Asbestos In Materials (AIMS) Scheme

Round 61 Sample Details

373 labs were assigned to Round 61 with 356 labs submitting results.

All samples were prepared for circulation following our normal internal screening process and were scanned using stereo-zoom microscopy to assess homogeneity and suitability. Approximately 10% of all samples prepared were validated by 15 independent laboratories using either PLM or SEM analytical techniques. All validation labs identified all asbestos components present in the samples and no additional asbestos components were identified.

The round consisted of four manufactured samples of materials that may contain asbestos and would typically be submitted for analysis at an asbestos testing laboratory. Sample 1 was a plaster material containing chrysotile asbestos; Sample 2 was a roofing felt material containing amosite asbestos within the bitumen adhesive layer on one side; Sample 3 was a painted board sample with chrysotile asbestos present within the white paint layer and Sample 4 was a non-asbestos cement sample containing organic and wollastonite fibres.

The majority of errors for this round were associated with samples 2 and 3. The errors on both these samples mainly concerned failure to identify the asbestos types present. Sample 2 was a non-asbestos roofing felt with a bituminous layer on one side containing amosite asbestos. Initially analysts looking through a stereozoom microscope would have been able to observe the outline of asbestos fibres in the bitumen layer. These could then be extracted and analysed. The use of solvents could also be considered to clean the bitumen from the asbestos fibres present. Sample 3 consisted of a non-asbestos board with a thin white paint layer on the surface containing chrysotile asbestos. Ideally one layer at a time should be analysed. Observation is key and in the first instance analysts looking through a stereozoom microscope would have been able to observe the faint outline of the chrysotile fibres in the paint layer. These could then be extracted and analysed before progressing onto the other layers of the sample. Sample 3 was very similar in appearance to the non-asbestos sample 2 from AIMS Round 60 and serves as a reminder to analysts, that in spite of appearances, to treat each sample separately and complete a thorough analysis on all samples.

Sample	Validation Number	Product Type	Target Component	Asbestos Present (approx. %)
1	263	Plaster (Manufactured)	Chrysotile	0.2
2	264	Felt & Bituminous Paint (Manufactured)	Amosite	3.0
3	265	Painted Board (Manufactured)	Chrysotile	0.5
4	266	Cement (Manufactured)	No Asbestos	N/A

