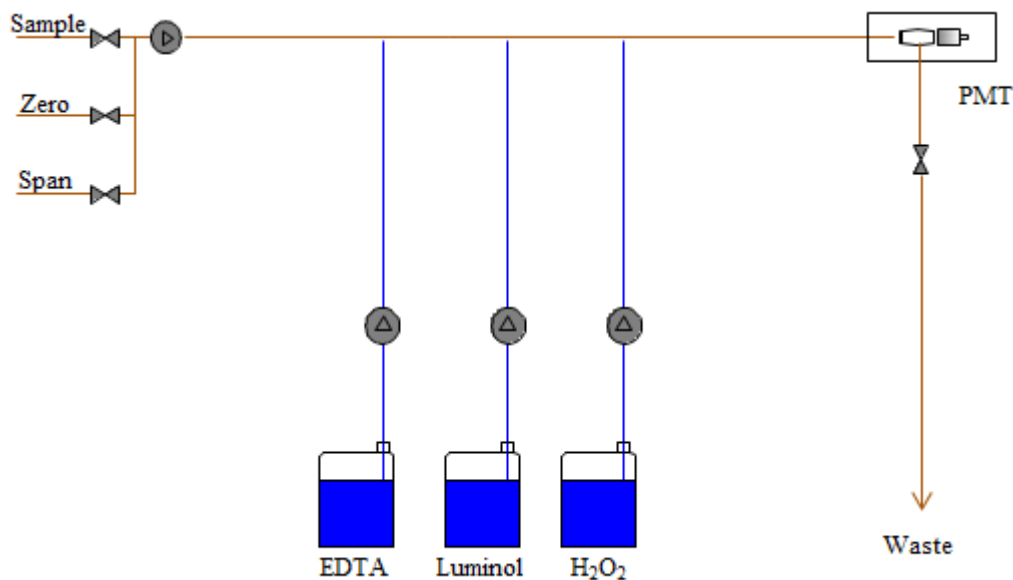


ChromiumIII(Cr³⁺) in Water

Description

Sample which contains Cr³⁺ is mixed with Luminol and hydrogen-peroxide(H₂O₂) to produce chemiluminescence. EDTA is injected first stage to mask the interference metal. The luminescence intensity is based on concentration of Cr³⁺. The intensity is measured by PMT spectrometer without any light source.

Operation:	Cyclic
Dilution:	None
Interferences:	Co, Cu, Fe, Ni



Typical performance data using aqueous standards(in percent of range)

Measurement Accuracy:	≤ 5% or 0.02mg/L (whatever is higher)
Repeatability(Coefficient Variation 50%)	~ 1.0 %
Detection limit(lowest range)	0.005mg/L
Calibration time;	10 min
Measurement time;	5 min

BL Process

Hardware Specification

Measuring system:	PMT detector
Number of pumps	1(Digital injector)

Reagent Consumption (10min Cycle)

Calibration solution 1 & 2	Depend on calibration frequency
EDTA	~15L
Luminol	~50L
H2O2	~50L

System Maintenance

Weekly	Check function of valves and pumps Check calibration parameters Check tubing cleanliness
3-monthly	Change syringe operation Check and clean Valve and detection cell
Yearly	Replace pump head if necessary Replace all tubing Check reagent and sample detectors

Data Sheets and Reagents

Cr6+(mg/L)	Path length	Required reagent
0-0.50...0-1.00	0.9	EDTA, Luminol, H2O2

References