



Round 1 Sample Details

BACKGROUND

This report covers Round 1 of the Low Asbestos Content Scheme (LACS). Round 1 was open to laboratories worldwide. Laboratory participation was as follows: 4 UK, 82 EU and 1 RoW. 87 laboratories subscribed to this round, with 85 submitting results.

SAMPLES

One sample was circulated as follows:

Sample LACS001 – This sample was manufactured with plaster mixed with 0.05% UICC anthophyllite asbestos (loose fibre).

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.

MAJORITY OF ERRORS

Four laboratories recorded errors for sample LACS001. One laboratory incorrectly reported amosite, one incorrectly reported chrysotile and one laboratory incorrectly reported amosite and chrysotile. A further laboratory reported no asbestos detected. Due to the free fibre nature of the asbestos in this sample (UICC anthophyllite), analysts may have had difficulty identifying and extracting individual fibre bundles covered with plaster particles. The UICC asbestos is generally of a shorter fibre length and therefore potentially more difficult to detect.

LACS QUALITATIVE RESULTS

Sample 1

Eighty laboratories correctly reported anthophyllite

One laboratory reported tremolite (no error)

One laboratory reported anthophyllite & chrysotile

One laboratory reported amosite

One laboratory reported amosite & chrysotile

One laboratory reported no asbestos

Two laboratories 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 0.0275. For the purposes of the z score we are using 40% of the median - 0.011. Thirty-seven laboratories submitted quantitative results;

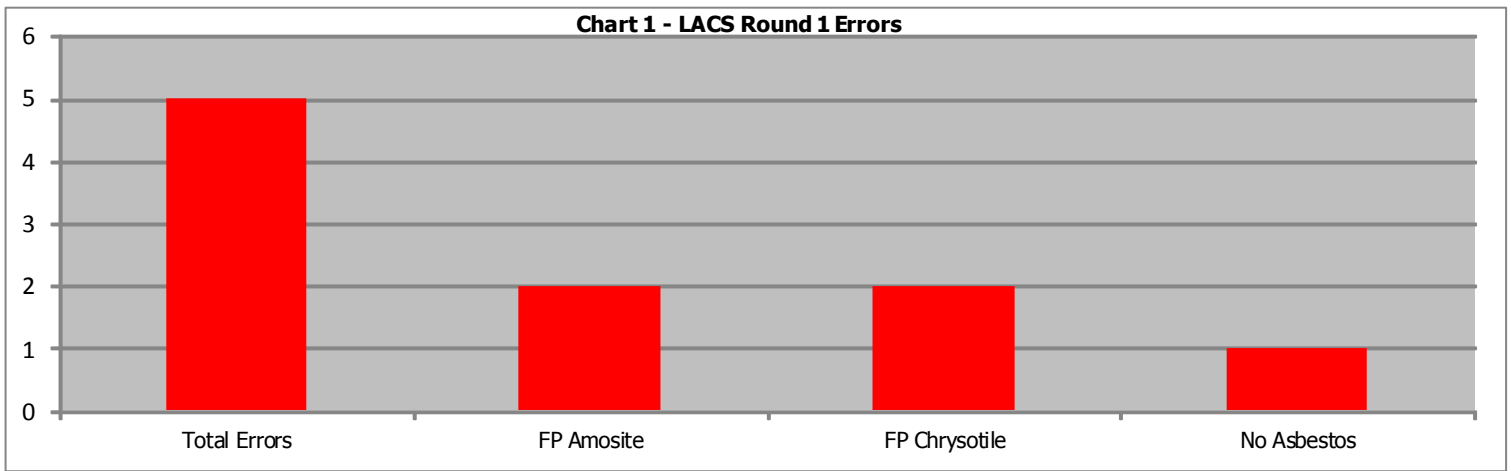
- 5 (14%) laboratories achieved a z-score of $< \pm 2$, this is normally considered to represent "Satisfactory" performance
- 9 (24%) laboratory achieved a z-score of between $\pm 2 - \pm 3$, this is normally considered to represent "Questionable" performance
- 23 (62%) laboratories achieved a z-score of $> \pm 3$, this is normally considered to represent "Unsatisfactory" performance.

These results are presented graphically in Charts 3 and 4.



