Microalbumin
Immunoturbidimetry
Quantitative determination

Cat.No. 101-0433 *Size: R1 1x80 ml / R2 1x2 ml*

PRINCIPLE:
α-Microalbuminuria is of clinical relevance in several cases as: monitoring a diabetic pregnancy, monitoring risk pregnancies, early detection of tubular proteinuria with the possibility of improving control of the metabolism.
The concentration is determined by turbidimetry assay.
The results are evaluated using a reference curve prepared with the aid of calibrator dilutions.

CLINICAL SIGNIFICANCE:
The significant increasing albumin concentration in the urine has been used some years as a predictive value of incipient nephropathy and cardiovascular disease in diabetic patients. Microalbuminuria occurs in response to acute inflammatory conditions such as ischemia, trauma and thermal injury, surgery, pancreatitis, and inflammatory bowel disease. In many of these conditions, albumin excretion increases within minutes or hours of the initiating stimulus. The degree of microalbuminuria is proportional to the severity of the inflammatory process.

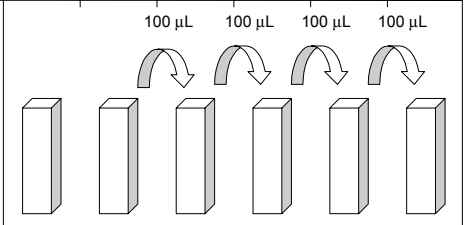
SAMPLE:
Urine, Saliva, CSF.
The samples and controls will be diluted manually or automatically with saline solution (NaCl 0.9%)

REAGENTS:
1. **Reagent 1 (1x80 ml)**
TRIS/PEG. buffer pH 7.5
2. **Reagent 2 (1x2 ml)**
Antiserum Anti-MA

Optional: 101-0434 Microalbumin calibrator 1x1 ml

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

PROCEDURES:
Calibration curve: Prepare dilutions of the Microalbumin calibrator using 9 g/L as diluent:

Std Nº	1	2	3	4	5	6
Dilution	1/1	1/2	1/4	1/8	1/16	0
NaCl (µL) Calibrator (µL)	-- 100	100 100	100 --	100 -- --	100 --	--
						
Factor	3.00	1.50	0.75	0.375	0.187	0

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

PROCEDURE:

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

1. Dilute Antiserum Anti-MA (R.2) 1:41 with buffer solution R.1. The working reagent is stable 2 weeks at 2-8ºC.

2. Dilute samples and controls 1:3 with saline solution.

3. 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

4. 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. MA concentration in the sample is calculated by interpolation its A value on the calibration curve.

EXPECTED VALUES:

Down to 20 mg/L.
Each laboratory should establish its own reference range.

NOTE:

1. *Measurement interval*: 0 – 400 mg/L, under the described assay conditions.

Chronolab has instruction sheets available for several automatic analyzers.