



Group Report
Round 77
November 2022



Asbestos In Materials Scheme

Asbestos In Materials (AIMS) Scheme

This report is available to view on our website: <https://www.hsl.gov.uk/proficiency-testing-schemes/group-reports>

Round 77 Sample Details

374 labs were assigned to Round 77 with 362 laboratories submitting complete results. All samples were prepared for circulation following our normal internal screening process and were scanned using stereozoom microscopy to assess homogeneity and suitability. Approximately 10% of all samples prepared were validated by 17 independent laboratories using either PLM or SEM analytical techniques.

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 sample containing 0.2% chrysotile asbestos; Sample 2 was a non-asbestos cement sample containing wollastonite; Sample 3 was a non-asbestos felt sample containing polypropylene fibre within a bitumen layer and Sample 4 was a black grout sample containing 0.1% crocidolite asbestos.

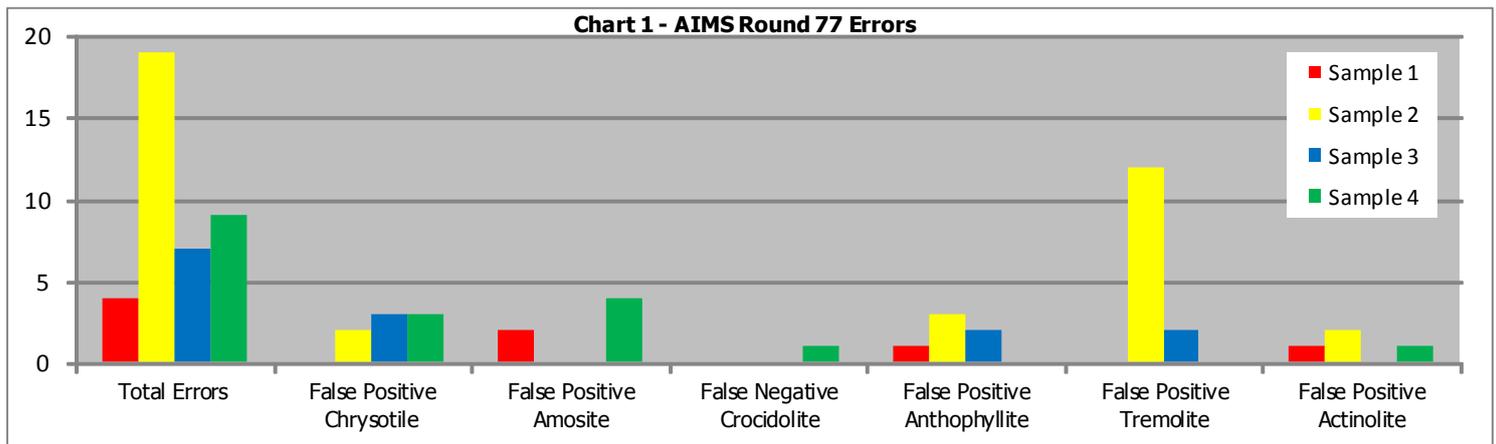
The largest number of errors occurred on Sample 2 with analysts misidentifying the wollastonite fibre in the cement as asbestos. As listed in paragraph A2.67 of HSG248 Asbestos: The Analysts' Guide there are a few techniques that can be used to differentiate wollastonite from asbestos fibres. "Fibrous wollastonite has been used as an asbestos substitute and has an acicular morphology. It is very brittle, white in appearance and slowly soluble in acid. It has RIs that overlap with tremolite, actinolite and anthophyllite, although it has lower birefringence and always displays an extinction angle, albeit small in some orientations and hence difficult to measure. The RI almost parallel to the elongated dimension is in the range 1.628-1.650. The other two RIs are in the ranges 1.626-1.640 and 1.631-1.653 and are observed across the shorter dimensions. The most distinctive feature is that the RI along the elongated dimension is intermediate between the other two RIs. Since the particle is lath-shaped, it will generally lie on its largest face and appear length slow. However, gentle pressure on the coverslip with a needle can be used to roll the particles so that it appears to alternate between length fast and length slow."