1. Type Of Errors Obtained

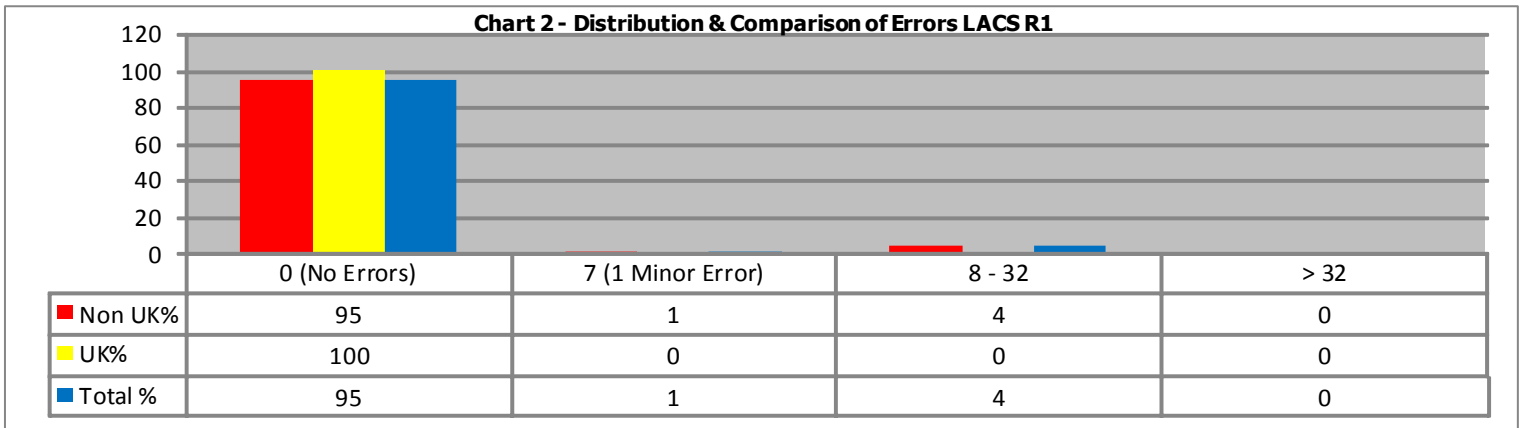
Chart 1 illustrates the errors made by participating laboratories. Five errors were made by laboratories on sample 001. Two laboratories falsely identified amosite, two laboratories falsely identified chrysotile and one laboratory reported no asbestos present.



False Negative = Component has been missed. False Positive = Component has been incorrectly identified as present.

2. Errors for UK & Non-UK Laboratories

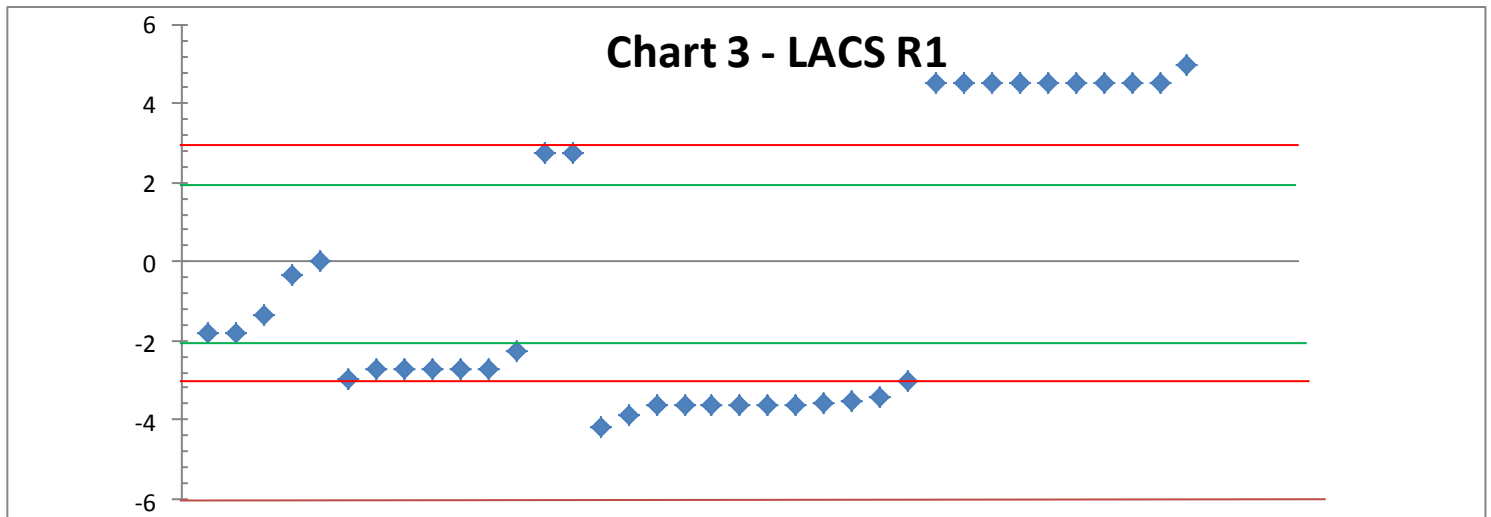
Chart 2 illustrates the distribution of scores for all participating laboratories. 81 (95%) laboratories obtained a score of zero in this round, indicating that these laboratories had not made any errors. The distribution of scores obtained by UK (United Kingdom) and Non-UK laboratories is also compared; 3 (100%) UK laboratories and 78 (95%) Non-UK laboratories obtained a score of zero for the round.



3. Quantitative Results - z scores

Chart 3

Scatter graph of z scores (one z score of 13.6 removed as outlier) for the 37 laboratories who submitted a quantification result.



4. Quantitative Results

Chart 4 illustrates of the 37 labs who submitted a quantification result, 5 laboratories (14%) achieved a satisfactory result i.e. a z score of $< \pm 2$. 9 labs (24%) achieved a questionable result with a z score of between ± 2 and ± 3 . 23 labs (62%) achieved an unsatisfactory result with a z score of $> \pm 3$.

