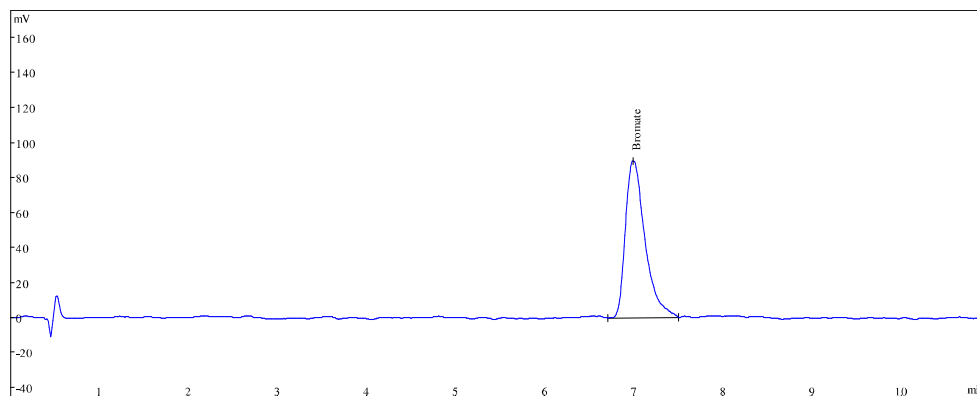
IONUS Bromate – Post-column Derivatization

Equipment	IONUS Bromate, contained a unit for Post-column Derivatization
Column	PRP-X100, 5 μ m, 100 mm x 4.6 mm ID, P/N 79669, S/N 104 (Hamilton Company, USA)
Column temperature	40 °C
Eluent profile	isocratic
Eluent	5.0 mM Sodium carbonate 2.5 mM Sodium hydrogen carbonate 0.1 mM Sodium thiocyanate
Reagent	500 ml Solution: 250 mg o-Dianisidine in 100 ml Methanol and 2.5 g Potassium bromide in Water with 70 ml 65 % Nitric acid (procedure see next page)
Reactor temperature	60 °C
Flow	1000 μ l/min
Detection	visible 440 nm
Injection volume	500 μ l (manually) or 100 μ l (autosampler)
Samples	Bromate standard solutions and Standard for EPA method 317.0 Rev 2.0 (10 Anions)

Separation of Standard Solution 20 ppb (injection volume 500 μ l)

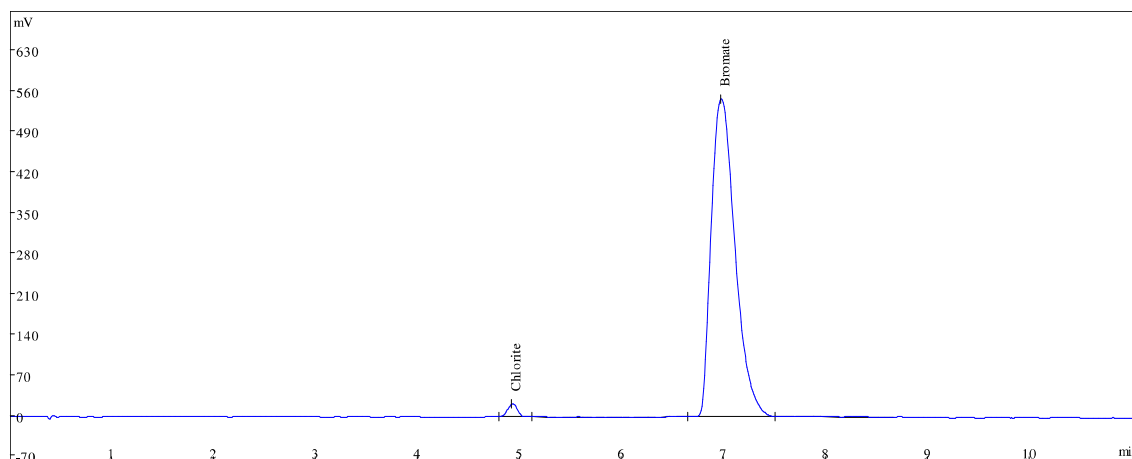


Separation of Standard Solution 500 ppb (injection volume 100 μ l)





Separation of EPA-Standard Solution (10 Anions, 20 µl injected)



Preparation of Post-column reagent (following EPA 317.0 Rev. 2)

The reagent is prepared by adding 70 mL of 65% nitric acid (purity as 99.999%) to approximately 300 mL ultrapure water in a well rinsed 500 mL volumetric flask and adding 2.5 grams of ACS reagent grade potassium bromide (KBr).

Two-hundred-and-fifty milligrams of purified grade o-dianisidine dihydrochloride salt (ODA) are dissolved, with stirring, in 100 mL methanol (Spectrophotometric grade).

After dissolution, the o-dianisidine solution is added to the nitric acid/KBr solution and diluted to volume with reagent water.

The reagent is stable for 24 hours and should be prepared fresh daily prior to analysis.