LACS

Group Report

Round 12
June 2021

LOW ASBESTOS CONTENT SCHEME

HSE

Round 12 Sample Details

BACKGROUND
This report covers Round 12 of the Low Asbestos Content Scheme (LACS). Round 12 was open to laboratories worldwide. Laboratory participation was as follows: 4 UK and 106 Non UK.

114 laboratories subscribed to this round, with 110 submitting results.

SAMPLES
One sample was circulated as follows: Sample LACS012 – This sample was chalk with 0.06% UICC anthophyllite.

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 and transmission electron microscopy to assess homogeneity and suitability. Approximately 10% of the total number of samples despatched were validated by 10 independent laboratories.

INFORMATION SUBMITTED BY LABORATORIES
Laboratories used the PT online 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
Of the 110 laboratories who submitted results three reported anthophyllite and chrysotile, one reported chrysotile only and one reported no asbestos.

LACS QUALITATIVE RESULTS
Sample LACS012
One hundred and five laboratories correctly reported anthophyllite (and/ or tremolite)
Three laboratories reported anthophyllite and chrysotile
One laboratory reported chrysotile
One laboratory reported no asbestos

These results are presented graphically in Charts 1 and 2.

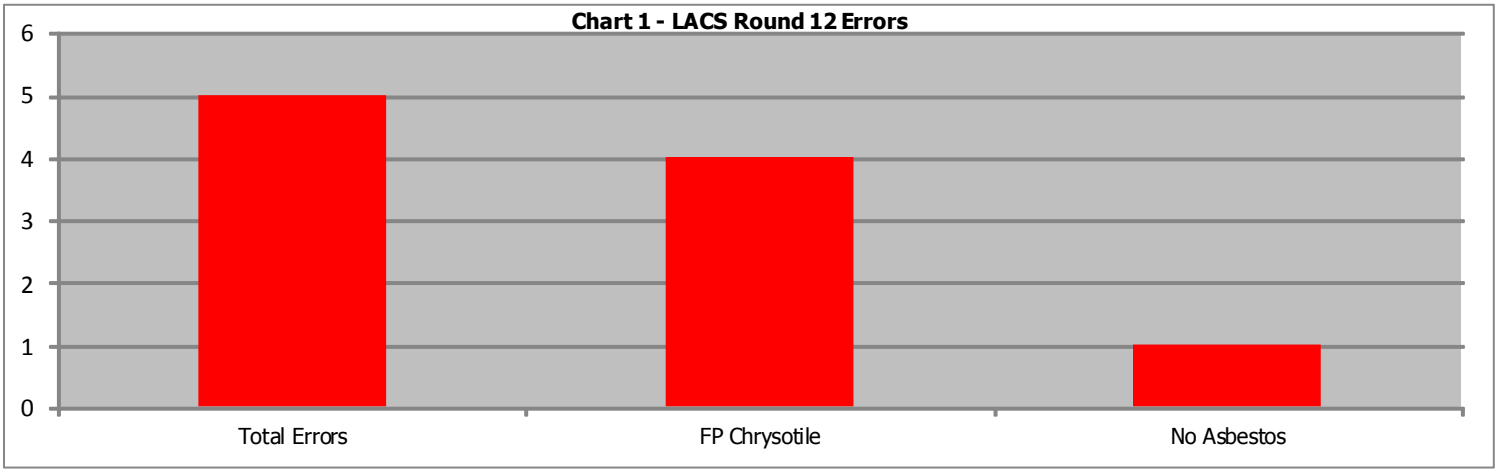
LACS QUANTITATIVE RESULTS
The median of quantitative results submitted was 0.05%. For the purposes of the z score we are using 40% of the median - 0.02%. Sixty-four laboratories submitted quantitative results;

- 40 (62%) laboratories achieved a z-score of < ± 2, this is normally considered to represent “Satisfactory” performance
- 19 (30%) laboratory achieved a z-score of between ± 2 - ± 3, this is normally considered to represent “Questionable” performance
- 5 (8%) laboratories achieved a z-score of > ± 3, this is normally considered to represent “Unsatisfactory” performance.

These results are presented graphically in Charts 3-5.

