



Low Asbestos Content Scheme Individual Results : Round 005 LACS R5

For Laboratory Number : 1640 CRB Analyse Service GmbH

From : 03/09/2018 To : 12/10/2018

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| Sample | Your Result                         | Assigned Result                    | Score         |
|--------|-------------------------------------|------------------------------------|---------------|
| 1      | Amosite,<br>Total Asbestos = 0.027% | Amosite,<br>Total Asbestos = 0.09% | 0<br>Z : -2.1 |

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## Round 5 Sample Details

### BACKGROUND

This report covers Round 5 of the Low Asbestos Content Scheme (LACS). Round 5 was open to laboratories worldwide. Laboratory participation was as follows: 4 UK, 105 Rest of Europe and 1 RoW.

110 laboratories subscribed to this round, with 107 submitting results.

### SAMPLES

One sample was circulated as follows: Sample LACS005B – This sample was plaster 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

One laboratory of the 107 who submitted results failed to report amosite and recorded a false positive error of anthophyllite for sample LACS005B.

### LACS QUALITATIVE RESULTS

#### Sample LACS005B

One hundred and six laboratories correctly reported amosite.

One laboratory reported anthophyllite and failed to report amosite.

Three laboratories did not submit a result.

These results are presented graphically in Charts 1 and 2.

### LACS QUANTITATIVE RESULTS

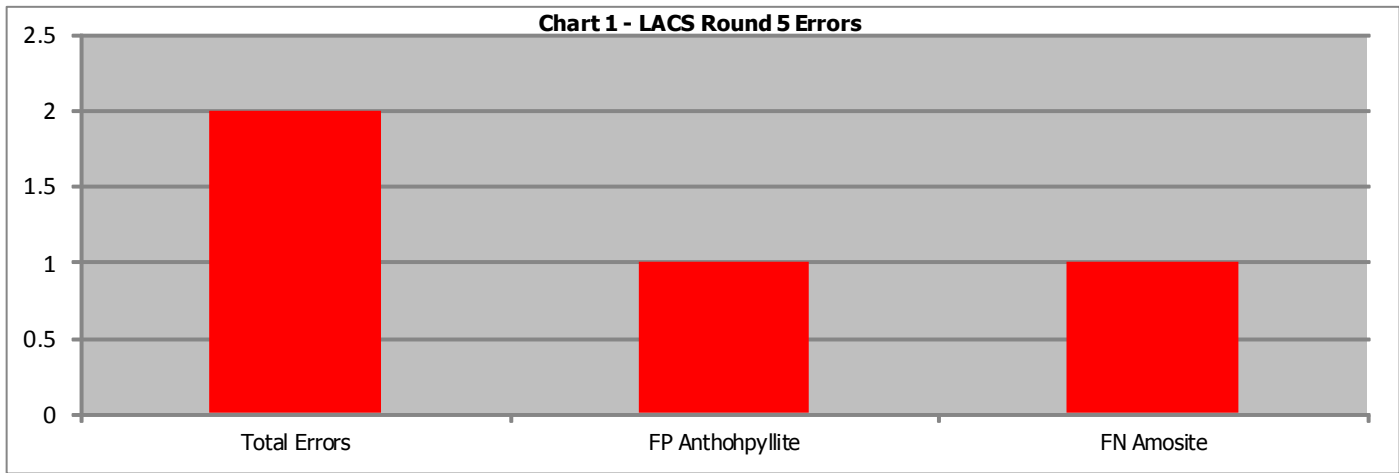
The median of quantitative results submitted was 0.07%. For the purposes of the z score we are using 40% of the median - 0.03%. Forty-five laboratories submitted quantitative results;

- 31 (69%) laboratories achieved a z-score of  $< \pm 2$ , this is normally considered to represent “Satisfactory” performance
- 6 (13%) laboratory achieved a z-score of between  $\pm 2 - \pm 3$ , this is normally considered to represent “Questionable” performance
- 8 (18%) laboratories achieved a z-score of  $> \pm 3$ , this is normally considered to represent “Unsatisfactory” performance.

These results are presented graphically in Charts 3-5.

## 1. Type Of Errors Obtained

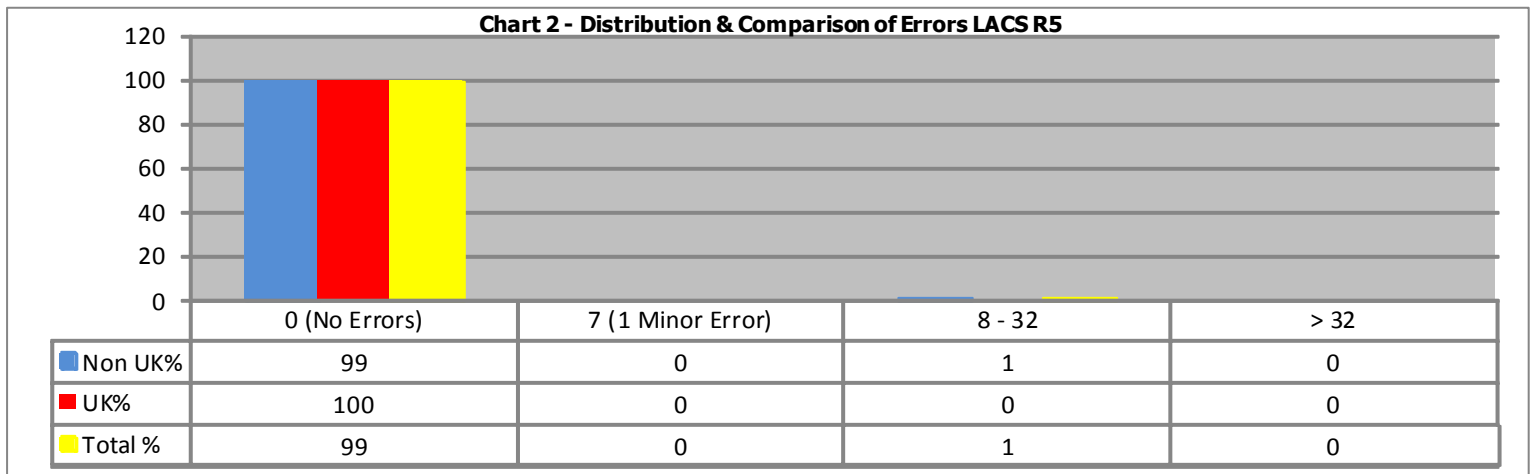
Chart 1 illustrates the errors made by participating laboratories. Two errors were made by a laboratory on sample LACS005B. The lab reported anthophyllite asbestos present and failed to report amosite asbestos present.



