

ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services



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PJLA Calibration/Inspection Program Manager
September 29, 2021



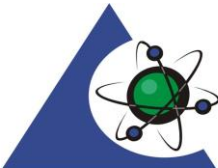
ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

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- All attendees are muted. However, feel free to utilize the questions tab and they will be answered at the end of the session.



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

This section combines the concepts of purchasing and subcontracting into one section.



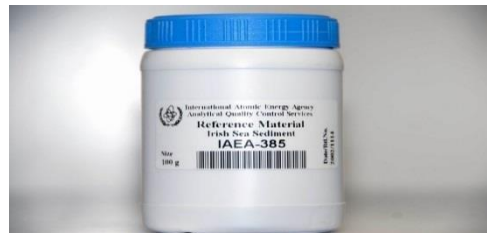
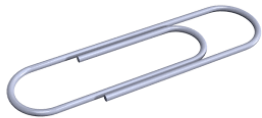
ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

Other than fulfilling the requirements of this section, the importance of selecting the right potential vendor should be of utmost importance. You are selecting a partner in your business and you will trust them to work with you in a professional and profitable manner. It is important that you select a company that can supply your **requirements** now and future needs;



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

6.6.1 The laboratory shall ensure that only suitable externally provided products and services **that affect laboratory activities** are used, when such products and services:



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

6.6.1 – The laboratory shall ensure that only suitable externally provided products and services **that affect laboratory activities** are used, when such products and services:

- a) are intended for incorporation into the laboratory's own activities;
- b) are provided, in part or in full, directly to the customer by the laboratory, as received from the external provider; - subcontracting
- c) are used to support the operation of the laboratory



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

In regards to subcontracting, the procedure for reviewing requests, tenders, and contracts shall include the laboratory's information to the customer of externally provided activities, and the customer shall approve the involvement of external providers before starting laboratory activities.

7.7.1 c) where external providers are used, the requirements of 6.6 are applied and the laboratory advises the customer of the specific laboratory activities to be performed by the external provider and gains the customer's approval



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

NOTE Products can include, for example, measurement standards and equipment, auxiliary equipment, consumable materials and reference materials. Services can include, for example, calibration services, sampling services, testing services, facility and equipment maintenance services, proficiency testing services and assessment and auditing services

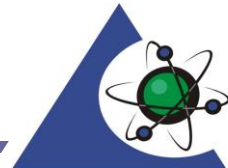
Support Functions



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

6.6.2 The laboratory shall **have a procedure** and **retain records** for:

- a) defining, reviewing and approving the laboratory's requirements for externally provided products and services;
- b) defining the criteria for evaluation, selection, monitoring of performance and **re-evaluation** of the external providers;



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

6.6.2 The laboratory shall **have a procedure** and **retain records** for:

- c) ensuring that externally provided products and services conform to the laboratory's established requirements, or when applicable, to the relevant requirements of this document, before they are used or directly provided to the customer;
- d) taking any actions arising from evaluations, monitoring of performance and re-evaluations of the external providers



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

Got rid of the list as 2017 is more electronic driven -
Added monitoring & re-evaluation

- From ISO/IEC 17025:2005

*4.6.4 The laboratory shall evaluate suppliers of critical consumables, supplies and services which affect the quality of testing and calibration, and shall maintain records of these evaluations and **list those approved***

