Round 4 Sample Details

BACKGROUND
This report covers Round 4 of the Low Asbestos Content Scheme (LACS). Round 4 was open to laboratories worldwide. Laboratory participation was as follows: 3 UK, 99 Rest of Europe and 1 RoW.

103 laboratories subscribed to this round, with 102 submitting results.

SAMPLES
One sample was circulated as follows: Sample LACS004 – This sample was cement containing 0.09% UICC amosite.

SCREENING & VALIDATOR INFORMATION
The sample was prepared for circulation following our normal internal screening process of samples with representative sub-samples scanned using stereo-zoom and polarised light microscopy to assess homogeneity and suitability. Approximately 10% of the total number of samples despatched were validated by 4 independent laboratories.

INFORMATION SUBMITTED BY LABORATORIES
Laboratories used the HSL web-based PT data entry system to submit their results for this round. Results were submitted as asbestos type(s) present and for the Quantitative element, the total % asbestos.

ERRORS
Only three laboratories of the 102 who submitted results recorded errors for sample LACS004. Two laboratories identified actinolite and one laboratory reported amosite & chrysotile.

LACS QUALITATIVE RESULTS
Sample LACS004
Ninety-nine laboratories correctly reported amosite.
One laboratory reported amosite and chrysotile.
Two laboratories reported actinolite.
One laboratory did not submit a result.
These results are presented graphically in Charts 1 and 2.

LACS QUANTITATIVE RESULTS
The median of quantitative results submitted was 0.04%. For the purposes of the z score we are using 40% of the median - 0.02%. Forty-four laboratories submitted quantitative results;
- 10 (23%) laboratories achieved a z-score of < ± 2, this is normally considered to represent "Satisfactory" performance
- 13 (30%) laboratory achieved a z-score of between ± 2 - ± 3, this is normally considered to represent "Questionable" performance
- 21 (47%) laboratories achieved a z-score of > ± 3, this is normally considered to represent "Unsatisfactory" performance.
These results are presented graphically in Charts 3 and 4.

FTPT F0935 issue 2 Final Report   UNCONTROLLED IF PRINTED   Page 1 of 3
Issued By: Matthew Jackson/ Melanie Clunas, HSL, Buxton, SK17 9JN

LACS **Round 4** | **June 2018**
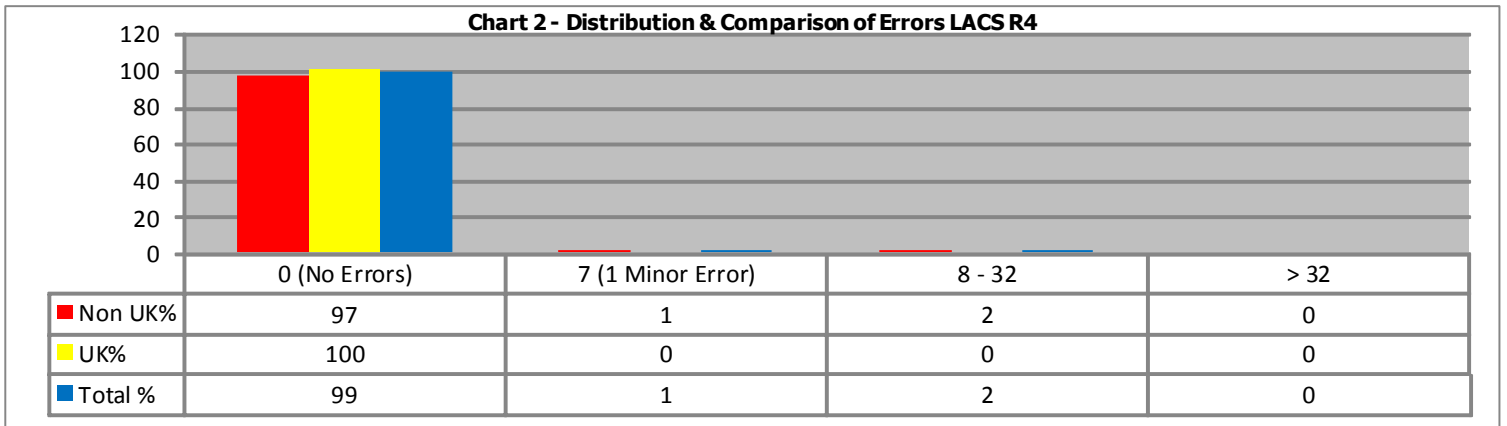
1. Type Of Errors Obtained

Chart 1 illustrates the errors made by participating laboratories. Three errors were made by laboratories on sample 004. Two laboratories falsely identified actinolite present and one laboratory falsely identified chrysotile present.

