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Science without f(r)iction
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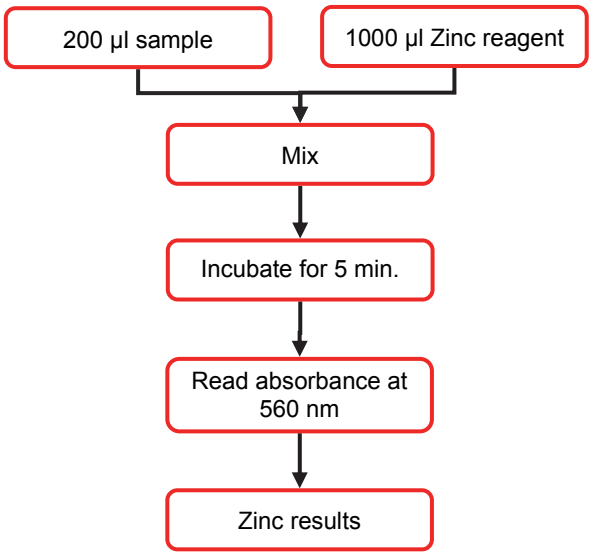
ZINC

Colorimetric method (5-Br-PAPS)
Zinc standard included
60 - 150 determinations per set
Serum, plasma, cerebrospinal fluid or urine
Serum and urine controls available

With and without deproteinization

Settings for automatic analyzers

Manual procedure



Precision (inter/intra)

	Repeatability (Inter)	Reproducibility (Intra)
Mean	18.3 µmol/l	18.3 µmol/l
Standard deviation	0.21 µmol/l	0.19 µmol/l
Variation coefficient	1.15 %	1.04 %

Linearity: 155 µmol/l **Mean CV's: 1.63%** **Mean recovery: 97.8%**

Correlation compared to other manufacturers: 0.981

Product name	Product no.	Quantity
Zinc Reagent Set	2299	60 -150 tests
Zinc Serum Control Low Level	3031	1 x 3 ml
Zinc Serum Control High Level	3032	1 x 3 ml
Zinc Urine Control Low Level	3033	1 x 3 ml
Zinc Urine Control High Level	3034	1 x 3 ml

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ZINC

DETERMINATION OF ZINC IN SERUM, PLASMA OR CEREBROSPINAL FLUID

- *Colorimetric method (5-Br-PAPS)*
- *For Manual and/or Automated Procedures*
- *Instrument Application Sheets Available*
- *Use Serum, Plasma, Cerebrospinal fluid or Urine*
- *Incl. Zinc Standard*
- *Wavelength 560 nm*

Products	Product no.	Quantity
Zinc Reagent Set	2299	60-150 tests
Zinc Serum Control, Low Level	3031	1 x 3 ml
Zinc Serum Control, High Level	3032	1 x 3 ml
Zinc Urine Control, Low Level	3033	1 x 3 ml
Zinc Urine Control, High Level	3034	1 x 3 ml

SUMMARY

PRINCIPLE
Zinc, in a pH 8.60 buffer system, forms with specific complexant 5-Br-PAPS a stable colored complex. The color intensity of which is proportional to the amount of zinc in the sample. The interferences, due to oligoelements present in the sample, are eliminated using particular reaction condition and specific masking agents.

SAMPLE MATERIAL
Serum, plasma, cerebrospinal fluid and urine. EDTA-plasma and hemolyzed samples cannot be used.

LINEARITY
Up to 155 µmol/l

EXPECTED VALUES
Serum, plasma:
- Male: 10.7 - 17.5 µmol/l
- Female: 11.1 - 19.5 µmol/l

Urine: 52.2 - 122.3 µmol/24 hours

QUALITY CONTROL

Products	Product no.	Quantity
Zinc Serum Control, Low Level	3031	1 x 3 ml
Zinc Serum Control, High Level	3032	1 x 3 ml
Zinc Urine Control, Low Level	3033	1 x 3 ml
Zinc Urine Control, High Level	3034	1 x 3 ml

QUANTITY OF DETERMINATIONS
Procedure
- Manual : 60 tests
- Automated : 150 tests

NOTES
1. For in vitro diagnostic use only.
2. For professional use only.
3. Always contact INstruchemie for the complete product insert and latest edition.