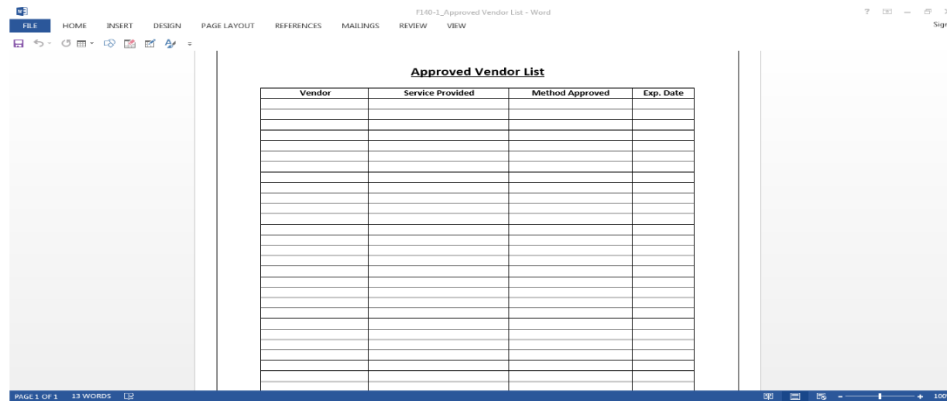
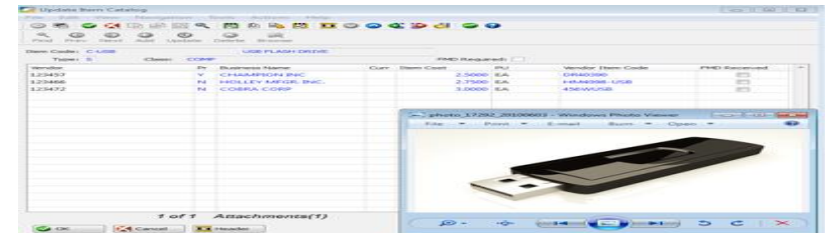
The list “approved vendors and suppliers” can still be used to capture records however not required.



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

Labs has flexibility on showing a record that the requirements are being met;

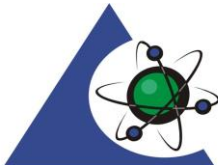
7	Excellence	Exceeds company's and customers' expectations, demonstrates extra effort
5	Good	Meets the company's expectations
3	Acceptable	Meets company's minimum requirements
1	Poor	Does not meet company's and customers' minimum acceptable level
2,4,6,8,9		Annectent grades



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

Criteria for defining evaluation, selection, monitoring of performance and re-evaluation of the external providers may include:

- Accreditation to ISO/IEC 17025
- ISO/IEC 17011
- ISO/IEC 17043
- ISO 9001
- On time delivery
- Supplier Audits
- Testimonials and references these are valuable if you can check that the vendor is reliable and as they claim to be
- Years in business - need to know that the organization is established and ready to service your requirements
- Accuracy requirements and capabilities: Scope of Accreditation “Range and CMC’s



Ranges and CMC's for Calibration Laboratories

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11 of 13

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Mass, Force, and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Balances ⁰	1 g to 10 kg	260 mg	NIST Handbook 105-1 (Class F) Test Weights P23-00

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Pressure ^{FO}	5 psig to 300 psig	0.33 psi	Fluke 702 with module 700PO7, P25-00
	100 psi to 10 000 psi	0.82 % of reading	Deadweight Pressure System (Mansfield & Green T-100) P25-00
Torque Wrench ^{FO}	5 lbf•in to 25 lbf•in	1.3 lbf•in	Mark-10 TT02, P24-00
	20 lbf•in to 100 lbf•in	1.8 lbf•in	Mark-10 TT03, P24-00
	100 lbf•in to 200 lbf•in	3.9 lbf•in	CDI 10002-I-DTT P24-00
	200 lbf•in to 600 lbf•in	5 lbf•in	
	600 lbf•in to 1 000 lbf•in	6 lbf•in	CDI 6004-F-DTT P24-00
	60 lbf•ft to 300 lbf•ft	2 lbf•ft	
300 lbf•ft to 600 lbf•ft	3.6 lbf•ft		



Ranges and CMC's for Calibration Laboratories

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1 of 13

*Dimensional, Electrical, Mechanical, Time & Frequency,
Thermodynamic, Mass, Force, and Weighing Calibration*
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

	<i>Initial Accreditation Date:</i> November 23, 2013	<i>Issue Date:</i> May 01, 2020	<i>Expiration Date:</i> June 30, 2022
Tracy Szerszen President/Operations Manager	<i>Accreditation No.:</i> 74269	<i>Certificate No.:</i> L20-278	

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjilabs.com

Page 1 of 13

  *Certificate of Accreditation: Supplement*



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

- **6.6.3** The laboratory shall **communicate its** requirements to external providers for:
 - a) the products and services to be provided;
 - b) the acceptance criteria;
 - c) competence, including any required qualification of personnel;
 - d) activities that the laboratory, or its customer, intends to perform at the external provider's premises;



ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

The laboratory shall communicate gives much more flexibility than requiring purchasing documents for items affecting the quality of laboratory output which shall contain data describing the services and supplies ordered.