Chart 1 - LACS Round 4 Errors
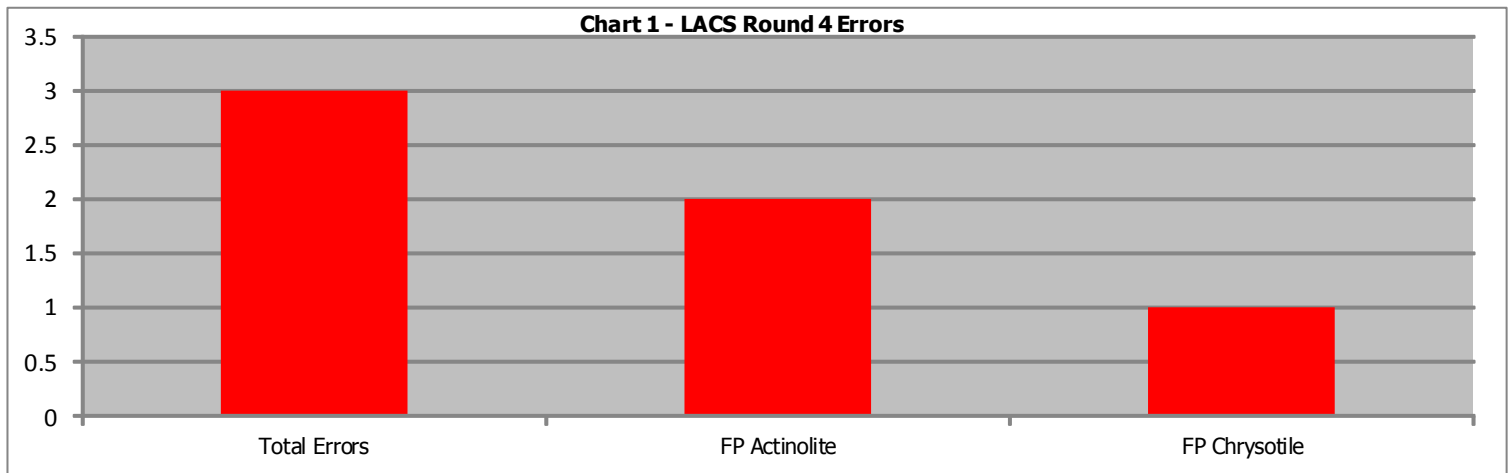
False Negative = Component has been missed. False Positive = Component has been incorrectly identified as present.

2. Errors for UK & Non-UK Laboratories

Chart 2 illustrates the distribution of scores for all participating laboratories. 99 (99%) laboratories obtained a score of zero in this round, indicating that these laboratories had not made any errors. The distribution of scores obtained by UK (United Kingdom) and Non-UK laboratories is also compared; 3 (100%) UK laboratories and 96 (97%) Non-UK laboratories obtained a score of zero for the round.

Chart 2 - Distribution & Comparison of Errors LACS R4

	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	97	1	2	0
UK%	100	0	0	0
Total %	99	1	2	0

3. Quantitative Results - z scores

Chart 3

Scatter graph of z scores (one z score of 4995.5 (100% asbestos) & five z scores ranging from 20.5-45.5 removed as outliers) for the 44 laboratories who submitted a quantification result.
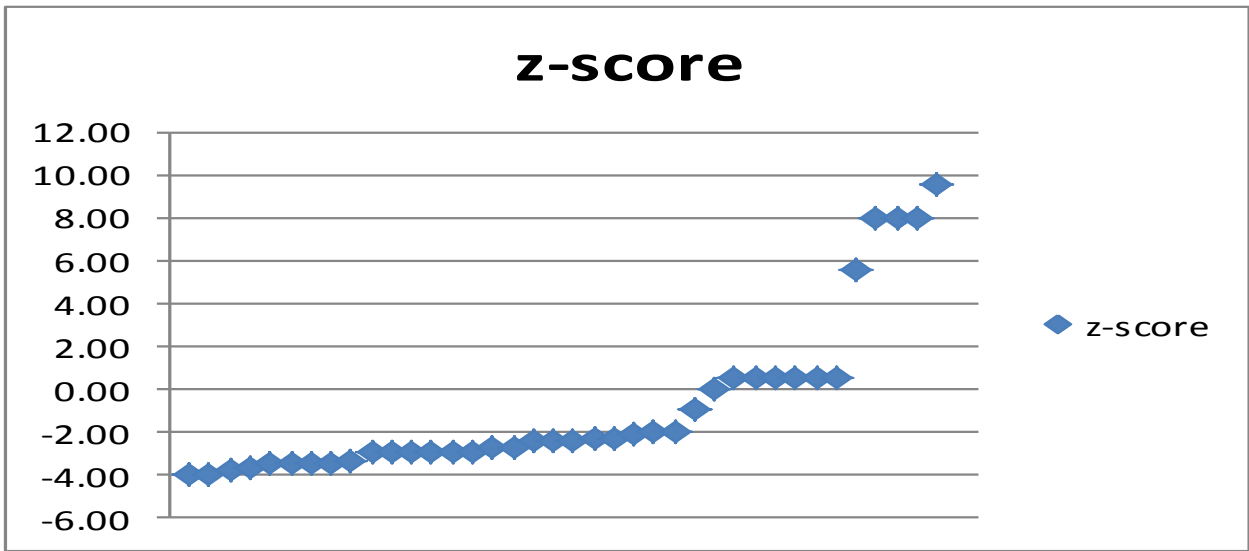
4. Quantitative Results

Chart 4 illustrates of the 44 laboratories who submitted a quantification result, 10 laboratories (23%) achieved a satisfactory result i.e. a z score of $< \pm 2$. 13 laboratories (29%) achieved a questionable result with a z score of between ± 2 and ± 3. 21 laboratories (48%) achieved an unsatisfactory result with a z score of $> \pm 3$.