Round 14 Sample Details

BACKGROUND

This report covers Round 14 of the Low Asbestos Content Scheme (LACS). Round 14 was open to laboratories worldwide. Laboratory participation was as follows: 5 UK, 109 Rest of Europe & 11 Rest of the World.

125 laboratories subscribed to this round with 121 submitting results.

SAMPLES

One sample was circulated as follows: Sample LACS014 – This sample was talc containing 0.05% 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 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.

LACS QUALITATIVE RESULTS

Sample LACS014

Of the 121 laboratories submitting results for R14:

One hundred and seven laboratories correctly reported amosite
One reported amosite & chrysotile
Eight reported amosite and anthophyllite
Two reported anthophyllite only
Two reported tremolite only
One reported no asbestos

These results are presented graphically in Charts 1 and 2.

LACS QUANTITATIVE RESULTS

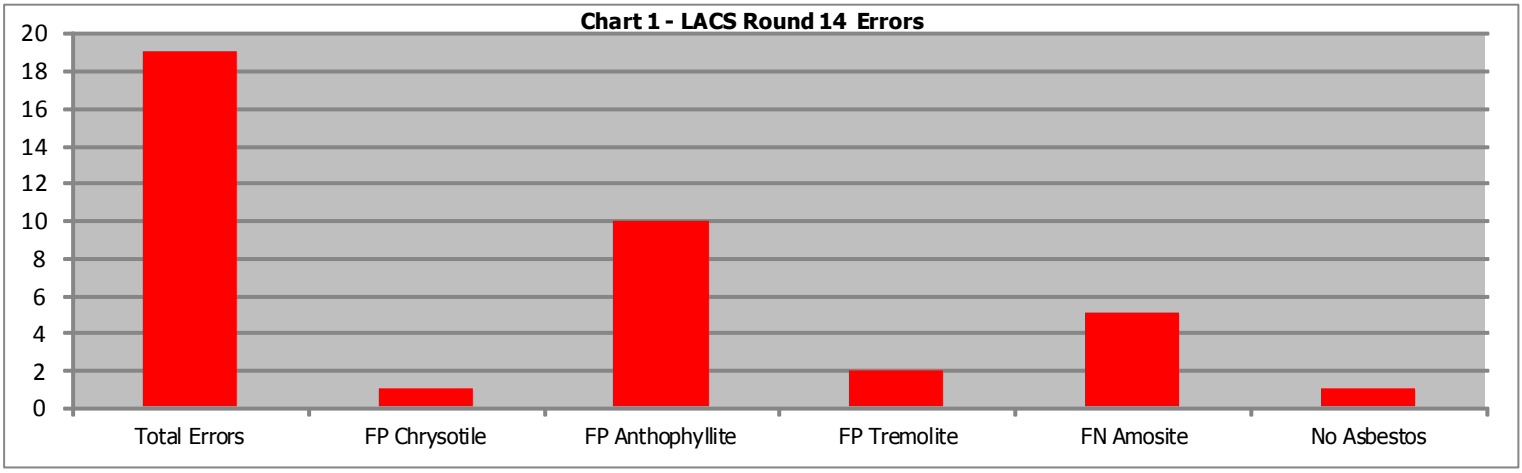
The median of quantitative results submitted was 0.042%. For the purposes of the z score we are using 40% of the median - 0.017%. Seventy two laboratories submitted quantitative results;

- 47 (65%) laboratories achieved a z-score of < ± 2, this is normally considered to represent “Satisfactory” performance
- 19 (27%) laboratory achieved a z-score of between ± 2 - ± 3, this is normally considered to represent “Questionable” performance
- 6 (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

