

Low Asbestos Content Scheme Individual Results: Round

For Laboratory Number: 1640 CRB Analyse Service GmbH

From: To:

Report Issued 29/06/2021

Report No. 12/252/1380

Sample	Your Result	Assigned Result	Score
1	Anthophyllite	Anthophyllite	0
	Total Asbestos = 0.062%	Total Asbestos = 0.06%	Z: 0.1

HSE
Melanie Clunas

LACS Scheme Co-Ordinator

Fibres Team: Chemical & Biological Risks Unit



HSE, Science & Research Centre Harpur Hill, Buxton, Derbyshire, SK17 9JN - UK

FTPT F0931

**ISSUE 2** 

Page 1 of 1





#### 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 subsamples 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.

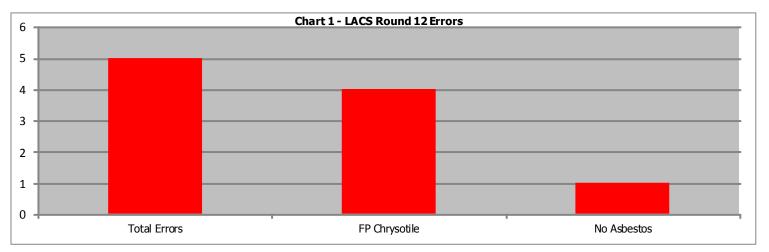
Page 1 of 4

These results are presented graphically in Charts 3-5.



#### 1. Type Of Errors Obtained

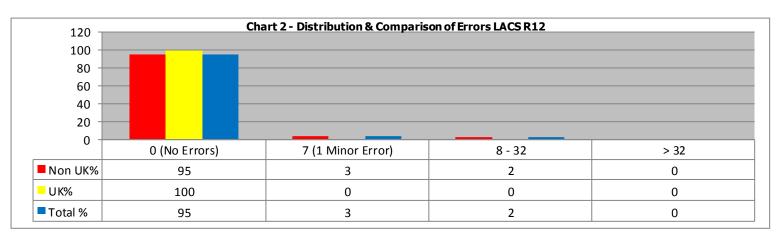
Chart 1 illustrates the errors made by participating laboratories. Five errors were made by laboratories on sample LACS012. Three laboratories reported anthophyllite & chrysotile, one laboratory reported chrysotile and one laboratory reported no asbestos.



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.

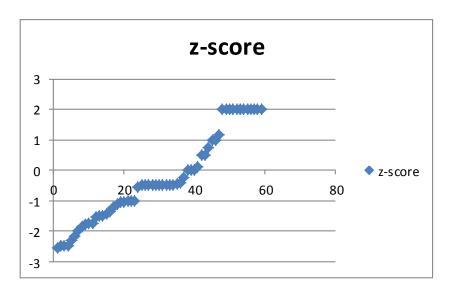




# 3. Quantitative Results - z scores

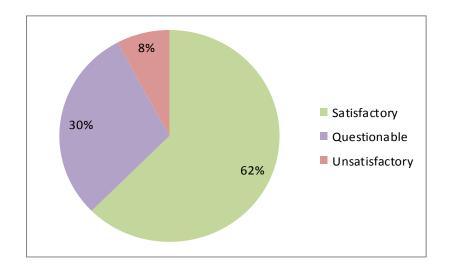
## Chart 3

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  $< \pm 2$ . 19 laboratories (30%) achieved a questionable result with a z score of between  $\pm 2$  and  $\pm 3$ . 5 laboratories (8%) 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 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.

