



## PHOSPHOLIPIDS

### 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

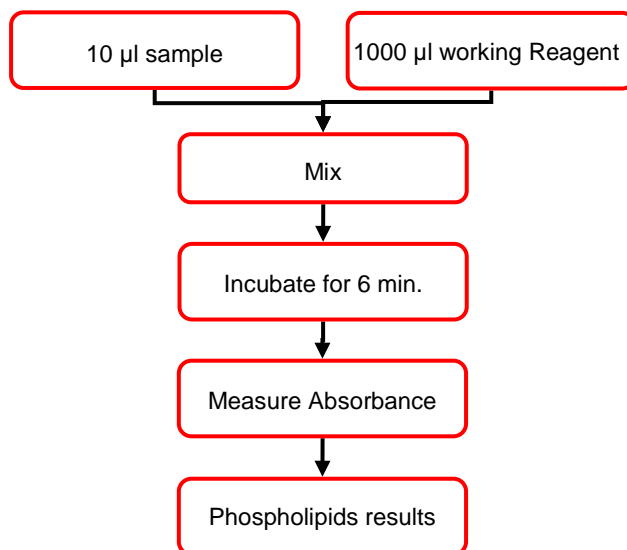
Phospholipids controls available



#### 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





## PHOSPHOLIPIDS

### 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
<b>Phospholipids Reagent Set</b>	3009	50 manual 160 automated
<b>Phospholipids Calibrator</b>	3012	1 x 2 ml
<b>Phospholipids Control</b> Low Level	3013	10 x 1 ml
<b>Phospholipids Control</b> Normal Level	3014	10 x 1 ml
<b>Phospholipids Control</b> High Level	3015	10 x 1 ml

## SUMMARY

### ASSAY PRINCIPLE

Phospholipids (Lecithin, Lysolecithin, Sphingomyelin) + H<sub>2</sub>O  $\xrightarrow{\text{Phospholipase D}}$  Choline + Phosphatidic Acid

2 Choline + 2 O<sub>2</sub>  $\xrightarrow{\text{Choline Oxidase}}$  2 H<sub>2</sub>O<sub>2</sub> + Betaine

4 – Aminoantipyrine + Phenol + 2 H<sub>2</sub>O<sub>2</sub>  $\xrightarrow{\text{Peroxidase}}$  Red Quinone Pigment Chromogen + 4 H<sub>2</sub>O

### 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 37°C

### QUALITY CONTROLS

Products	Product no.	Quantity
<b>Phospholipids Control</b> Low Level	3013	10 x 1 ml
<b>Phospholipids Control</b> Normal Level	3014	10 x 1 ml
<b>Phospholipids Control</b> 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.



## 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

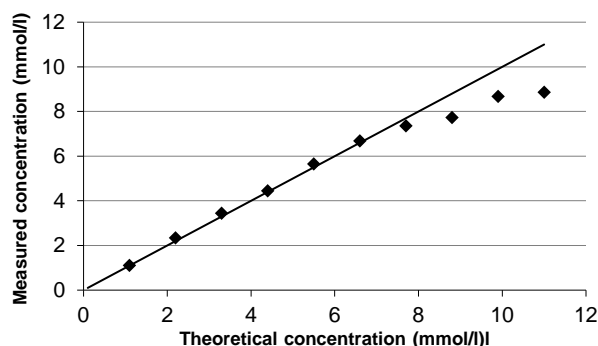
The sensitivity (limit of detection) was determined by measuring human control material 20 times (Phospholipids activity = 0 mmol/l).

$$\text{Sensitivity} = 3x \text{ standard deviation} = 3x 0.0061 = 0.018 \text{ mmol/l}$$

## 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

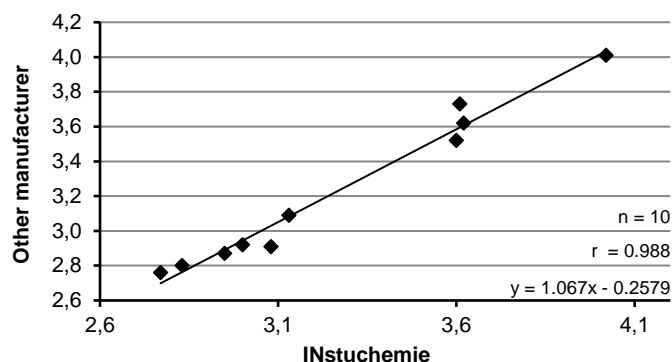
### Reproducibility:

	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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<b>Date</b>	August 2018
<b>Reference</b>	2180816-1.FEN

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