



**GROUP REPORT**  
**Round 19**



**July 2019**

**ASBESTOS IN SOILS SCHEME**

## Round 19 Sample Details

### BACKGROUND

This report covers Round 19 of the Asbestos in Soils Scheme (AISS). Round 19 was open to laboratories worldwide. Laboratory participation was as follows: 35 UK, 31 Rest of Europe and 2 RoW.

### SAMPLES

Two samples were circulated as follows:

Sample S037 – This sample contained chrysotile string, black paint and oil within a soil/ cement matrix

Sample S038 – This sample contained amosite & chrysotile asbestos (AIB) at 0.053% by weight. Each sample was individually made by mixing known weights of asbestos in a top soil, plaster, sand, shredded blue roll and heavy duty plastic.

### SCREENING & VALIDATOR INFORMATION

Both samples were prepared for circulation following our normal internal screening process of samples with representative sub-samples scanned using stereo-zoom microscopy to assess homogeneity and suitability. Approximately 10% of the total number of samples despatched were validated by 3 independent laboratories.

### INFORMATION SUBMITTED BY LABORATORIES

67 laboratories submitted results for AISS Round 19. 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 option, the % asbestos in ACM's, as loose fibres and the total % asbestos.

### AISS QUALITATIVE RESULTS

#### Sample 1 (S037)

Sixty-one laboratories correctly reported chrysotile  
Six laboratories reported no asbestos

#### Sample 2 (S038)

Thirty-six laboratories correctly reported amosite & chrysotile asbestos  
Twenty-five laboratories reported only amosite  
One laboratory reported only chrysotile  
Five laboratories reported no asbestos

A number of labs failed to identify the chrysotile within the AIB in sample S038. AIB typically contains amosite asbestos but will often also contain smaller quantities of chrysotile asbestos. Analysts need to be aware of this and thoroughly search the material to identify all asbestos components present.

### AISS QUANTITATIVE RESULTS

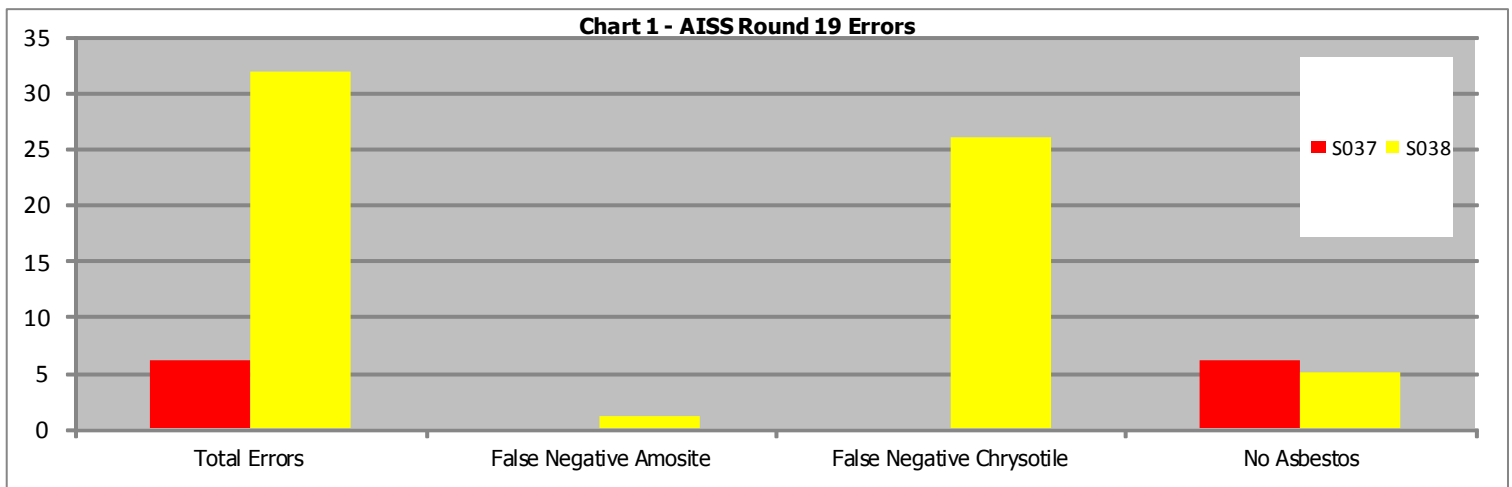
The median of quantitative results submitted was 0.045. For the purposes of the z score we are using 40% of the median - 0.018. Fifty-one laboratories submitted quantitative results for S038;

- 38 (74%) laboratories achieved a z-score of  $< \pm 2$ , Satisfactory
- 10 (20%) laboratory achieved a z-score of between  $\pm 2 - \pm 3$ , Questionable
- 3 (6%) laboratories achieved a z-score of  $> \pm 3$ , Unsatisfactory



