Appendix 15

Proficiency (ring) testing scheme requirements
The following are minimum requirements of a proficiency or ring testing scheme recognised by AIC/TASCC.

The scheme and/or provider must be independently approved e.g. UKAS or ISO accredited against:

ISO/IEC Guide 43: 1997, Part 1: 'Proficiency Testing by Interlaboratory Comparisons Development and operation of Proficiency Testing Schemes'

The International Harmonised Protocol for the Proficiency Testing of (Chemical) Analytical Laboratories, M Thompson and R Wood, JAOAC International, Vol 76, No 4, 1993, pp 926-940
or
the scheme and or provider must demonstrate compliance with the following requirements:

Facilities that organise/provide / administer proficiency testing schemes must comply with the requirements within this scope.

Proficiency Testing Schemes	Requirement	***Interpretation / Guidance***
T14	ACCREDITATION REQUIREMENTS	
T14.1 R	The Scheme and/or provider must be able to demonstrate compliance to this scope **or** be independently approved by UKAS.	***Further Information*** BS EN ISO/IEC 17043:2023 Conformity assessment. General requirements for the competence of proficiency testing providers.
T14.2 R	The scheme or provider must have a manual detailing the requirements and procedures.	
T15	SCOPE AND PARAMETERS	
T15.1 R	The scheme provider must define the scope of the scheme including; • commodities • test parameters included • frequency of samples • reports provided • source of the assigned values for each parameter	
T16	CERTIFICATES	
T16.1.a R	The scheme must maintain a register of participants.	***Interpretation*** The register of participants must include the commodities they are enrolled for.

T16.1.b R	A certificate of membership must be issued, listing each commodity analysed and/or individual equipment enrolled.	
T17	SOURCING SAMPLE MATERIAL	
T17.1.a	Commodities must be homogenous.	***Guidance*** Where possible commodities should be from a single source and stable i.e. not subject to deterioration. Where material is used from more than one source sample preparation must be sufficient to ensure as much homogeneity of sub-sample as possible This may be demonstrated by recording the source of the material on documentation for that PT round
T17.1.b	The preparation of sample material must include adequate blending and other preparation to ensure homogeneity.	***Guidance*** There must be sufficient cleaning/screening to ensure as much homogeneity as possible This may be demonstrated by recording the homogeneity checks (APP15.7)
T17.1.c R	Homogeneity testing must be carried out, for each commodity, a minimum of once every 6 months during the PT Scheme year.	***Interpretation*** To check the preparation procedure produces homogenous samples; – 5% or 10 samples (whichever is the larger) of each batch of samples selected must be checked. – A minimum of two parameters must be checked on each sample and meet the repeatability figures as given in Appendix 17.
T18	SAMPLE PREPARATION, PACKING AND DISTRIBUTION	
T18.1.a	Ring Check samples must be of sufficient volume to enable accurate testing.	***Guidance***

		Sample sizes of 200g – 1kg are usually sufficient dependent on: • equipment • testing parameters • testing method
T18.1.b	Ring Check samples must be packaged to maintain their stability and integrity	***Guidance*** Well-sealed strong plastic re-sealable bags
T18.1.c R	Ring Check samples must be uniquely labelled and identifiable	
T19	DATA COLLECTION	
T19.1.a R	The scheme must have a documented recording and reporting system for results and a reliable communication method	***Guidance*** This may be via an online reporting system or emails
T19.1.b R	The scheme must have a target turnaround from dispatch to reporting which must not exceed one month.	***Guidance*** To enable participants to react to results within a month. A results deadline is usually evident Interpretation If a target is missed the corrective action needs to be recorded.
T20	MEAN TEST RESULTS	
T20.1.a R	The scheme provider must report results in a clear and unambiguous manner which must contain the following: • Date report is released • Participant ID • Samples / Commodities Tested • Results of each parameter • Difference from assigned value • Standard deviation (SD) value used • z-scores for each parameter • Robust mean/assigned value for each parameter (see APP15.8.b)	***Guidance*** Can be in the format of a table/charts with colour coding to aid interpretation.
T20.1.b R	The assigned values for each parameter must be calculated in one of the following ways depending upon the amount of reference data available. If there is enough reference data available, then the assigned value must be calculated using this. • Mean of reference results (minimum x 3)	***Guidance*** The mean reference result is the mean result from a minimum of three Testing Facilities that have performed

	• Robust mean of reference results (minimum x 8) • Participants robust mean of results (minimum x8) This can only be used if sufficient reference data is not available If neither method of calculation of the assigned value can be used then z scores must not be reported. • The source of the assigned value for each parameter must be clearly stated in either the scheme protocol or the report. • If the method of calculating the assigned value has changed this must be demonstrated in writing.	the test by the reference method. The reference robust mean result is the robust mean result calculated from a minimum of 8 Testing Facilities that have performed the test by the reference method. The participants robust mean result is the robust mean result calculated from a minimum of 8 participants of the scheme whatever test method is used. Where results of participants fall outside of acceptable tolerances as defined by the scheme, these should not be used for mean calculations. This may be via email or the report. The report may or may not be issued for monitoring purposes.
T20.1.c R	Testing Facilities supplying reference data may or may not be participants of the scheme. Testing facilities will hold appropriate certification for the method used, if not certified they must be able to prove consistency and accuracy for the methods used. For specific weight a 1L Chondrometer must be used.	***Guidance*** Appropriate certification TASCC, UFAS, GAFTA, FOSFA, UKAS, BRC or the equivalent. It is recommended that the scheme provider monitors and reviews reference testing facilities performance. Recommended reference methods used can be found in Appendix 16.
T21	Z-SCORE	
T21.1.a	A participant's z-score must be calculated using the following: Z-score = <u>Facility's result – Assigned value</u> Established standard deviation (SD)	

T21.1.b	Standard deviation (SD) values no greater than those given in the AHDB Standard Values for Testing document must be used for the calculation of z-scores	***Guidance*** See AIC - Appendix 17

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