

PRINCIPLE:

The concentration is determined by turbidimetry assay. The results are evaluated using a reference curve prepared with the aid of dilutions of calibrator.

CLINICAL SIGNIFICANCE:

Complement C3 is a β -2-protein that is cleaved by C3 convertase to give the pharmacologically active fragment C3a and the larger fragment C3b. On ageing, C3 in serum is rapidly cleaved enzymically to inactive C3c plus other smaller fragments. Serum levels of C3 are associated with acute inflammatory reactions. Decreased serum levels are associated with Factor I deficiency, recurrent infections, etc.

REAGENTS:

1. Reagent 1 (1x80 ml)

TRIS/PEG. buffer pH 7.5

2. Reagent 2 (1x2 ml)

Antiserum Anti-C3

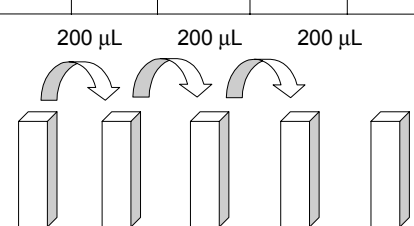
Optional: 101-0485 General proteins calibrator

PREPARATION AND STABILITY:

R.1: Ready to use. Stable at 2-8°C up to the date of expiration.
 R.2: Must be diluted with buffer solution. The dilution depends on the analyser (Inquire).
 Stable, at 2-8°C, up to the expiration date.
 Calibrator; Ready to use.

Calibration curve: Prepare dilutions of the General Proteins calibrator using 9 g/L as diluent:

Std N°	1	2	3	4	5
Dilution	1/21	1/42	1/84	1/168	0
NaCl (µL)	400	200	200	200	200
Calibrator (µL)	20	--	--	--	--



Factor	1.00	0.50	0.25	0.12	0
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Multiply the Complement C3 calibrator concentration by the corresponding dilution factor indicated in the table to obtain the Complement C3 concentration of the different calibrators.

SAMPLES:

Fresh serum. Complement C3 in serum is stable 8 days at 2-8°C. Do not use haemolized or lipemic samples. The controls and samples will dilute manually or automatically with saline solution. (NaCl 0,9%).

MANUAL PROCEDURE:

Wavelength: 340 nm
 Cuvette: 1 cm light path
 Temperature: 37 °C
 Zero: distilled water

- Dilute Antiserum Anti-C3 (R.2) 1:41 with buffer solution R.1. The working reagent is stable 2 weeks at 2-8°C.
- Dilute samples and controls 1:21 with saline solution. (NaCl 0.9%)
- Pipette into a cuvette:

	Blank	Calibrator	Sample
NaCl 9 g/L (µL)	50	--	--
Calibrator (µL)	--	50	--
Dil. Sample (µL)	--	--	50
Work. Reag. (mL)	1.0	1.0	1.0

- Mix and read the absorbance (A) against blank after 10 minutes of the working reagent addition.

CALCULATION:

Calculate the absorbance for each calibrator and plot the values found against the concentration in a calibration curve. Complement C3 concentration in the sample is calculated by interpolation its A value on the calibration curve.

Chronolab has instructions sheets available for several automatic analyzers.

REFERENCE VALUES:

Between 55 – 120 mg/dL.
 Each laboratory should establish its own reference range.

PERFORMANCE CHARACTERISTICS:

- Measurement interval:* 10 – 360 mg/dL, under the described assay conditions.