PHOSPHOLIPIDS

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DETERMINATION OF THE PHOSPHOLIPIDS (LECITHIN, LYSOLECITHIN AND SPHINGOMYELIN) IN SERUM OR PLASMA

Enzymatic method

Suitable for all analyzers – 160 tests

Product insert with instructions for automated and manual procedures

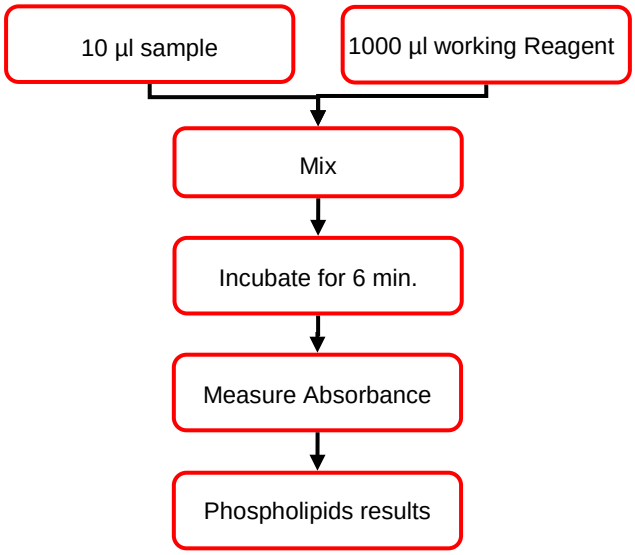
Stability > 6 years after production

Phospholipids controls available

For automated analyzers

Settings for automatic analyzers

Manual procedure



Precision (inter/intra)

	Repeatability (Inter)	Reproducibility (Intra)
Mean	3.12 mmol/l	3.12 mmol/l
Standard deviation	0.03 mmol/l	0.03 mmol/l
Variation coefficient	0.96 %	0.96 %

Linearity: 7 mmol/l **Mean CV's: 0.86%** **Mean recovery: 99.4%**

Correlation compared to other manufacturers: 0.988

Product name	Product no.	Quantity
Phospholipids Reagent Set	3009	40 - 160 tests
Phospholipids Calibrator	3012	1 x 2 ml
Phospholipids Control Low Level	3013	10 x 1 ml
Phospholipids Control Normal Level	3014	10 x 1 ml
Phospholipids Control High Level	3015	10 x 1 ml

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DETERMINATION OF PHOSPHOLIPIDS IN SERUM OR PLASMA

- Enzymatic method

- Liquid, ready for use reagent

- For Manual and/or Automated Procedures

- Use Serum or Plasma

- Also available Phospholipids Calibrator & Controls

- Wavelength 505 nm

Products	Product no.	Quantity
Phospholipids Reagent Set	3009	50 manual 160 automated
Phospholipids Calibrator	3012	1 x 2 ml
Phospholipids Control Low Level	3013	10 x 1 ml
Phospholipids Control Normal Level	3014	10 x 1 ml
Phospholipids Control High Level	3015	10 x 1 ml

SUMMARY

ASSAY PRINCIPLE

$$\text{Phospholipids (Lecithin, Lysolecithin, Sphingomyelin)} + H_2O \xrightarrow{\text{Phospholipase D}} \text{Choline} + \text{Phosphatidic Acid}$$

$$2\,\text{Choline} + 2\,O_2 \xrightarrow{\text{Choline Oxidase}} 2\,H_2O_2 + \text{Betaine}$$

$$4-\text{Aminoantipyrine} + \text{Phenol} + 2\,H_2O_2 \xrightarrow{\text{Peroxidase}} \text{Red Quinone Pigment Chromogen} + 4\,H_2O$$

SAMPLE MATERIAL

Serum or Plasma (Heparin or EDTA).