Sample	Validation Number	Product Type	Target Component	Asbestos Present (%)
1	330	Plaster (Manufactured)	Chrysotile	0.2%
2	332	Cement (Manufactured)	No Asbestos	N/A
3	329	Felt with Bitumen (Manufactured)	No Asbestos	N/A
4	331	Black Grout (Manufactured)	Crocidolite	0.1%



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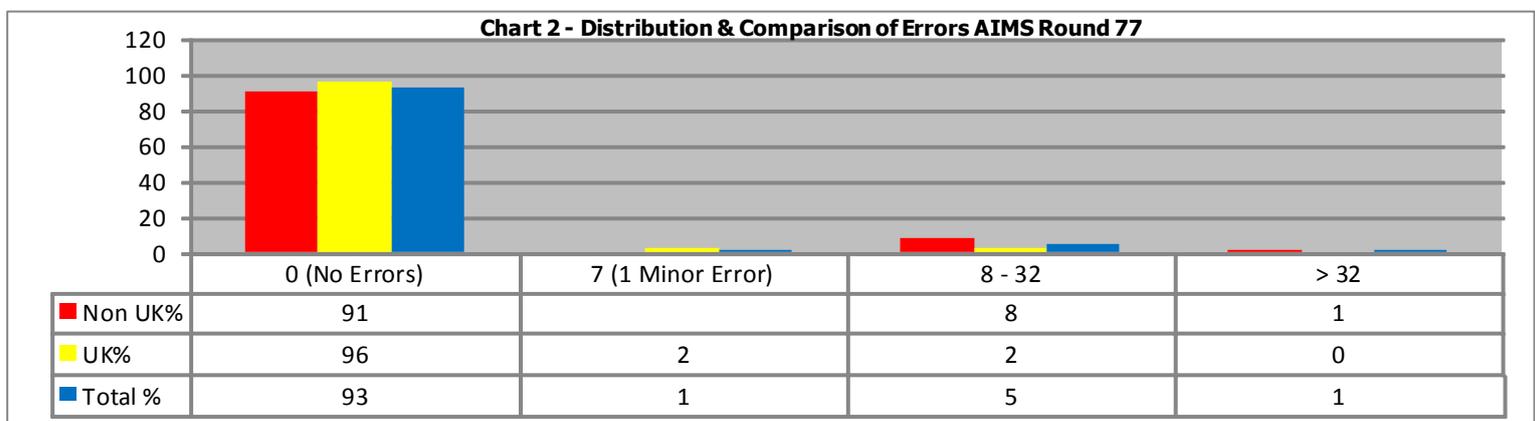
1. Type Of Errors Obtained



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. 336 (93%) 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; 156 (96%) UK laboratories and 180 (91%) Non-UK laboratories obtained a score of zero for the round.





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Chart 3 shows the percentage distribution of cumulative three round scores for all UK and Non-UK laboratories. 12 laboratories (3%) in total had not yet completed 3 rounds and therefore did not accumulate a score. Following this round, 292 laboratories (78%) obtained a good cumulative score (0 – 7 penalty points cumulatively). 56 laboratories (15%) obtained an acceptable cumulative score (8 – 32 penalty points cumulatively) and 14 laboratories (4%) obtained an unsatisfactory cumulative score (33 or more penalty points cumulatively).