**1. Type Of Errors Obtained**

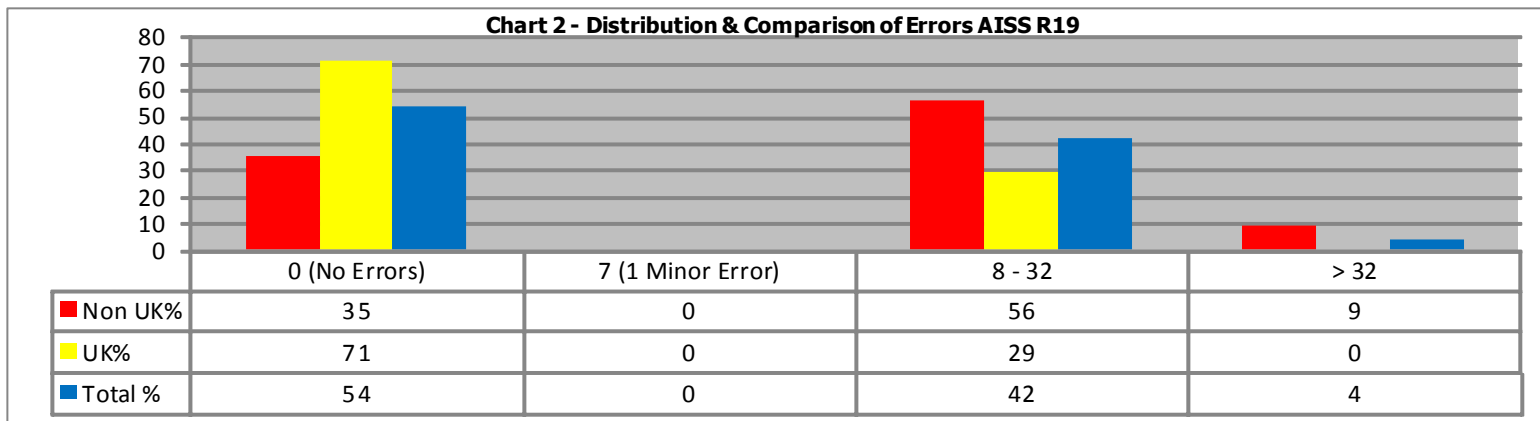
Chart 1 illustrates the errors made by participating laboratories. Six errors were made by laboratories on sample S037 with the labs failing to identify chrysotile. Thirty two errors were made by laboratories on sample S038 with twenty six labs reporting amosite only, one lab reporting chrysotile only and five labs reporting no asbestos.



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

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

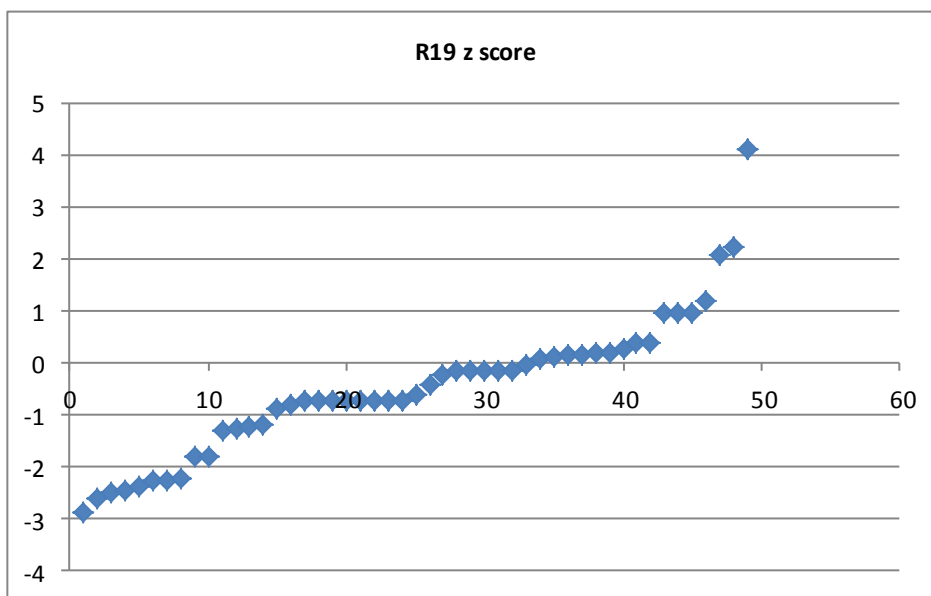
Chart 2 illustrates the distribution of scores for all participating laboratories. 36 (54%) laboratories obtained a score of zero in this round, indicating that these laboratories had not made any errors. The distribution of scores obtained by UK (United Kingdom) and Non-UK laboratories is also compared; 25 (71%) UK laboratories and 11 (35%) 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 63.36 removed as outlier) for the fifty one labs who submitted a quantification result for sample S038.



### 4. Quantitative Results

Chart 4 illustrates the results of the 51 labs who submitted a quantification result for sample S038. 38 labs (74%) achieved a satisfactory result i.e. a z score of  $< \pm 2$ . 10 labs (20%) achieved a questionable result with a z score of between  $\pm 2$  and  $\pm 3$ . 3 labs (6%) achieved an unsatisfactory result with a z score of  $> \pm 3$ .