LINEARITY

Up to 7.00 mmol/l

EXPECTED VALUES

Serum or Heparinized Plasma - Normal: 1.94 – 3.23 mmol/l at 37ºC

QUALITY CONTROLS

Products	Product no.	Quantity
Phospholipids Control Low Level	3013	10 x 1 ml
Phospholipids Control Normal Level	3014	10 x 1 ml
Phospholipids Control High Level	3015	10 x 1 ml

QUANTITY OF DETERMINATIONS

According to product insert of Phospholipids Reagent Set (3009):

Procedure

- Manual : 50 tests
- Automated : 160 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.

PHOSPHOLIPIDS

CONCENTRATION MEASUREMENTS

The concentrations of a low, normal and high human serum were measured manually with a spectrophotometer.

Phospholipids measurements

	Low	Normal	High
Extinction	0.1166	0.3766	0.9705
Concentration (mmol/l)	0.99	2.96	7.64

TEST CONDITIONS

All tests were conducted under the following conditions:

Temperature : 37 °C
Wavelength : 505 nm
Light path : Analyzer: 0.7 cm / Manual: 1.0 cm
Blanc : Reagent blank
Sample : Serum

SENSITIVITY

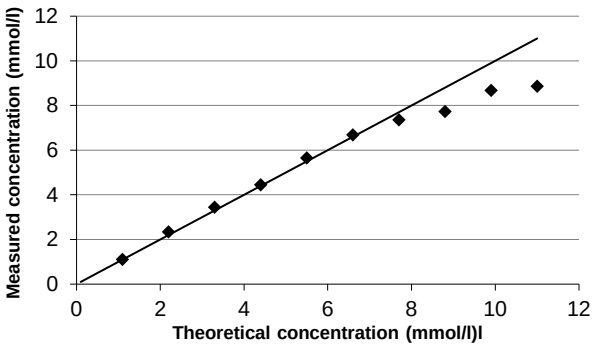
The sensitivity (limit of detection) was determined by measuring human control material 20 times (Phospholipids activity = 0 mmol/l).

Sensitivity = 3x standard deviation= 3x 0.0061 = 0.018 mmol/l

LINEARITY

The Phospholipids assay is linear up to 7.00 mmol/l.

Linearity measurements with an automatic analyzer



RECOVERY

The recovery is determined by measuring the Phospholipids concentrations of spiked human sera 10 times using an automatic analyzer.

Recovery:

Added Phospholipids (mmol/l)	Measured (mmol/l)	Recovery (%)
1.55	1.54	99.4
4.25	4.21	99.1
5.46	5.44	99.6

PRECISION

The precision is determined by measuring a human serum and Phospholipids Calibrator 10 times a day (repeatability) for 5 consecutive days (reproducibility), using an automatic analyzer.

Repeatability:

	Sample (mmol/l)	Calibrator (mmol/l)
Mean	3.12	4.06
Standard deviation	0.03	0.03
Variation coefficient	0.96	0.74

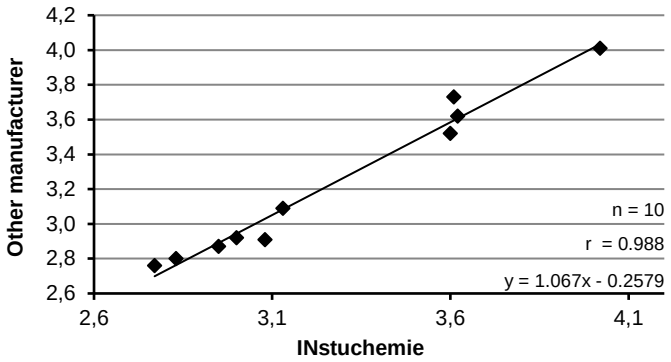
Reproducibility:

	Sample (mmol/l)	Calibrator (mmol/l)
Mean	3.12	3.90
Standard deviation	0.03	0.03
Variation coefficient	0.96	0.77

CORRELATION

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

Correlation measured with an automatic analyzer (mmol/l)



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PHOSPHOLIPIDS

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