Chart 3 - Distribution & Comparison of Cumulative Scores Following AIMS Round 77

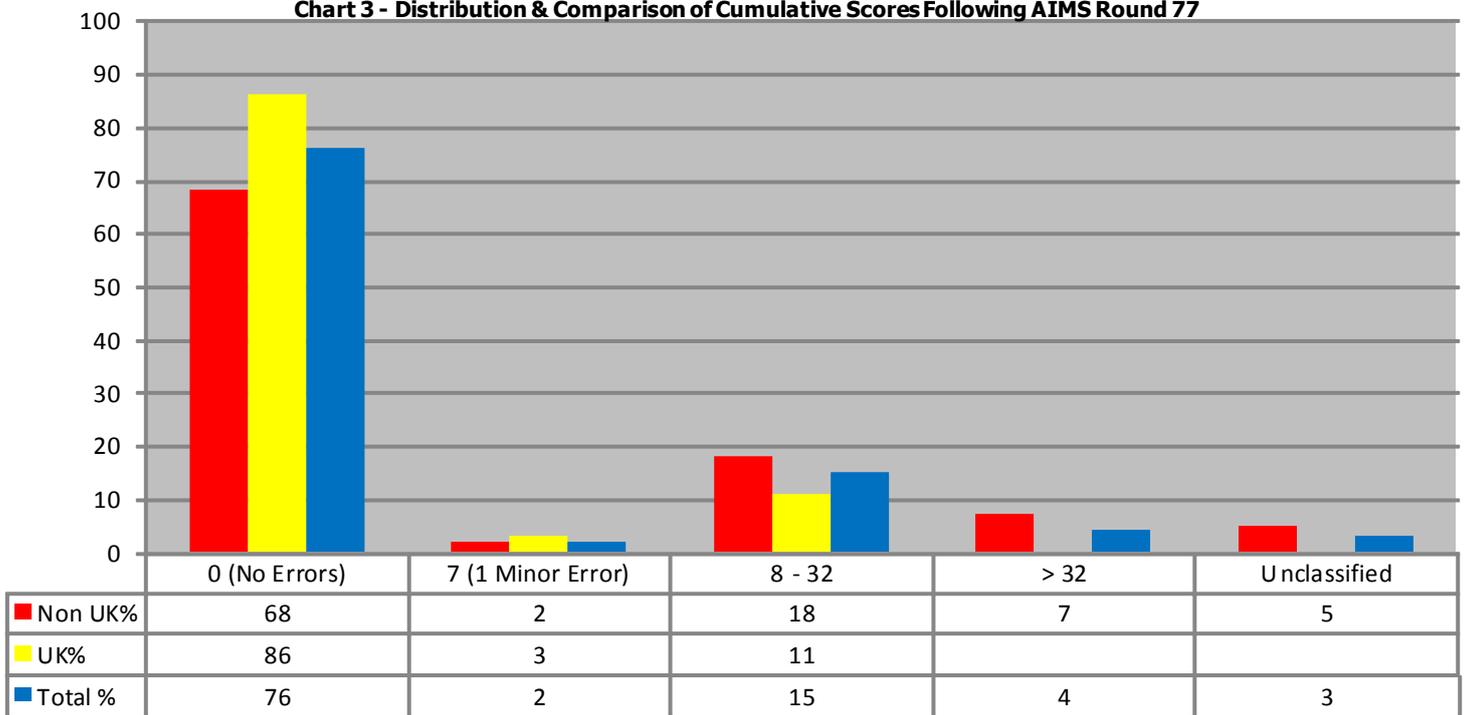
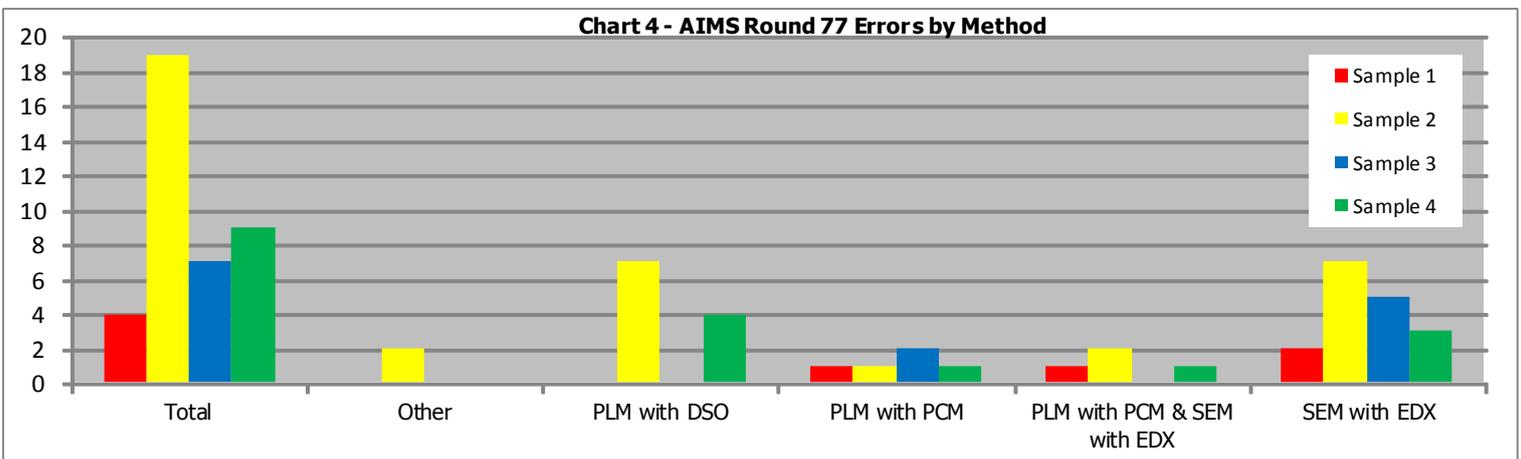


Chart 4 shows the number of errors made on each sample for all UK and Non-UK laboratories.

PLM - polarised light microscopy. DSO - dispersion staining objective. SEM - scanning electron microscopy. EDX - energy dispersive X-ray. PCM - phase contrast microscopy.