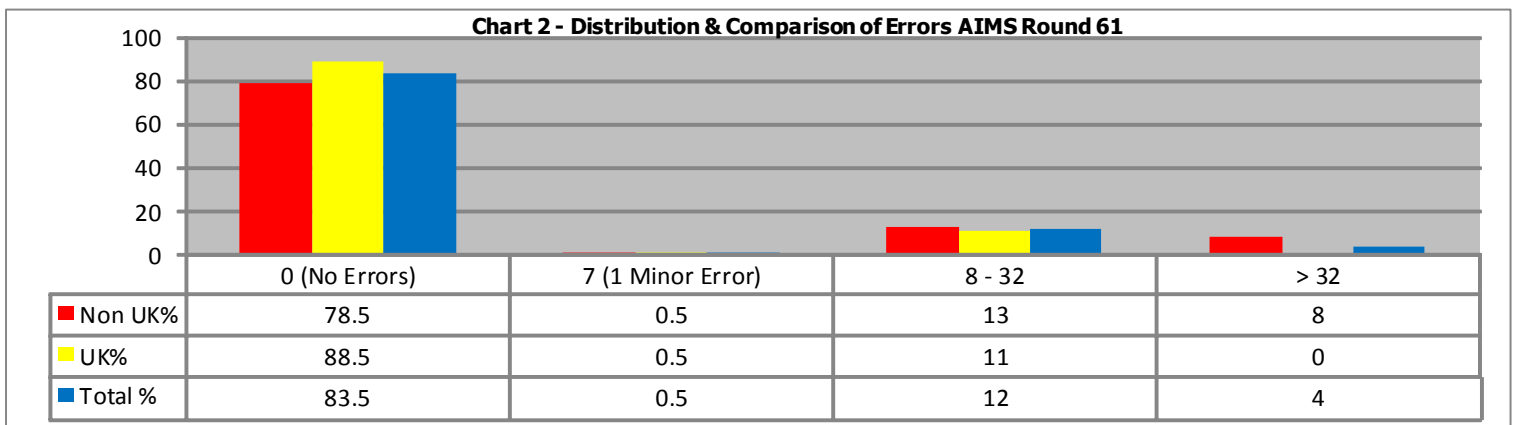# Asbestos In Materials (AIMS) Scheme

1. Type Of Errors Obtained

Chart 1 - AIMS Round 61 Errors
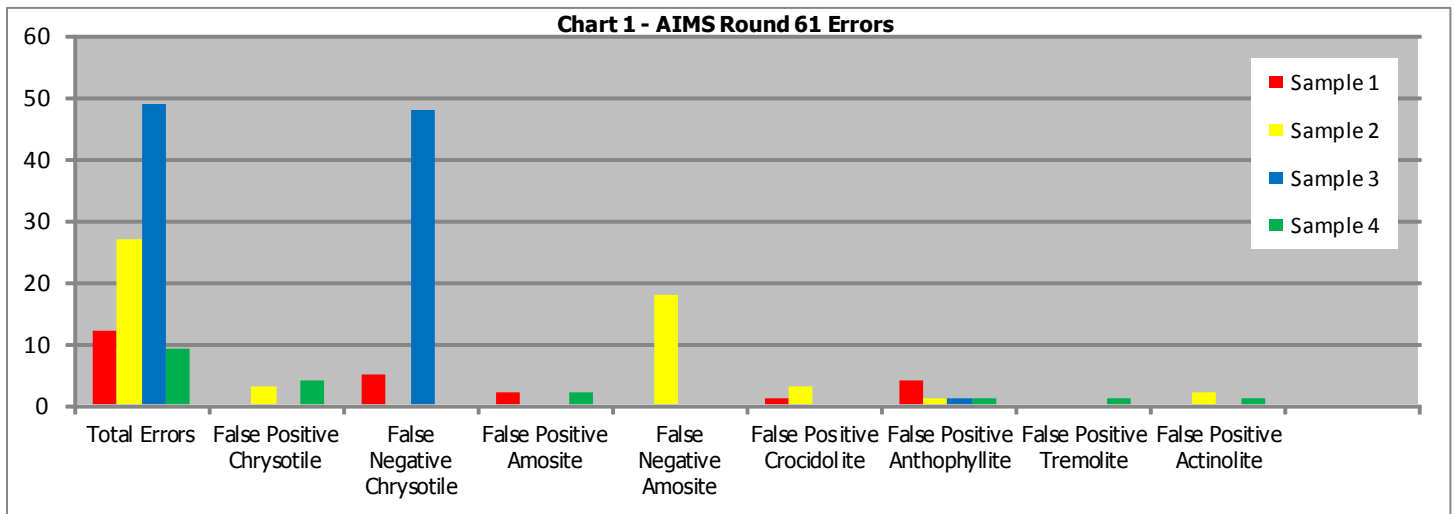
False Negative = Component has been missed. False Positive = Component has been incorrectly identified as present.

2. Round Scores

Chart 2 illustrates the distribution of scores for all participating laboratories. 300 (83.5%) 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; 159 (88.5%) UK laboratories and 141 (78.5%) Non-UK laboratories obtained a score of zero for the round.

Chart 2 - Distribution & Comparison of Errors AIMS Round 61

	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32
Non UK%	78.5	0.5	13	8
UK%	88.5	0.5	11	0
Total %	83.5	0.5	12	4

Asbestos In Materials (AIMS) Scheme

Chart 3 shows the percentage distribution of cumulative three round scores for all UK and Non-UK laboratories. 32 laboratories (9%) in total had not yet completed 3 rounds and therefore did not accumulate a score. Following this round, 247 laboratories (66%) obtained a good cumulative score (0 – 7 penalty points cumulatively). 76 laboratories (20%) obtained an acceptable cumulative score (8 – 32 penalty points cumulatively) and 18 laboratories (5%) obtained an unsatisfactory cumulative score (33 or more penalty points cumulatively).

