



MYOGLOBIN

Turbilatex

Quantitative determination

Cat. No. 101-0475

Size 1x20 ml/1x10 ml

PRINCIPLE:

Latex particles coated with anti-human myoglobin are agglutinated when mixed with samples containing myoglobin. The agglutination causes an absorbance change, dependent upon the myoglobin contents of the patient sample that can be interpolated in a calibration curve prepared with different calibrators of different myoglobin contents.

CLINICAL SIGNIFICANCE:

Myoglobin is a hemo-protein present in cardiac and skeletal muscle cells and is released into blood stream when these cells are damaged. The determination of serum myoglobin level is useful in the diagnosis of myocardial infarction, muscular dystrophy, myositis and myopathy, and also for the assessment of treatment and disease prognosis.

REAGENTS:

1. Reagent 1 (1x20 ml)

Buffer solution pH 8.3

2. Reagent 2 (1x10 ml)

Myoglobin Latex

Optional: 101-0476 Myoglobin Calibrator * 1x1 ml
101-0477 Myoglobin Control 1x2 ml

* The concentration of Myoglobin in the calibrator is stated on the vial label

PREPARATION AND STABILITY:

R.1: Ready to use.

R.2: Ready to use: It should be gently mixed before to use.

Calibration curve: Prepare dilutions of the myoglobin calibrator using 9 g/L saline as diluent:

Dilution	1	2	3	4	5	6
Calibrator, µl	0	6	12	25	50	100
NaCl 9g/L, µl	100	94	88	75	50	0
Factor	0	0.062	0.125	0.25	0.50	1.0

Multiply the Mb calibrator concentration by the corresponding dilution factor indicated in the table to obtain the Mb concentration of the different calibrators.

All the components of the kit are stable until the expiration date on the label when stored at 2-8°C. Do not freeze.

SAMPLES:

Fresh serum. Stable 8 days at 2-8°C or 3 months at -20°C.

The samples with particles or fibrin should be centrifuged to eliminate them.

Do not use haemolized or lipemic samples.

PROCEDURE:

Wavelength: 570 nm (500-600)
Cuvette: 1 cm light path
Temperature: 37 °C
Zero: distilled water

Pipette into a cuvette:	Reagent blank	Calibrator	Sample
NaCl 9 g/L	100 µl	--	--
Calibrator	--	100 µl	--
Sample	--	--	100 µl
R1 Buffer	650 µl	650 µl	650 µl
R2 LAtex	350 µl	350 µl	350 µl

Mix and read the absorbance against blank after 10 seconds (A₁) and 5 minutes (A₂) of the latex addition.

CALCULATION:

Calculate the absorbance differences A₂-A₁ for each Mb calibrator/sample and blank:

$$(A_2 - A_1)_{\text{calibrator/sample}} - (A_2 - A_1)_{\text{blank}}$$

and plot the values found against the Mb concentration in a calibration curve. Mb concentration in the sample is calculated by interpolation of:

$$(A_2 - A_1)_{\text{sample}} - (A_2 - A_1)_{\text{blank}}$$

value on the calibration curve.

Chronolab has instructions sheets available for several automatic analyzers.

REFERENCE VALUES:

Up to 65 ng/mL.

Each laboratory should establish its own reference range.

PERFORMANCE CHARACTERISTICS:

- Measurement interval:* 20-800 ng/mL, under the described assay conditions. The measurement range depends on the sample to reagent ratio. The upper limit of the range will be higher by decreasing sample volume, although the sensitivity will be reduced.
- Prozone effect:* No prozone effect was detected upon 900 ng/mL.
- Sensitivity:* Values less than 20 ng/mL give non reproducible results.
- Precision:*

	Intrassay (n=10)		
Mean (ng/mL)	49.1	98.1	166.9
SD	2.93	2.26	5.99
CV	5.97	2.3	3.59

- Accuracy:* Results obtained using these reagents (y) were compared to those obtained using a commercial RIA reagent (x). 60 samples were assayed with two methods. The correlation coefficient was 0.9952 and the regression equation was $y = 1.081x + 9.018$.

INTERFERENCES:

Bilirubin: up to 30 mg/dL do not interfere.

Hemoglobin: up to 4 g/L do not interfere.

Lipids: up to 5 g/L do not interfere.

REFERENCES:

Groth T et al. Scand J Clin Lab Invest 1981: 41; 79
Bachem M G et al. Dtsch Med Wochenshr 1983: 108; 1190
Sylvén C et al. Acta Med Scand 1981: 209; 369



MYOGLOBIN
Turbilatex
Quantitative determination

Cat. No. 101-0475

Size 1x20 ml/1x10 ml