Chart 4 - AIMS Round 77 Errors by Method

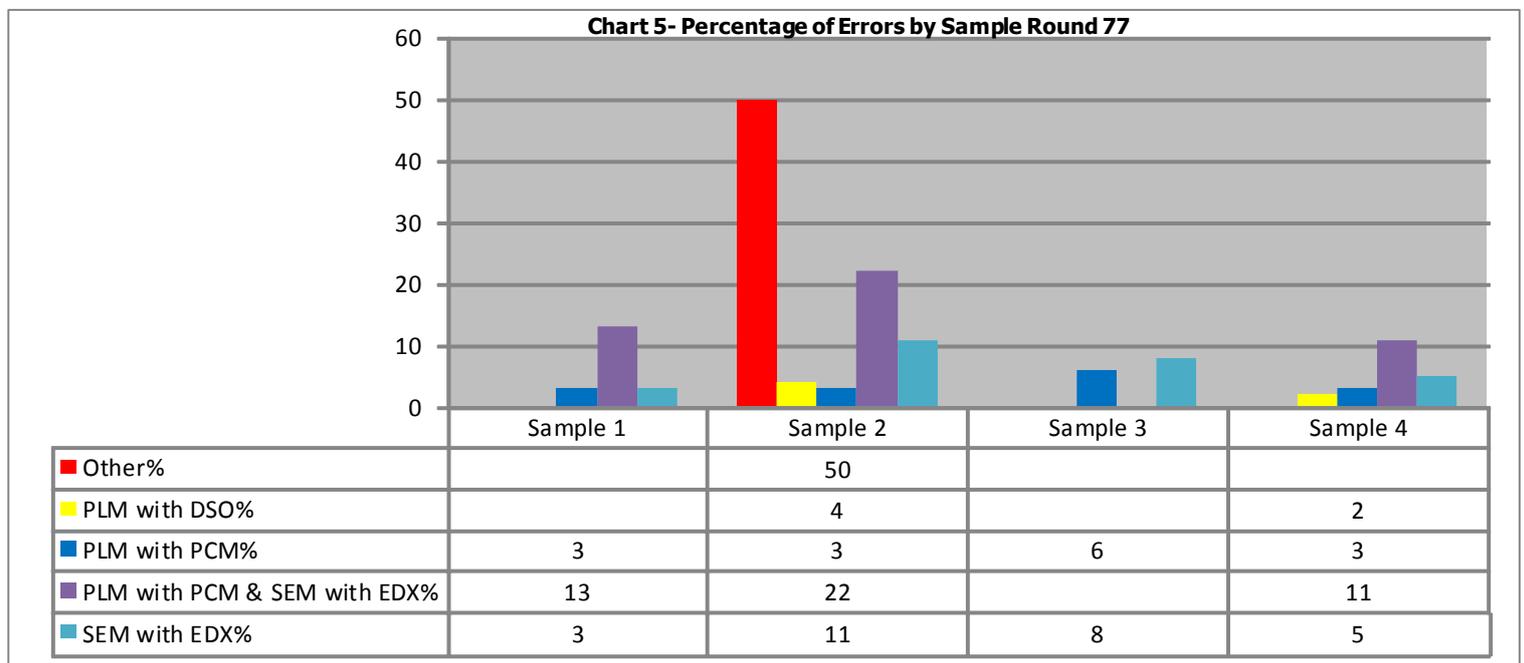




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Chart 5 shows the percentage of sample errors by method.

Of the 362 participating labs in R77 the method used in terms of the number of labs was as follows : FTIR, 1 lab; PLM with DSO, 189 labs; PLM with PCM, 36 labs; SEM with EDX, 63 labs; TEM with EDX, 32 labs; PLM with DSO & TEM with EDX, 24 labs; PLM with PCM & SEM with EDX, 9 labs; PLM with PCM & TEM with EDX, 4 labs; and Other, 4 labs.



3. For Your Information - AIMS NEWS !!

The next round of AIMS will be despatched week commencing 2nd January 2023. Samples will not be despatched until full payment has been received. Please ensure your contact details are kept up to date and inform us straight away if anything needs amending prior to despatch.

Our courier company has advised that overseas laboratories **must** provide their EORI (Economic Operators Registration & Identification) and VAT number to assist customs processing their packages in a timely manner. If you haven't provided this information to us already, please email the PT Team with the details - including your PT Lab number. It is important for laboratories to inform the PT Team if they are having issues receiving their samples due to customs.

If you require a sample to be investigated by HSE following completion of a round, please remember to advise the PT Team within 10 working days of your report being issued so we can let you know the process for returning it to us. Following R76 there was one sample returned to HSE for investigation. The sample was investigated and the score applied by HSE was upheld.

The annual survey will be available to complete online during December 2022 - an email will be sent to all participants.

A reminder that we are still mainly working from home, so if you need to contact us please send an email and we will respond as soon as we can.

Melanie Clunas



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