1. Type Of Errors Obtained

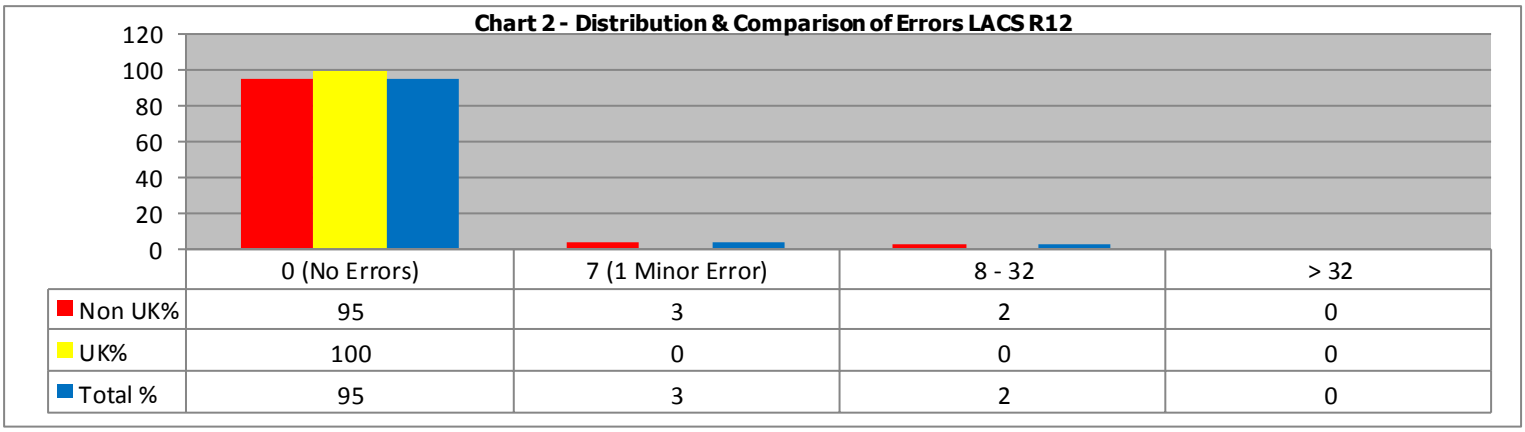
Chart 1 illustrates the errors made by participating laboratories. Five errors were made by laboratories on sample LACS012. Three laboratories reported anthophyllite & chrysotile, one laboratory reported chrysotile and one laboratory reported no asbestos.



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. 105 (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; 4 (100%) UK laboratories and 101 (95%) Non-UK laboratories obtained a score of zero for the round.

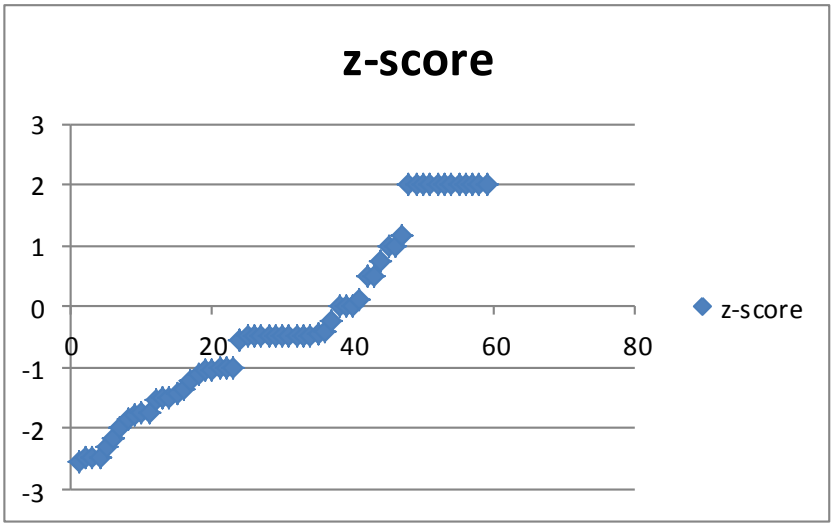


	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	95	3	2	0
UK%	100	0	0	0
Total %	95	3	2	0

3. Quantitative Results - z scores

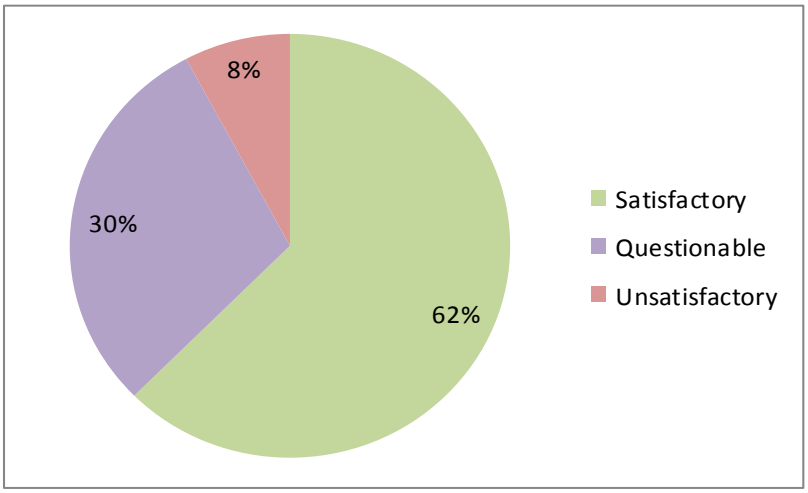
Chart 3

Scatter graph of z scores (five z scores ranging between 7 and 47 were removed as outliers) for the 64 laboratories who submitted a quantification result.



4. Quantitative Results

Chart 4 illustrates of the 64 laboratories who submitted a quantification result, 40 laboratories (62%) achieved a satisfactory result i.e. a z score of < ± 2. 19 laboratories (30%) achieved a questionable result with a z score of between ± 2 and ± 3. 5 laboratories (8%) achieved an unsatisfactory result with a z score of > ± 3.



5 Quantitative Results by analytical method

The following charts illustrate the z-score results by method of the 64 laboratories who submitted a quantification result. The number of labs using each method were as follows: 31 labs used SEM/EDX; 30 labs used TEM/EDX/ED and 3 labs used PLM/ PCM.