Chart 3 - Distribution & Comparison of Cumulative Scores Following AIMS Round 61

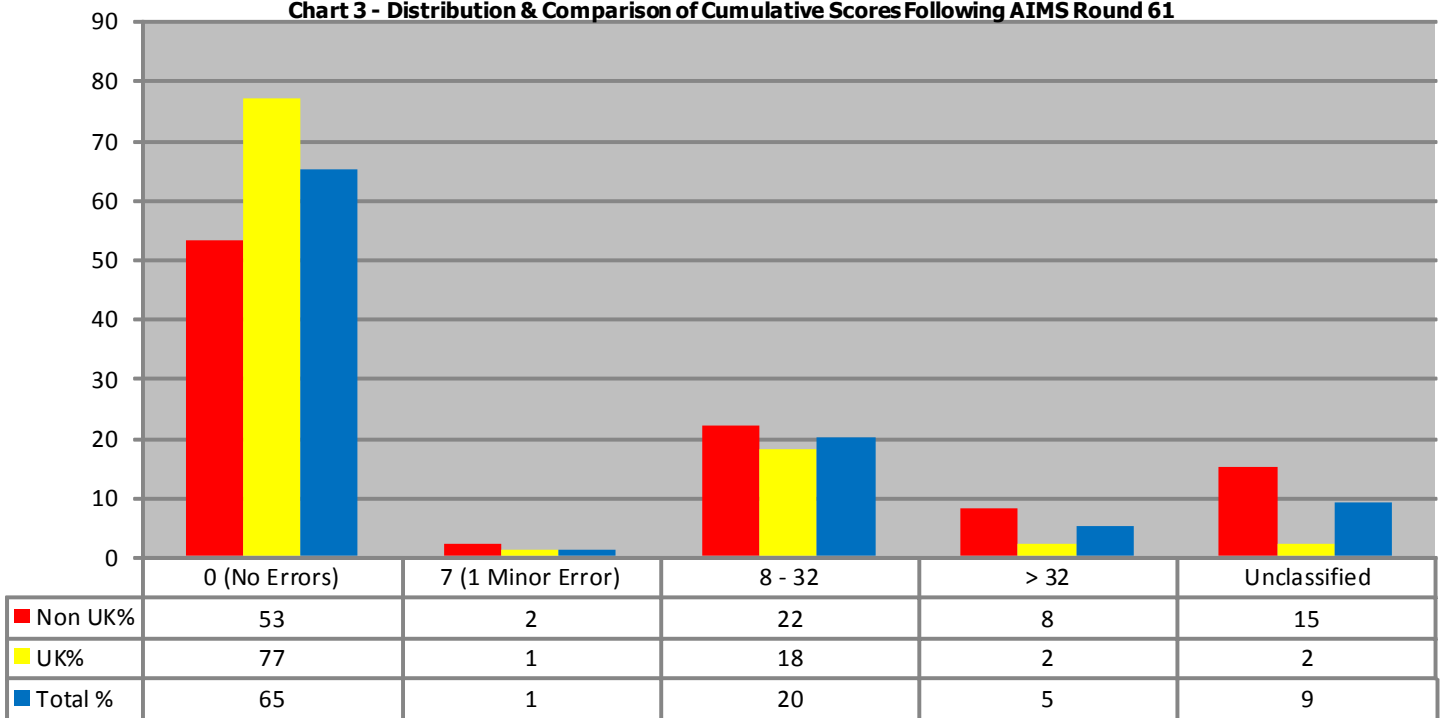|	0 (No Errors)	7 (1 Minor Error)	8 - 32	> 32	Unclassified
Non UK%	53	2	22	8	15
UK%	77	1	18	2	2
Total %	65	1	20	5	9

Chart 4 shows the number of errors made on each sample for all UK and Non-UK laboratories.

PLM - polarised light microscopy. DSO - dispersion staining objective. SEM - scanning electron microscopy. EDX - energy dispersive X-ray. TEM - transmission electron microscopy. FTIR - Fourier transform infra-red.

Chart 4 - AIMS Round 61 Errors by Method
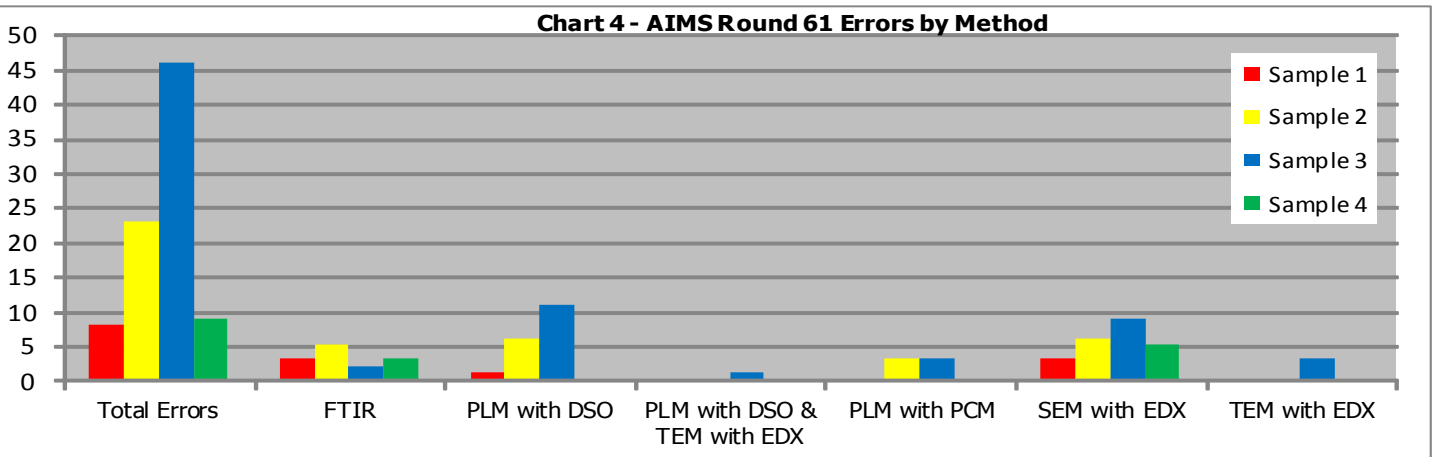
Sample 1, Sample 2, Sample 3, Sample 4

