



NASCOLA

North American Specialized Coagulation
Laboratory Association



ECAT FOUNDATION

International Thrombophilia External
Quality Assessment Scheme

Explanation for Report on Long-Term Coefficient of Variation

To assess the quality of test performance over a prolonged period of time an evaluation of test results is performed over a 3-years period. The long-term analytical performance is established by calculation of the so-called long-term analytical coefficient of variation (LCV_a). The LCV_a is based on a linear regression analysis of test results from a particular parameter in relation to the corresponding consensus value (see below).

The example long-term report for Antithrombin covers the period 2001 – 2003. It includes the following items:

1. A table containing for each exercise the overall consensus value with your corresponding result (upper part, right side). If your result, during an exercise, was identified as an outlier, it is placed in a separate column and excluded from the analysis of the LCV_a (see below).
2. A regression plot showing your result (Y-axis) in relation to the overall consensus value (X-axis) (upper part, left side). If during a particular exercise a test result was identified as an outlier, this is represented by a solid symbol. A regression line is only plotted when at least 8 test results are available.
3. Based on the regression analysis your long/term analytical coefficient of variation (LCV_a) is calculated using the following equation:

$$LCV_a = \frac{(s_{y/x} / b)}{\bar{X}} \cdot 100\%$$

The LCV_a is based on the variability of the regression line ($s_{y/x}$) and the mean value of all consensus values (X). To allow comparison of the LCV_a between laboratories, it was calculated after adjustment for the bias ($s_{y/x}/b$).

4. The histogram in the middle of the report shows the distribution of the LCV_a 's of all included participants. The green bars represent the LCV_a for users of Anti-Xa methods, the blue bars represent the LCV_a for users of Anti-IIa methods. Your position in the histogram is indicated by the red bar.

5. The table in the lower part of the report gives the descriptive statistics. The LCV_a calculated for the total group is based on the overall consensus values, while the LCV_a for the specific assay groups is based on the consensus values for these particular assay groups.

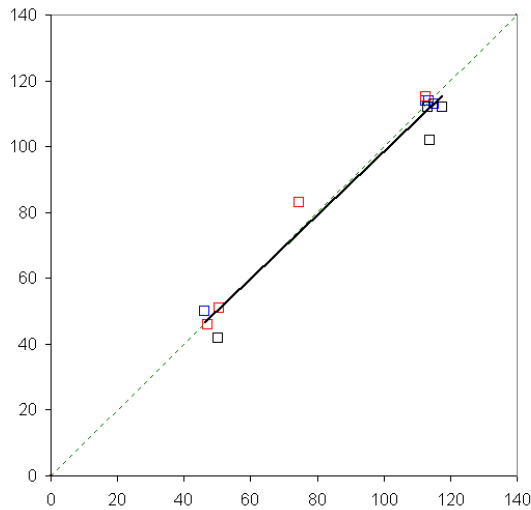
LABORATORY CODE NUMBER: 102

LONG-TERM REPORT 2001-2003

ECAT FOUNDATION

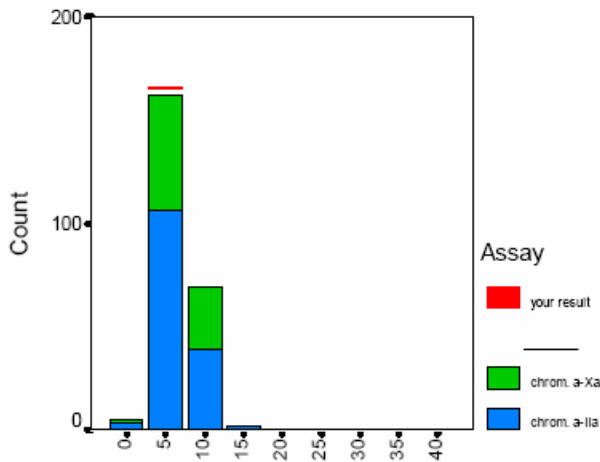
INTERNATIONAL THROMBOPHILIA EXTERNAL QUALITY ASSESSMENT SCHEME (EQAS)

ANTITHROMBIN



ANTITHROMBIN			
Exercise	Consensus value	Your result	Outliers
2001-1	46.3	50	
2001-2	115.0	113	
2001-3	113.5	114	
2001-4	112.5	114	
2002-1	50.5	51	
2002-2	112.6	115	
2002-3	47.2	46	
2002-4	74.6	83	
2003-1	117.6	112	
2003-2	50.1	42	
2003-3	113.2	112	
2003-4	113.9	102	

laboratory 102



LCVa

ANTITHROMBIN				
	n	median	range	your result
Total	182	6.5	2.2-14.0	6.5
Anti-IIa	103	6.2	1.9-13.2	
Anti-Xa	74	6.8	2.5-12.2	6.8