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

## 2. Errors for UK & Non-UK Laboratories

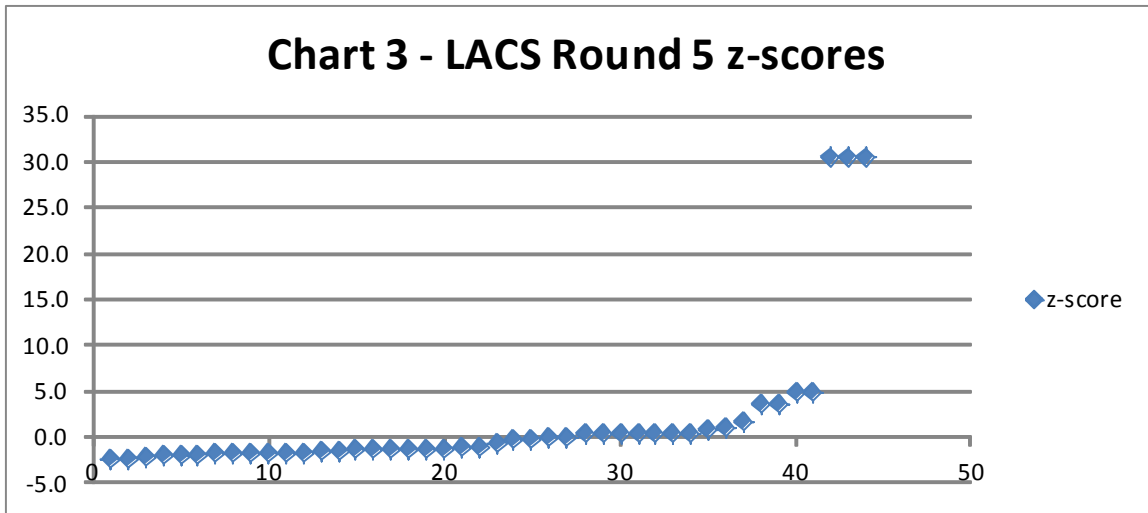
Chart 2 illustrates the distribution of scores for all participating laboratories. 106 (99%) laboratories obtained a score of zero in this round, indicating that these laboratories had not made any errors. The distribution of scores obtained by UK (United Kingdom) and Non-UK laboratories is also compared; 4 (100%) UK laboratories and 102 (99%) Non-UK laboratories obtained a score of zero for the round.



### 3. Quantitative Results - z scores

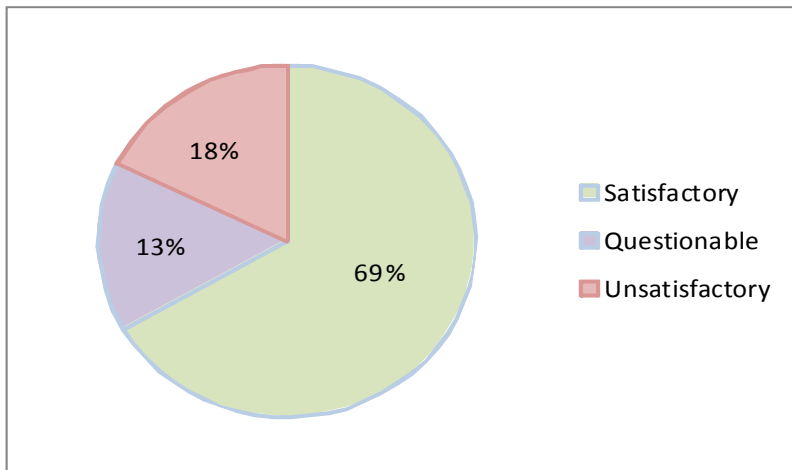
Chart 3

Scatter graph of z scores (one z score of 63.7 removed as outlier) for the 45 laboratories who submitted a quantification result.



### 4. Quantitative Results

Chart 4 illustrates of the 45 laboratories who submitted a quantification result, 31 laboratories (69%) achieved a satisfactory result i.e. a z score of  $< \pm 2$ . 6 laboratories (13%) achieved a questionable result with a z score of between  $\pm 2$  and  $\pm 3$ . 8 laboratories (18%) achieved an unsatisfactory result with a z score of  $> \pm 3$ .



## 5 Quantitative Results by analytical method

The following charts illustrate the z-score results by method of the 45 laboratories who submitted a quantification result. The number of labs using each method were as follows: 22 labs used SEM/EDX; 21 labs used TEM/EDX/ED and 2 labs used PLM/PCM.

