A120 – Petroleum Testing Checklist
Revision 1.5 – May 5, 2015

Laboratory Name: _____

Appendix Name: _____

Appendix Number: _____

Assessor: _____

Date: _____

CALA
Laboratory Accreditation

Item	Clause	Requirement	Document Review 1 2 3	Implementation 1 2 3
01		**DOCUMENT CONTROL**		
01	4.3	Verify that the current authorized test method and supporting work instructions are available to the analyst. Verify that the modifications to the reference methods are documented, and that the method is accurately reflected on the scope.	❑ ❑ ❑	❑ ❑ ❑
02		**TEST METHOD VALIDATION**		
01	5.4	Verify that there are method validation results, and a statement that the method is fit for the intended use, for the following (as applicable): Modifications from the reference method shall be documented and validated.	❑ ❑ ❑	❑ ❑ ❑
		• Analytical range;	❑ ❑ ❑	❑ ❑ ❑
		• Precision;	❑ ❑ ❑	❑ ❑ ❑
		• Trueness/bias;	❑ ❑ ❑	❑ ❑ ❑
		• Measurement uncertainty.	❑ ❑ ❑	❑ ❑ ❑
03		**TEST METHOD**		
		Test Procedure: Verify that all necessary successive steps in the test procedure (including details on reagent preparation, storage and shelf life, sample preparation/pre-treatment, data reduction, equipment, supplies, data validation, etc.) are appropriate and based on the latest valid edition of a published reference method, unless it is not possible or appropriate.	❑ ❑ ❑	❑ ❑ ❑

Item	Clause	Requirement	Document Review 1 2 3	Implementation 1 2 3
04		**SAMPLING**		
01	5.7	Sample History Verify that sample history requirements are 1) appropriate 2) included or referenced in the test method and 3) implemented; e.g.,	❑ ❑ ❑	❑ ❑ ❑
		• Sample containers;	❑ ❑ ❑	❑ ❑ ❑
		• Storage conditions;	❑ ❑ ❑	❑ ❑ ❑
		• Holding time.	❑ ❑ ❑	❑ ❑ ❑
02	5.7	Sampling and Sub-sampling Verify that sampling plans for samples are based on appropriate statistical methods and that the sampling process addresses the factors to be controlled to ensure the validity of the results; i.e.:	❑ ❑ ❑	❑ ❑ ❑
		• Sampling/sub-sampling methods are available and followed;	❑ ❑ ❑	❑ ❑ ❑
		• Sampling plans are statistically based;	❑ ❑ ❑	❑ ❑ ❑
		• Field sampling generates representative samples, and duplicates are routinely taken to establish precision/ uncertainty;	❑ ❑ ❑	❑ ❑ ❑
		• Sampling methods are validated;	❑ ❑ ❑	❑ ❑ ❑
		• Sub-sampling methods are verified;	❑ ❑ ❑	❑ ❑ ❑
		• Sampling integrity is verified;	❑ ❑ ❑	❑ ❑ ❑
		• Sampling containers are appropriately cleaned.	❑ ❑ ❑	❑ ❑ ❑

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05		**METHOD CALIBRATION**		
01	5.6	Verify that method calibration is 1) appropriate 2) included or referenced in the test method and 3) implemented, e.g.,	❑ ❑ ❑	❑ ❑ ❑
		• Blank to establish calibration baseline;	❑ ❑ ❑	❑ ❑ ❑
		• equivalent standard/sample matrix;	❑ ❑ ❑	❑ ❑ ❑
		• adequate number of standards;	❑ ❑ ❑	❑ ❑ ❑
		• linearity established, if appropriate, and slope and/or RRF calculated;	❑ ❑ ❑	❑ ❑ ❑
		• control standard (independent from the routine calibration standards) and reagent blank to monitor calibration accuracy/stability;	❑ ❑ ❑	❑ ❑ ❑
		• control charting where applicable (see P07);	❑ ❑ ❑	❑ ❑ ❑
		• criteria to identify calibration non-conformances.	❑ ❑ ❑	❑ ❑ ❑
06		**METHOD QUALITY CONTROL**		
01	5.9	Verify that method quality control is 1) appropriate 2) included or referenced in the test method and 3) implemented; e.g.,	❑ ❑ ❑	❑ ❑ ❑
		• duplicates to monitor precision (range is as specified in the reference method;	❑ ❑ ❑	❑ ❑ ❑
		• reference sample to monitor accuracy /recovery (range is as specified in the reference method;	❑ ❑ ❑	❑ ❑ ❑
		• method blank to monitor contamination;	❑ ❑ ❑	❑ ❑ ❑

