



CHLORIDE in aqueous solution

PRINCIPLE

Chloride ions react with Mercury thiocyanate and form thiocyanate ions. These ions form an orange colored complex when treated with a iron (III) nitrate solution; the intensity of the color, read at 505 nm, is proportional to the chloride concentration in the sample.

REAGENTS

Reagent (ready in cuvette): Mercury (II) thiocyanate
Fe(III) nitrate

REAGENTS PREPARATION

Reagent ready to use.

STABILITY

Reagent is stable up label expiration date. Store at room temperature.

SAMPLE

Aqueous solutions.

REACTION CONDITION (Edit)

Chan:	505 nm	Timer BLK:	5 min
K factor:		Timer SMP:	0 min
Q sign:	- or +	Temperature:	37°C
Q offset:		Mode:	END POINT
Decimal:	2	Sample:	5 µL
Anl/Std:	ANL (for testing) - STD (standardization)		

OPERATING PROCEDURE

Select the test Chloride in water on well 2:

3: Chloride in water on DISPLAY appears Timeout 5 min

Put the cuvette with the working solution into the incubation cells and press "**Enter**" for the countdown.
5 minutes later press:

ENTER on DISPLAY appears Insert blank

Put a cuvette, just incubated at 37°C, into the reading cell with the green light and press:

ENTER on DISPLAY appears Insert sample

Put **5 µL** of sample into cuvette and mix well. Put the cuvette into the reading cell with the green light and press "**Enter**" immediately. Do it for every sample to test. A session of analysis permits to test until to 14 samples. At the end of the session of analysis, results appear as g/dL of Chloride.

STANDARDIZATION PROCEDURE

Select in EDIT the function "**STD**". Select the test Chloride in water on well 2:

3: Chloride in water on DISPLAY appears Insert Conc. 1, 2, 3 ...
< 0.00 >

Insert the standards concentration and confirm with "**Enter**". Minimum number accepted: 3 standards. At the end, press "**STOP**" for reading the standards. Follow the same procedure described for testing the samples. At the end, on the display appears the "K factor", the "q offset" and the "r²" of the linear regression. Press "**MEMO**": the values are stored in "Edit" in automatic mode.

LINEARITY

This method is linear up to 5 g/dL. Samples with higher concentration should be diluted 1:2 with distilled water. Multiply result by diluted factor. The sensitivity is 0,010 g/dL.

NORMAL VALUES

0,2-1,0 g/dL

NOTES

1. The working solution can be opalescence. This is indifferent for the good execution of the test.
2. Avoid to contaminate the reagents and the sample with hands.