UK NEQAS Blood Coagulation

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Homocysteine Programme
Your Results On Survey 90: August 2023

Samples:

Blood was collected by venepuncture into 0.109M sodium citrate, centrifuged at 3000g for 10 minutes, plasma was separated and buffered with 0.8% HEPES prior to lyophilisation in 0.5ml aliquots. Samples were distributed to a total of 24 centres. Results were received from 23 centres in this exercise. Z scores (see below) are calculated automatically and reported overleaf if 20 or more results are received.
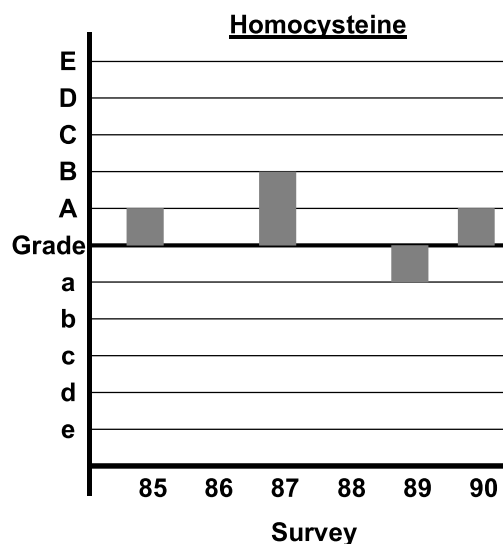
Methods used:

In this survey, 8 centres used a chemiluminescent immunoassay – 5 from Abbot and 3 from Siemens. Fourteen centres reported using a latex-enhanced (competitive) immunoassay - 13 from Instrumentation Laboratories and 1 from Siemens. One centre used a Roche Cobas enzyme immunoassay. The overall median homocysteine level in this sample was 33.98 µmol/L, range 25.8-44.26 µmol/L (standard uncertainty of the median +/-1.475). All z scores were within the range +/-2 in this survey.
As notified previously, interpretations are no longer requested for homocysteine exercises.

Please note: Results are assessed using the A-E grading system. However, from this survey onwards, when A-E grades are determined, z-scores are also calculated and displayed on the report. z-scores are determined as *(your result – mean result)/standard deviation***); a z-score between -2 and +2 is considered acceptable performance, results <-2 or >+2 are considered a warning level, and results <-3 or >+3 are an action level. For this survey, we will continue to use A-E grades to assign performance, but the z-score may be used to assist participants in evaluating their results.**

Table 1	HO 23:03
Your Method	Latex Enhanced Immunoassay
Your Result	**35.3**
No. of returns	23
Median (umol/l)	**33.98**
CV(%)	16.4
Z-Score	0.15
Interquartile range (A-grade limits)	29.63-38.5
Your stated range	4.8-13.1 (m), 5.0-10.5 (f)umol/l
Your % deviation	3.9
Your grade	A
Your cumulative grades	* / a / A
Your performance**	Within Consensus
Notes	
Non participation code	
Intepretations are no longer required	

*Performance is assessed on two or more consecutive grades.

23 centres returned results for this survey.

Table 2. Breakdown of results by method.

Method	Chemilumin-escence Abbott	Chemilumin-escence Siemens	Latex-Based Assay IL	Latex-Based Assay Siemens	Enzyme Immunoassay Roche Cobas
No. of returns	5	3	13	1	1
Median (µmol/l)	41.0	36.2	30.28	32.4	42.3

Marked differences between different methodologies were observed in this exercise.

Please note, information with respect to sharing of information and subcontracting of services may be found in the participants manual for this programme, available online at www.neqascoag.org Any comments related to homocysteine assays or any other aspect of thromobophilia screening are most welcome. Samples for Survey 91, the next homocysteine programme exercise, will be distributed on November 14th 2023