Round 27 Sample Details

BACKGROUND

This report covers Round 27 of the Asbestos in Soils Scheme (AISS). Round 27 was open to laboratories worldwide. Laboratory participation was as follows: 25 UK & 42 NON UK

SAMPLES

Two samples were circulated as follows:

Sample S053 – This sample contained 0.03% each of amosite and crocidolite free fibre asbestos in a topsoil, cement, sand and cardboard matrix.
Sample S054 – This sample contained chrysotile asbestos (0.1%) within small asbestos cement pieces in a topsoil, sand, plaster, polypropylene and limestone chippings matrix. The asbestos cement pieces were 0.4% of the total matrix so as per section 5 (b) in the Information Book this equates to 0.1% asbestos.

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 were validated by 3 independent laboratories.

INFORMATION SUBMITTED BY LABORATORIES

Sixty-four laboratories submitted results for AISS Round 27. 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 AC-M's, as loose fibres and the total % asbestos.

AISS QUALITATIVE RESULTS

Sample 1 (S053)
Fifty-nine laboratories correctly reported crocidolite & amosite
One laboratory reported crocidolite only
Two laboratories reported amosite only
One laboratory reported chrysotile
One laboratory reported no asbestos

Sample 2 (S054)
Fifty-two laboratories correctly reported chrysotile
One laboratory reported crocidolite & amosite
Eleven laboratory reported no asbestos

AISS QUANTITATIVE RESULTS

The median of quantitative results submitted was 0.111177. For the purposes of the z score we are using 40% of the median - 0.0444708. Forty-two laboratories submitted quantitative results for S054;

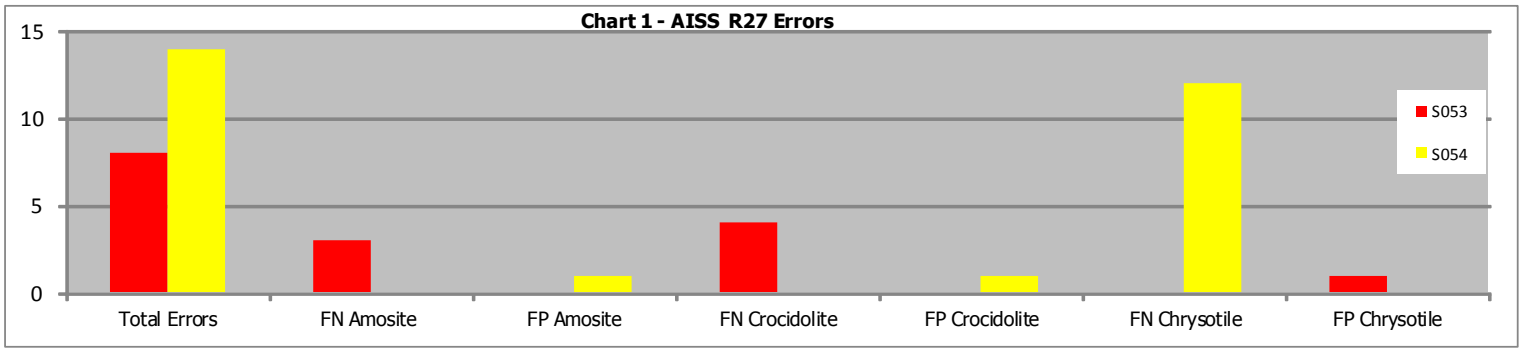
- 34 (81%) laboratories achieved a z-score of < ± 2, Satisfactory
- 4 (9.5%) laboratories achieved a z-score of between ± 2 - ± 3, Questionable
- 4 (9.5%) laboratories achieved a z-score of > ± 3, Unsatisfactory

1. Type Of Errors Obtained

Chart 1 illustrates the errors made by participating laboratories.

Eight errors were made on sample S053 (crocidolite & amosite), with three laboratories missing amosite, four missing crocidolite and one falsely identifying chrysotile.