Item	Clause	Requirement	Document Review 1 2 3	Implementation 1 2 3
06		**METHOD QUALITY CONTROL (Continued)**		
01	5.9	• control charting where applicable (see P07);	❑ ❑ ❑	❑ ❑ ❑
		• criteria to identify method non-conformances;	❑ ❑ ❑	❑ ❑ ❑
		• PT, as per P02-03 – *CALA Program Description - Proficiency Testing Policy for Accreditation*; participates in an appropriate exchange program, as applicable (e.g., ARC, ASTM etc.).	❑ ❑ ❑	❑ ❑ ❑
07		**TEST METHOD CONTENT**		
01	5.4.1	Other Work Instructions/Procedures Verify that all necessary supporting work instructions are 1) either included or referenced in the test method and 2) available to the analyst; e.g.,	❑ ❑ ❑ _____ _____ _____ _____ _____ _____ _____	❑ ❑ ❑ _____ _____ _____ _____ _____ _____ _____
		• glassware cleaning procedures;	❑ ❑ ❑	❑ ❑ ❑
		• supporting test methods;	❑ ❑ ❑	❑ ❑ ❑
		• equipment instruction manuals;	❑ ❑ ❑	❑ ❑ ❑
		• requisite reference texts;	❑ ❑ ❑	❑ ❑ ❑
		• computer software related procedures;	❑ ❑ ❑	❑ ❑ ❑
		• gas cylinder cleaning procedure.	❑ ❑ ❑	❑ ❑ ❑

Item	Clause	Requirement	1 2 3
08		**CONDUCT OF TESTING**	
01	5.4.1 4.2.1	Verify that the test procedure and all supporting work instructions are performed as documented.	❑ ❑ ❑
09		**EQUIPMENT**	
01	5.5.1 5.5.2 5.5.4 5.5.12	Verify that all instruments required for the test procedure are available, functioning properly, capable of achieving the required accuracy, compliant with specifications, checked and calibrated before use, uniquely identified, and safeguarded from adjustments that would invalidate results. Measurement equipment calibrations are performed as specified in the reference method (e.g. for RVP method, pressure transducer and platinum resistance, thermometers are calibrated every 6 months as required by ASTM method).	❑ ❑ ❑
02	5.5.1	Verify that all support equipment* required for the test procedure is available and functioning properly. * Includes computers.	❑ ❑ ❑
03	5.5.7 5.5.9	Verify that out of service equipment is clearly isolated or clearly labeled or marked as being out of service, and that equipment is checked and validated before return to service.	❑ ❑ ❑

Item	Clause	Requirement	1 2 3
09		**EQUIPMENT (continued)**	
04	5.5.8	Verify that all equipment requiring calibration is labeled to indicate calibration status, including the date last calibrated and expiry date or date when recalibration is due.* *not required for equipment checked daily or as-used.	❑ ❑ ❑
10		**SUPPLIES**	
01	4.6.2 5.5.1	**Availability:** Verify that all supplies required for the test procedure are available and meet requisite requirements and/or specifications.* *Includes reagents and reference materials. NB: For records of reference standard/material certificates, cite B.05.03 in A02.	❑ ❑ ❑
02	5.3	**Storage:** Verify that all supplies are stored under appropriate conditions and in a manner that satisfies requirements for safety, security, separation of incompatible materials, and ease of retrieval. NOTE: For records of storage temperatures, cite B.02.03 in A02.	❑ ❑ ❑
03	4.13.2	**Labeling:** Verify that all reagents are labeled with material, concentration or purity, date prepared and/or expiry date.	❑ ❑ ❑

Item	Clause	Requirement	1 2 3
10		**SUPPLIES (continued)**	
04	5.5.1	**Labware**: Verify that all labware is adequately cleaned and, where required, labware quality control incorporates analytical testing.	❑ ❑ ❑
11		**RECORD KEEPING**	
01	4.13.2 4.9 4.13.2 5.5.5 5.6	Maintain records related to the performance of the test method; e.g.,	❑ ❑ ❑
		• analyst worksheet or notebook (1);	❑ ❑ ❑
		• record of non-conformances and actions taken (2);	❑ ❑ ❑
		• reagent preparation log (3);	❑ ❑ ❑
		• equipment maintenance log (4);	❑ ❑ ❑
		• test organism maintenance log (5);	❑ ❑ ❑
		• records of gravimetric traceability (6);	❑ ❑ ❑
		• records of volumetric traceability (7);	❑ ❑ ❑
		• records of temperature traceability (8);	❑ ❑ ❑

(1) Includes, as appropriate, calibration data, test data (including QC data), experimental variables (e.g., temperature, etc.); analyst ID; sample ID; equipment ID; test method ID; date and time of test.

(2) Includes, as appropriate, non-conformances related to: test method variances; sample history; method performance; interferences; and data validation.

(3) Includes, as appropriate, supplier, grade, batch no; dates of preparation or verification; measurement of weights, volumes, time intervals, temperatures and related calculations; relevant processes; verification results; discard date.

(4) Includes, as appropriate, identity of the item of equipment and its software; manufacturer, model, serial no; checks that equipment complies with lab specifications; date commissioned; repair and maintenance history; calibration history; any damage, malfunction or modification to the equipment; location.

(5) Includes, as appropriate, traceability of balance and/or weights to a national standard, and daily or as-used checks (see A61- CALA Traceability Policy).

(6) Includes, as appropriate, traceability of flow meters, gas meters, etc., that play a defining role in analytical accuracy, and daily or as used checks (see A61 – CALA Traceability Policy).

(7) Includes, as appropriate, traceability of working thermometers to a national standard for those thermometers that measure temperatures that play a defining role in analytical uncertainties (see A61-CALA Traceability Policy).

(8) Includes, as appropriate, traceability and plan of device calibration for pressure transducers, platinum resistance thermometers, spinning bands etc as required by the reference method.

Assessor Notes: