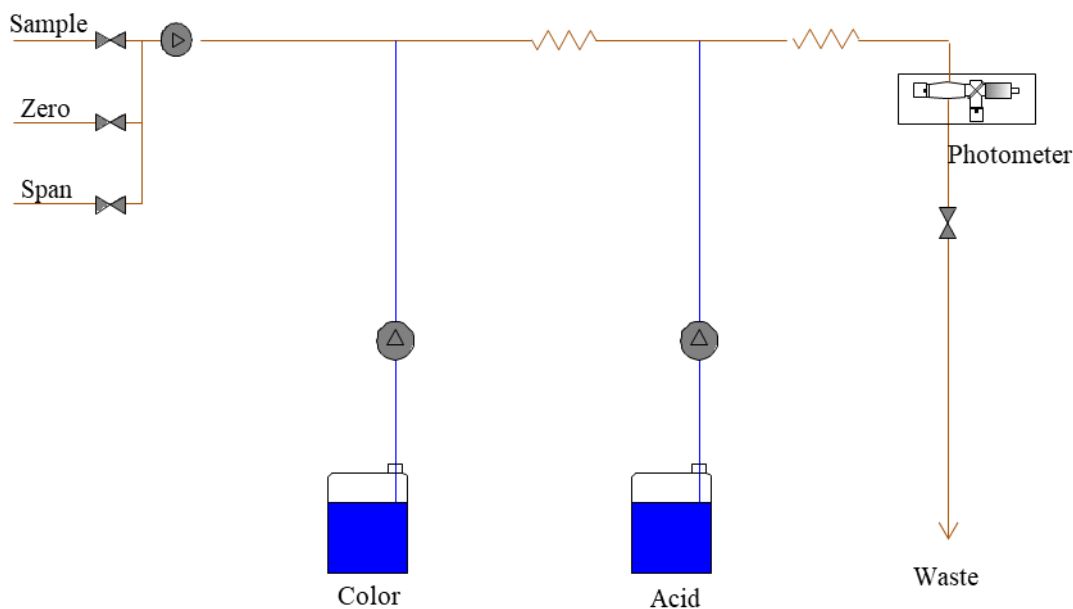


### Chromium VI(Cr6+) in Water

#### Description

Chromium is determined using the reaction of Cr<sup>6+</sup> with diphenyl carbazide in acid solution, where the chromium oxidizes the carbazide and is itself reduced to Cr<sup>3+</sup>. The resulting red-violet color complex has an absorbance maximum at 545 nm.

Operation:	Cyclic
Dilution:	None
Interferences:	V, Mo, Cu from 10-fold excess



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

Measurement Accuracy:	≤ 3% or 0.003mg/L (Whatever is higher)
Repeatability(Coefficient Variation 50%)	1.0 %
Detection limit(lowest range)	0.005mg/L
Calibration time;	10 min
Measurement time;	8 min

# BL Process

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## Hardware Specification

Measuring system:	Photometer
Flowcell path length:	10mm (0-0.200mg/L ... 0-2.00mg/L) 50mm (0-0.050mg/L ... 0-0.4.00mg/L)
Measured wavelength	524nm LED / 540nm IF
Number of pumps	2

## Reagent Consumption (10min Cycle)

Calibrant 1 & 2	Depend on calibration cycle
Acid	~ 22L
Color(Chromogen)	~ 22L

## System Maintenance

Weekly	Check function of valves and pumps Check calibration parameters Check tubing cleanliness
3-monthly	Change pump tubes Check and clean flow cell
Yearly	pump rotors and replace if necessary Replace all tubing

## Data Sheets and Reagents

Cr6+(mg/L)	Path length	Required reagent
0-0.050...0-0.400	50	Acid, Color(Chromogen)
0-0.200...0-1.000	10	Acid, Color(Chromogen)
0-1.000...0-2.000		Acid, Color(Chromogen)

## References