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CONCENTRATION MEASUREMENT

The concentrations of a low, normal and high sample were measured with a spectrophotometer in order to verify acceptable absorbance.

Zinc measurements

	Low	*Normal*	*High*
Extinction	0.049	0.086	0.255
Concentration (µmol/l)	9.1	15.8	24.4

TEST CONDITIONS

All tests were conducted under the following conditions:

Temperature : 37 °C
Wavelength : Analyzer: 545 nm / Manual: 560 nm
Light path : Analyzer: 0.7 cm / Manual: 1.0 cm
Blank : Reagent blank
Sample : Serum

SENSITIVITY

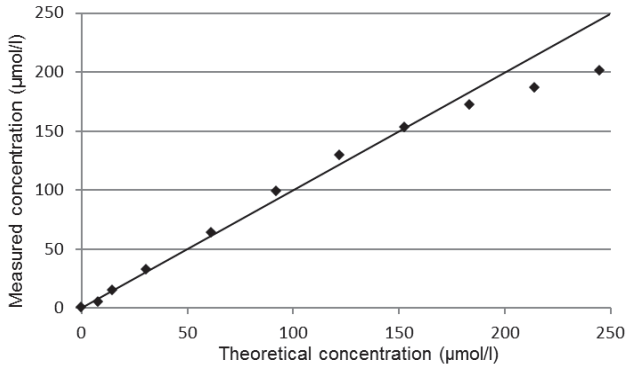
The sensitivity (limit of detection) was determined by measuring human control material
(Zinc Concentration = 0 µmol/l) 20 times.

Sensitivity = 3 x standard deviation = 3 x 0.2 = 0.6 µmol/l

LINEARITY

The Zinc assay is linear up to 155 µmol/l.

Linearity measurements with an automatic analyzer



RECOVERY

The recovery is determined by measuring the Zinc concentration in spiked human sera 10 times using an automatic analyzer.

Recovery:

Added Zinc (µmol/l)	Measured (µmol/l)	Recovery (%)
6.8	6.7	98.5
17.0	16.9	99.4
101.7	97.2	95.6

PRECISION

The precision is determined by measuring Zinc Serum Control High Level and a human serum 10 times a day (repeatability) for 5 consecutive days (reproducibility), using an automatic analyzer.

Repeatability:

	Sample (µmol/l)	Control (µmol/l)
Mean	18.3	24.8
Standard deviation	0.21	0.53
Variation coefficient (%)	1.15	2.14

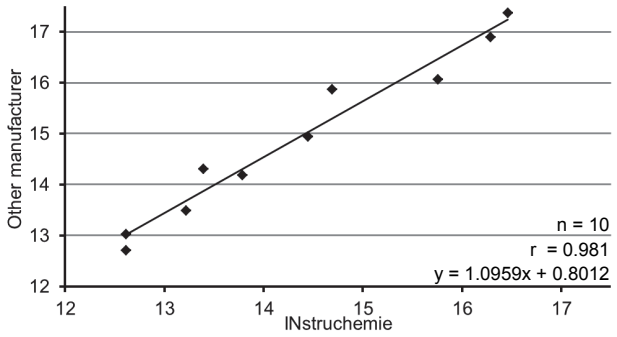
Reproducibility:

	Sample (µmol/l)	Control (µmol/l)
Mean	18.3	24.8
Standard deviation	0.19	0.54
Variation coefficient (%)	1.04	2.17

CORRELATION

Pearsons' correlation is determined by measuring the Zinc concentration in multiple human sera with reagent of INstruchemie and reagent from another manufacturer.

Correlation measured with an automatic analyzer (µmol/l)



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