Asbestos In Materials (AIMS) Scheme

Chart 5 shows the percentage of sample errors by method. Of the 356 participating labs in R61 the method used in terms of number of labs was as follows: FTIR, 4 labs; PLM with DSO, 128 labs; PLM with PCM, 18 labs; SEM with EDX, 37 labs; TEM with EDX, 26 labs; PLM with DSO & TEM with EDX, 14 labs; PLM with PCM & FTIR, 2 labs; PLM with PCM & TEM with EDX, 2 labs; No method choice specified, 124 labs and Other method, 1 lab.

Chart 5- Percentage of Errors by Sample R61
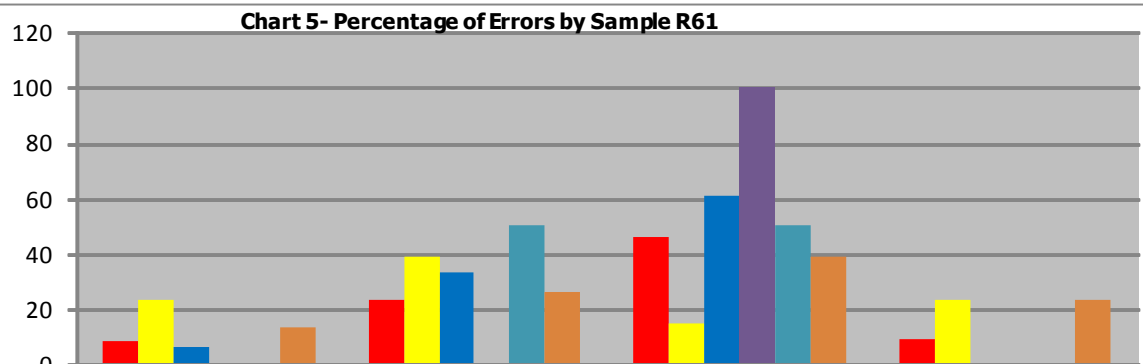
	Sample 1	Sample 2	Sample 3	Sample 4
Total Errors	8	23	46	9
FTIR %	23	39	15	23
PLM with DSO %	6	33	61	
PLM with DSO & TEM with EDX			100	
PLM with PCM %		50	50	
SEM with EDX %	13	26	39	23

3. For Your Information - AIMS NEWS !!

Following the issue of R60 reports, two samples were returned to HSL for investigation. One sample score was withheld, and one score was amended and the report re-issued. Further details on our sample investigation procedure can be found in the Information Book for Participants, available on our website.

Subscription forms for 2017/18 are now available on the Online Data Entry System! Please log on and complete your subscription at your earliest convenience - samples for schemes are subject to availability. Thank you to everyone who has submitted their subscriptions so far, invoices will be issued within the next few weeks. R62 will be despatched week commencing 1st May 2017.

Our new Low Asbestos Content Scheme (LACS) is available for all participants to join - more information is available on our website.

Thank you to everyone who completed the recent SurveyMonkey questionnaire sent out in December 2016. The results are available to view in the Participant Feedback section on our website:

http://www.hsl.gov.uk/proficiency-testing-schemes

Melanie Clunas
AIMS Scheme Co-ordinator

Email: proficiency.testing@hsl.gsi.gov.uk

Telephone: +44 (0)1298 218553

UKAS
PROFICIENCY TESTING
5254