Phosphatidyl ethanol (Art.nr 295)

External quality assessment for measurement of phosphatidyl ethanol (PEth) in blood.

The test material is EDTA blood, 3 samples in each round.

Frequency: 4/year

Article number: 295
Advisory group: Therapeutic drugs and drugs of abuse
Accreditation: No

Examinations

B-Phosphatidyl ethanol 16:0/18:1 (µmol/L)

Dispatched	24 January 2022
Last date for analysis	31 January 2022
Closing date	7 February 2022

Scheme coordinator: Carolina Kristoffersson
Telephone, E-mail: +46 18-490 31 63, carolina.kristoffersson@equalis.se

Test material

Label	Equalis | Art. Nr: 295 | 2023:01/ A-C
Description	Pooled whole blood with authentic phosphatidyl ethanol or whole blood with or without reference substance. K2-EDTA added.
Storage	After arrival, +2 till +8 ˚C, the test material must not be stored in -20 °C.
Infectious diseases	The test material origins from patients with higher risk of blood-borne diseases. Testing for infectious diseases is not performed. For safety reasons, the test material should always be handled using the same precautions as an unknown patient sample.

Included components
The table on the last page presents all components included in this scheme. The table also has a field for internal notes.

Instruction for analysis
Let the sample material attain room temperature before analysis. Mix the sample well but carefully. Turn manually at least 20 times or put on a rocker for at least 10 minutes. The test material should be handled in the same manner as a patient sample, when possible.

Registration of results
The results are registered on Equalis Online with three significant figures.
Report all values that is higher than the limit of quantification of your method even if the value is lower than your clinical cut-off value.
Example: A laboratory gets the value 0.01 µmol/L upon analysing a test material, which is less than the clinical cut-off value of 0.05 µmol/L. Register the value “0.01” and add (0.05) in the field for cut-off.
When no spike is visible at all, register the value “0”.
Always register your cut-off level and limit of quantification.
Registered results may be changed until the closing date.

Reports
A summary of the results is sent to the participants within one month from the closing date.

Component*	Notes/ Results** /A	/B	/C
B—Phosphatidyl ethanol, 16:0/18:1 (µmol/L)			

* All components included in the scheme.
** The results are registered on Equalis Online with three significant figures. Registered results may be changed until the closing date.

Lab code: _____

Instrument: _____

Date of analysis: _____

Round opened	2023-01-24
Last day of analysis	2023-01-31
Closing date	2023-02-07

Scheme coordinator	Carolina Kristoffersson
Telephone, E-mail	+46 18 490 31 63, carolina.kristoffersson@equalis.se
For advisory group	Therese Hansson

Summary of results

55 laboratories (15 Swedish and 40 from other countries) participated in this round, of which 40 participants have analysed the samples and reported results within set dates. Reported cut-off limits were 0,05 µmol/L (15 participants), 0,03 µmol/L (12 participants) and 0,014 µmol/L (2 participants). Eleven participants did not report their cut-off limit. The reported limits of quantification vary between 0,002 – 0,05 µmol/L.

The results are reasonably normally distributed, and your results are compared to the total mean value.

The quality goal for B—Phosphatidyl ethanol is that your own result should not deviate more than +/- 20 % from total mean value.

Sample 2023:01/A
Sample A consisted of whole blood containing authentic phosphatidyl ethanol. The results vary between 0,08–0,19 µmol/L, generating a CV of 14,1 % with 88 % of the results within the set quality goal for B—Phosphatidyl ethanol.

Sample 2023:01/B
Sample B was a blank whole blood sample. No mean value or SD is calculated; therefore, this sample is not present in the overview or the individual reports. All participants reported the result “0” or a result below their cut-off limits.

Sample 2023:01/C
Sample C consisted of whole blood containing authentic phosphatidyl ethanol. The results vary between 0,82–1,49 µmol/L, generating a CV of 13,2 % with 90 % of the results within the set quality goal for B—Phosphatidyl ethanol.

Test material

The sample material consisted of hemolyzed whole blood with addition of EDTA.
Sample A and C was pooled patient samples containing authentic phosphatidyl ethanol.
Sample B was a blank whole blood sample.

Based on the previous tests and the results of this round, the samples are homogeneous, stable and suitable for the external quality assessment scheme.

Sample	Component	Method	n	Mean value	SD	CV%
A	**B-Phosphatidyl ethanol, 16:0/18:1 (µmol/L)**	**All results**	**40**	**0,12**	**0,02**	**14,1**
		LC-MS/MS	39	0,12	0,02	13,5
		Not available	1	0,08		
C	**B-Phosphatidyl ethanol, 16:0/18:1 (µmol/L)**	**All results**	**40**	**1,16**	**0,15**	**13,2**
		LC-MS/MS	39	1,17	0,15	12,8
		Not available	1	0,82		

Overview

*Expected result: Total mean value (no asterisk), *Output group mean value, **Assigned value. Colour dev: >Quality goal or >|3SD| = Red, >|2SD| = Light blue*

Sample	Component	Quality goal (%)	Expected result	Your result	Dev. (SD)	Dev. (%)
A	B-Phosphatidyl ethanol, 16:0/18:1 (µmol/L)	20	0,12	0,116	-0,03	-0,4
C	B-Phosphatidyl ethanol, 16:0/18:1 (µmol/L)	20	1,16	1,177	+0,10	+1,3

B-Phosphatidyl ethanol, 16:0/18:1 (µmol/L) Sample : A & C

	A	C
Quality goal (%)	± 20	
Your output group	LC-MS/MS	
Your result	0,116	1,177
Expected result (Total mean value)	0,12 ± 0,01	1,16 ± 0,06
Your deviation		
Absolute (µmol/L)	0	+0,02
Relative (%)	-0,4	+1,3

Your output group	A (39)	C (39)	All	A (40)	C (40)
Mean value	0,12	1,17	Mean value	0,12	1,16
SD	0,02	0,15	SD	0,02	0,15
CV%	13,5	12,8	CV%	14,1	13,2
Your deviation from output group mean value			**Your deviation from total mean value**		
Absolute (µmol/L)	0	+0,01	Absolute (µmol/L)	0	+0,02
Relative (%)	-0,9	+0,8	Relative (%)	-0,4	+1,3
No. of SD	-0,07	+0,06	No. of SD	-0,03	+0,10
Mean deviation (%) (last 5 rounds)	+14,3		Mean deviation (%) (last 5 rounds)	+14,5