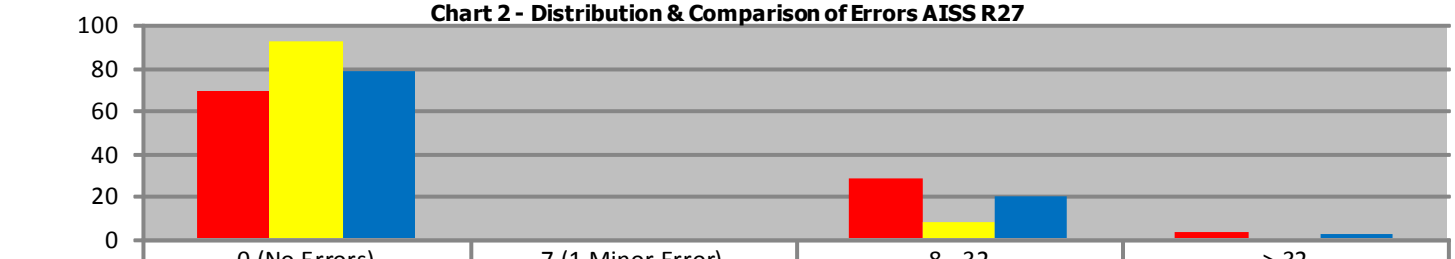
Fourteen errors were made on sample S054 (chrysotile), with one laboratory falsely identifying crocidolite and amosite and eleven reporting no asbestos.



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

2. Errors for UK & Non-UK Laboratories

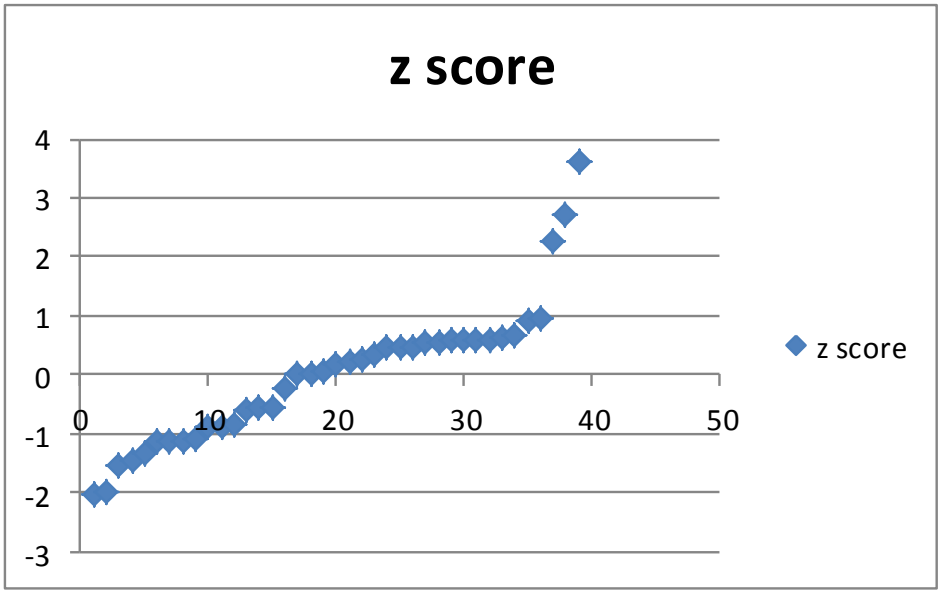
Chart 2 illustrates the distribution of scores for all participating laboratories. 50 (78%) laboratories obtained a score of zero in this round. The distribution of scores obtained by UK (United Kingdom) and Non-UK laboratories is also compared; 23 (92%) UK laboratories and 27 (69%) Non-UK laboratories obtained a score of zero for the round.



	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	69		28	3
UK%	92		8	
Total %	78		20	2

3. Quantitative Results - z scores

Chart 3 - scatter graph of z-scores for the forty-nine laboratories who submitted a quantification result for sample S054. (three z-score of 13.27, 19.45 & 63.86 were removed as outliers)



4. Quantitative Results

Chart 4 illustrates of the forty-two laboratories who submitted a quantification result for sample S054, 34 labs (81%) achieved a satisfactory result i.e. a z score of < ± 2. 4 labs (9.5%) achieved a questionable result with a z score of between ± 2 and ± 3. 4 labs (9.5%) achieved an unsatisfactory result with a z score of > ± 3.