

TRICHLOROACETIC ACID

Colorimetric determination
of Trichloroacetic Acid (TCA) on urine

100 tests

REF CM02-100T

INTENDED USE

Kit for quantitative *in vitro* determination of Trichloroacetic Acid on urine.

PRINCIPLE

Trichloroacetic acid reacts with pyridin in alkaline medium and forms a color complex which can be determined photometrically.

REAGENTS

Kit components:

* REAGENT 1 Hydrated solution	REF CM02-100T 1 x 30 ml
* REAGENT 2 Pyridine	2 x 51 ml
* STANDARD Trichloroacetic acid 10 g/L	1 x 3 ml

(*) Dangerous reagents are marked by an asterisk. Refer to MSDS.

STABILITY: stored at 15-30°C, sealed reagents are stable up to the expiration date on the label.

REQUIRED EQUIPMENT

Hot bain-marie (100°C)

Spectrophotometer or filter photometer at 526 nm (520 -530 nm).

DILUTION OF THE STANDARD

Dilute the Standard 1:100 with distilled water.

STABILITY: at least one month at 2-8°C.

SAMPLE

24-hour urine.

Collect the 24-hour urine. Mix it, measure the volume and centrifuge or filter 4-5 ml before use.

STABILITY: at least one month at 2-8°C.

MANUAL ASSAY PROCEDURE

Wavelength:	526 nm (520 – 530 nm)
Optical path:	1 cm
Reading:	against blank reagent
Temperature:	hot bain-marie
Method:	colorimetric endpoint
Linearity:	up to 500 mg/L
Minimum sensitivity:	0.8 mg/L
C.V. (intra-assay):	3 %

Pipette into 4 centrifuge test tubes labeled as follows:

	Blank reagent	Standard	Sample	Blank sample
Distilled water	0.1 ml	---	---	---
Diluted standard	---	0.1 ml	---	---
Sample	---	---	0.1 ml	0.1 ml
Reagent 1	0.25 ml	0.25 ml	0.25 ml	0.25 ml
Reagent 2	1.0 ml	1.0 ml	1.0 ml	---

Mix accurately until the emulsion is homogeneous. Incubate all tubes in a hot bain-marie for exactly 1 minute.

For repeatable results, it is important to mix accurately and respect the incubation time.

Cool the tubes under running water or iced bath and pipette:

	Blank reagent	Standard	Sample	Blank sample
Reagent 2	---	---	---	1.0 ml
Distilled water	0.9 ml	0.9 ml	0.9 ml	0.9 ml

Mix until the solution is clear. Read the absorbances of the standard, the sample and the blank sample against the blank reagent within 5 minutes.

CALCULATION

Trichloroacetic acid (mg/L) = (A sample / A standard) x 100
mg TCA acid/liter x L.s of urine/24h= mg TCA acid/24h

REFERENCE VAUES

Up to 5.5 mg / 24 hours.

QUALITY CONTROL

All clinical chemistry laboratories should implement a quality control program. Control Urine of human origin are available for this purpose on request:

PERFORMANCE CHARACTERISTICS

Sensitivity: the sensitivity of the method is 0.8 mg/L.

Linearity: up to 500 mg/L.

For higher values, dilute the sample 1:10 with saline solution and multiply the result by 10.

Precision:

Within run (n=10)	Mean [U/L]	CV %
Sample 1	1,6	4,0
Sample 2	8,0	3,1

Between run (n=20)	Mean [U/L]	CV %
Sample 1	1,6	5,4
Sample 2	8,0	4,3

Correlation against a reference method: the correlation of FAR method (Y) against a reference method (X) gives a correlation of 0,98.

DISPOSAL

The product must be used for professional assay only. Dispose of the product according to national/international laws.

WARNINGS AND PRECAUTIONS



REAGENT 1

H314 Causes severe skin burns and eyes damage.



REAGENT 2

H225 Highly flammable liquid and vapor.

H302+H312+H332 Harmful if swallowed, in contact with skin, if inhaled.

H315 Causes skin irritation.

H319 Causes serious eyes irritation.



STANDARD

H315 Causes skin irritation.

NOTES

- A non specific positive reaction can be obtained with tri- and tetrahalogen hydrocarbons (trichloroethylene, carbon tetrachloride, bromoform, chloroform, hydrate chloral, tetrachloroethane, etc.)
- Pyridine must be dispensed with an automatic pipette or a pipette aspirator. Keep the vials tight closed. Do not pipette with mouth.
- A proportional variation in reagent volumes does not change the results.

REFERENCE

- R. Glisler et a.M. Griffino, "Med. Lavoro" 61 (10), 509 (1970).

KEY SYMBOLS

	In Vitro diagnostic medical device
	batch number
	catalogue number
	temperature limits
	use by
	caution
	read instructions for use



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MANUFACTURER



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