COPPER

(Colorimetric Test
with Dibrom-PAESA)

Cat.No	Package Size
162 000	2 x 50 mL + Standard
162 016	7 x 10 mL + Standard

PRINCIPLE:
Copper forms with 4-(3,5-dibromo-2-pyridylazo)-N-ethyl-N-sulfopropylaniline a chelate complex. The increase of absorbance of this complex can be measured and is proportional to the concentration of total copper in the sample.

REAGENTS (ready for use)

Monoreagent

acetate buffer pH 5.0 0.2 mol/l

4-(3.5-dibromo-2-pyridylazo)-N-ethyl-N-sulfopropylaniline 0.02 mmol/l

Standard 100 µg/dl = 15,7 µmol/l

STORAGE AND STABILITY:
The sealed reagent is stable up to the indicated expiry date if stored at 2 - 25°C.

NOTE:
If stored at 2°- 8°C precipitation may occur. In this case store the reagent at for about 2 hours over 20°C and mix until the reagent is clear.

SAMPLE MATERIAL:
Serum, Plasma

QUALITY CONTROL:
Use Greiner's control sera with ***Copper values,*** determinated by this method or by atomic absorbance.

REFERENCE VALUES:
70 - 153 µg/dl in serum (11 -24 µmol/l)

LINEARITY:
Up to 500 µg/dl (78.65 µmol/l)

INTERFERENCES :
By in-vitro tests it was shown that only Nickel (Ni) does interfere heavily, but Nickel is hardly present in
normal human samples.

ANALYTICAL PROCEDURE

Wavelength : 580 nm
Light path: 1 cm
Temperature : 37°C

Pipette into cuvettes:

	Standard	Sample
Monoreagent	1000 µl	1000 µl
Serum or plasma	-	50 µl
Standard	50 µl	-

Mix and incubate for 5 minutes at 37°C.
Measure the absorbance of the sample A_S and of the standard A_{STD} against the reagent blank A_{RBL} .
$\Delta A_S = A_S - A_{RBL}$
$\Delta A_{STD} = A_{STD} - A_{RBL}$

CALCULATION:

$$\text{µg/dl copper} = \frac{\Delta A_S}{\Delta A_{STD}} \times 100$$

$$\text{µmol/l copper} = \frac{\Delta A_S}{\Delta A_{STD}} \times 15{,}7$$

LITERATURE:
Abe A., Yamashita S., Noma A., Clin. Chem., 552-554- 35 (1989)

SYMBOLS USED

IVD For *in vitro* diagnostic medical use

LOT Batch Code

Use by

Temperature limitation

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