



PJLA

Work Instruction for Testing Scopes of Accreditation

The scope of accreditation is a formal document issued by PJLA to its accredited laboratories. It contains information for which accreditation has been granted in regards to types of tests performed, techniques used and detection limits.

It is the responsibility of the laboratory to prepare its proposed scope of accreditation before its initial assessment. The proposed scope of accreditation will be reviewed by your assessor onsite for accuracy and completeness. Once your assessor has agreed with the proposed scope of accreditation, both the laboratory and the assessor will sign the proposed scope and submit that to PJLA for review with the assessment package. Please note that the submitted scope of accreditation can be modified by PJLA after technical review of the assessment package.

When accreditation is granted, PJLA will issue a final scope of accreditation certificate. The final scope of accreditation will be available to the public through inquiry to PJLA or through the PJLA website. Per PJLA procedures a laboratory whose accreditation is suspended or terminated shall not use or display the scope of accreditation or the PJLA name and logo in any way.

Your scope of accreditation will be reviewed at your accreditation and reaccreditation assessments. Special exceptions would be made at surveillance audits should any information on your scope of accreditation need to be changed.

The following information should be used to complete the scope of accreditation worksheet, LF-64.

Field of Test:

The entry in this field needs to represent the generic classification of the testing services provided by the laboratory. When completing this field, the entry needs to broadly describe the discipline that is to follow in the adjacent columns. Appendix A of this work instruction includes a listing of appropriate fields to be used based on the types of testing that is being provided by the laboratory. Should you find that your testing areas do not fit into the fields listed in Appendix A, please notify PJLA staff to assist you with completing this section of your scope of accreditation.

Items, Materials or Products Tested:

Define the products, materials or other items that you test using the technology defined in column three. For example: Metals, Waste Water or Plastic Components.

Specific Tests or Properties Measured:

The entry in this field needs to represent the tests you are performing. This entry needs to be specific and fully describe the test or property so as to indicate the capabilities of the laboratory.

Specification, Standard Method or Technique Used:

Enter all of the test methods that are used when performing tests in the technologies related to the third column. The test method may be an internationally recognized test method such as ASTM, SAE or other accepted methods. This may also be a customer specified method or internal method. Whichever method is stated on the scope, the laboratory is expected to have available the most current version of that method.

Range (Where Appropriate) and Detection Limit:

Provide the lower and upper boundaries for the range of the parameter. Beware of including a zero as the lower boundary, especially when a percent or multiplier is used

Detection limit for the product in the manner to be tested must be provided. Detection Limit can be expressed in quantitative or qualitative terms as necessary. The capabilities of the laboratory need to be clearly expressed in an easy to understand format.

The units, which define the measurement, must comply with acceptable units. Please refer to NIST SP 811 and Appendix B of this document regarding the use of SI units.

Format:

A separate line entry is needed for each parameter/discipline and/or each range listed for that parameter. For each line entry, a separate line must be used for each range.

The format of the example table must be followed. This includes font (Times New Roman), font size (10), column order and column headings, and placement of notes. Blank Boxes and boxes containing the phrase “N/A” will only be accepted for the range of the parameter and not the detection limit, where applicable.

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Environmental	Waste Water	Sodium Content	EPA 10528	0.001 mg/dl to 0.15 mg/dl 0.000012 mg/dl
Mechanical	Automotive Components	Chipping Resistance	SAE 4500A	± 5%

APPENDIX A

Testing Field:

1. Biological: Biological, microbiological and biochemical testing and measurement.
2. Chemical: Chemical analysis and detection including instrumental and automated methods.
3. Dimensional Inspection
4. Electrical: Tests of an electrical and electronic nature performed on instruments, equipment, appliances, components and materials.
5. Environmental: Tests for constituents in various environmental media.
6. Mechanical: Tests, measurements and evaluation of physical properties of materials, components and assemblies.
7. Non-Destructive: Examination of materials, components and assemblies to detect discontinuities without damaging the material, component or assembly.

APPENDIX B

Guidelines for the use of SI units for the scope of accreditation

The General Conference on Weights and Measures established the International System of Units (SI). It is the modern metric system of measurement used throughout the world. PJLA policy requires the use of SI units to be used for reporting results of measurements on scopes of accreditation. This policy calls for the use of NIST SP 811 and ISO 31 series for direct guidance on the use of symbols and numbers. The NIST SP 811 is a publication that was created to assist anyone needing assistance in the use of the SI in his or her work.

It is the responsibility of the client to know and understand the requirements of the SI on their scope of accreditation. The NIST SP 811 is available on the Internet from the NIST website. The ISO 31 series is available for purchase from the ISO website. The cost varies depending on which standards in the series you will need. If you choose to purchase these, we recommend at least acquiring the ISO 13-0, General Principles, and ISO 31-11, Mathematical signs and symbols for use in the physical sciences and technology.

The following pages contain a small sampling of guidelines and examples contained in the NIST SP 811.

Rule:	Example:	Instead Of:
Only units of the SI and those recognized by the SI are used.	10 m 100 °C	10 ft 100 °F
Abbreviations are avoided	S or second cm ³ or cubic centimeter	sec cc
ppm, ppb and ppt are avoided	2 ng/kg 1.1 nm/m	2 ppt 1.1 ppb
Unit symbols are not modified in order to provide information about the quantity.	$V_{\max} = 1000 \text{ V}$	$V = 1000 \text{ V}_{\max}$
The symbol “%” can be used in place of the number 0.01	$x_{\beta} = 0.0038 = 0.38 \%$	$x_{\beta} = 0.25 \text{ percent}$
Quantities are to be defined so that they can be expressed solely in acceptable units	The Ca content is 25 ng/L	25 ng Ca/L
Unit and mathematical symbols and names are not mixed	m/s or meter per second	meter/s
Values for quantities are expressed in acceptable units using Arabic numerals and the SI symbols for units	The weight of the box was 35 kg.	The length of the box was thirty-five kilograms.
There is always a space between the quantity and the unit symbol, except when it is a plane angle	189 kg 25 °C 357 Ω 24° (plane angle)	189kg 25°C 357Ω 24 ° (plane angle)
A thin space is used to separate digits with more than four per side of a decimal point	123 586 257.004 1	123586257.0041 or 123,586,257.0041
Quantity equations are preferred to numerical value equations	$l = vt$	$\{l\}_m = 3.6^{-1} \{v\}_{\text{km/h}} \{t\}_s$
A quotient quantity is expressed using “divided by” instead of “per unit”	Pressure is force divided by area.	Pressure is force per unit area.

Rule:	Example:	Instead Of:
The terms Normality and Molarity, symbols N and M respectively are obsolete. The preferred name is amount of substance concentration of B.	A solution having an amount of substance concentration of $c[(1/2)H_2SO_4]$	A 0.5 N solution of H_2SO_4
Values of quantities are to be written so that it is clear to which unit symbols the numerical values of the quantities belong.	51 mm x 51 mm x 25 mm	51 x 51 x 25 mm
The word “to” is used to indicate a range of values instead of a dash.	0 V to 5 V	0 V – 5 V

1. The word “weight” is used with the intended meaning clear. In science and technology, weight is defined as a force, for which the SI unit is the Newton. In commerce and everyday use, weight is used as a synonym for mass, for which the SI unit is the kilogram.
2. Standardized quantity symbols given in the ISO 31 series are used. Similarly, standardized mathematical signs and symbols such as those given in ISO 31-11 are used.