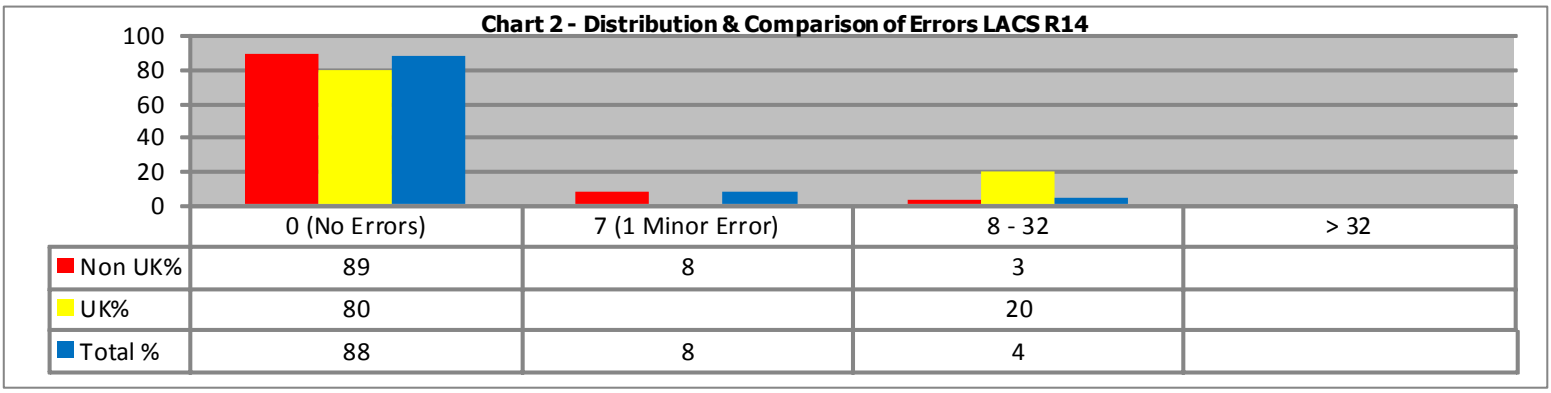
Chart 1 illustrates the errors made by participating laboratories. Nineteen errors were made by laboratories on sample LACS014. One reported amosite & chrysotile, eight reported amosite and anthophyllite, two reported anthophyllite, two reported tremolite one reported no asbestos and five failed to identify amosite.



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. 107 (88%) 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 (80%) UK laboratories and 103 (89%) Non-UK laboratories obtained a score of zero for the round.

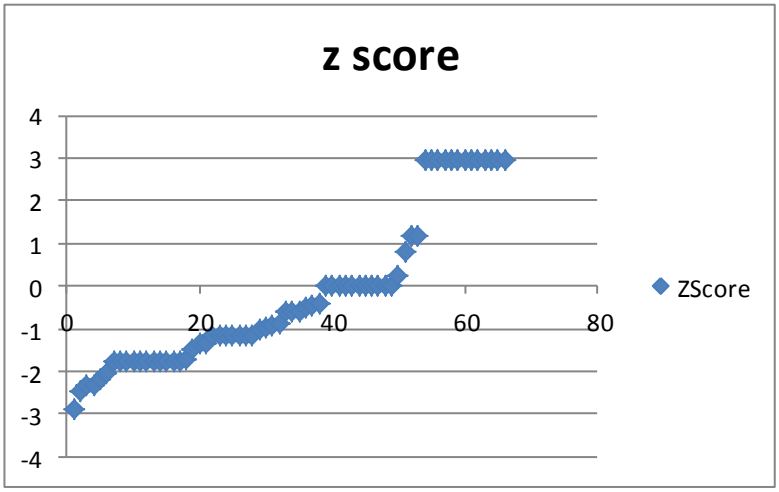


	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	89	8	3	
UK%	80		20	
Total %	88	8	4	

3. Quantitative Results - z scores

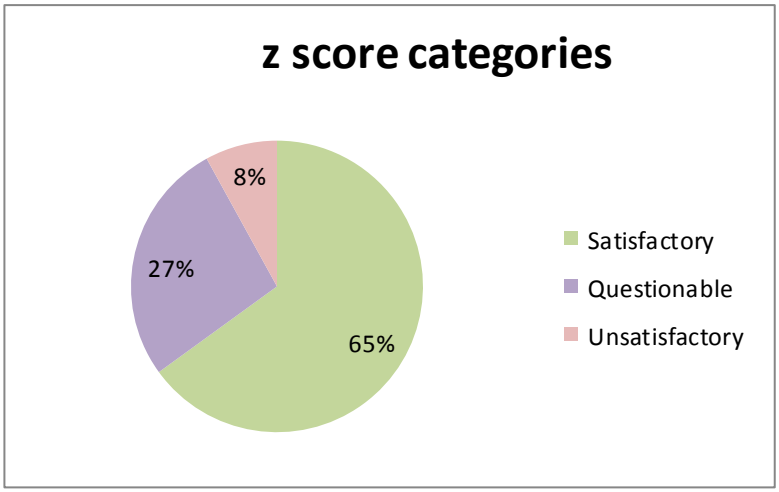
Chart 3

Scatter graph of z-scores for the 72 laboratories who submitted a quantification result. (six z-scores of 8.82, 14.71, 26.47, 32.35, 114.71 and 5879.41 were removed as outliers as these laboratories reported greater than 0.1% asbestos).



4. Quantitative Results

Chart 4 illustrates of the 72 laboratories who submitted a quantification result, 47 laboratories (98%) achieved a satisfactory result i.e. a z score of < ± 2. 19 laboratories (27%) achieved a questionable result with a z score of between ± 2 and ± 3. 6 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 72 laboratories who submitted a quantification result. The number of labs using each method were as follows: 35 labs used SEM/EDX; 31 labs used TEM/EDX/ED and 6 labs used PLM/ PCM.