Your Company		PURCHASE ORDER No.	
Your Street, Your Town, Your County, Postcode Your Telephone Number, Your Fax Number Your Email Address, Your Website Address		Order Date:	
Invoice to:		Requested Date:	
Delivery to (if different):		Ordered By:	
		Account Number:	
QTY	DESCRIPTION	PRICE	
			TOTAL €

ISO/IEC 17025:2017 Section 6.6 Externally Provided Products and Services

Assure enough detail is conveyed to your supplier and examine upon receipt to assure you got what should have been clearly specified.

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Certificate of Accuracy

Client: Manny Moe and Jack Scale and Balance Company Report number 14356
 200 Anywhere Street
 Richmond, VA 12543
 Unit Calibrated: 12 piece precision mass weight set
 Manufacturer Troemner
 Serial Number 54321
 Date Calibrated: 11-21-18 Date Calibration Due: 11-21-19

The mass standards submitted was tested using standard methods employed by Ace Calibration Company and found to meet both specification and tolerances as specified in ASTM E617 for Class 1 mass standards.

The calibration was performed with standards traceable to NIST. The results of the calibration relate only to the items specified above. This report may not be reproduced except in full without the written approval of Ace Calibration Company.

Approved by: 
 Joe Smith

Class1 sn 1KK4 exp 7.30 22.2mg to 200g.pdf - Adobe Acrobat Reader DC (32-bit)

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Home Tools ISO/IEC 17025:201... PL-4 Calibration Sc... sample cert to review... Class1 sn 1KK4 exp... x Sign In

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AS LETT Data (AS FOUND ONLY SHOWN WHEN DIFFERENT THAN AS LETT)

Nominal Value	Unique ID	True Mass	True Mass Corr. (mg)	Conv. Mass	Conv. Mass Corr. (mg)	(k=2) Unc. (± mg)	MPE (± mg)	MPE Pass	Assumed Density (g/cm ³)	Assumed Material	Const. Type	Balance Used	Reference Standard Set Used	Air Density (mg/cm ³)	Clear Level
2 mg 1KK4		2.00493	0.00493	2.00493	0.00493	0.00069	0.010	Y	7.95	SS	I	503Q	L595Q	1.1578	A
5 mg 1KK4		5.00152	0.00152	5.00152	0.00152	0.00084	0.010	Y	7.95	SS	I	503Q	L595Q	1.1578	A
10 mg 1KK4		10.0050	0.0050	10.0050	0.0050	0.0012	0.010	Y	7.95	SS	I	503Q	L595Q	1.1574	A
20 mg 1KK4		20.00386	0.00386	20.00364	0.00364	0.00087	0.010	Y	7.95	SS	I	503Q	L595Q	1.1574	A
30 mg 1KK4		30.0050	0.0050	30.0049	0.0049	0.0012	0.010	Y	7.95	SS	I	503Q	L595Q	1.1573	A
50 mg 1KK4		50.0006	0.0006	50.0005	0.0005	0.0011	0.010	Y	7.95	SS	I	503Q	L595Q	1.1572	A
100 mg 1KK4		100.0040	0.0040	100.0040	0.0040	0.0014	0.010	Y	7.95	SS	I	503Q	L595Q	1.1572	A
200 mg 1KK4		200.0025	0.0025	200.0023	0.0023	0.0014	0.010	Y	7.95	SS	I	503Q	L595Q	1.1570	A
500 mg 1KK4		499.9960	-0.0040	499.9956	-0.0044	0.0014	0.010	Y	7.95	SS	I	503Q	L595Q	1.1571	A
1 g 1KK4		0.999999	-0.0001	0.999990	-0.0010	0.0022	0.034	Y	7.95	SS	I	650Q	L595Q	1.1570	A
2 g 1KK4		1.999975	-0.0025	1.999956	-0.0044	0.0025	0.034	Y	7.95	SS	II	650Q	L595Q	1.1570	A
3 g 1KK4		3.000012	0.0212	3.0000183	0.0183	0.0030	0.034	Y	7.95	SS	II	650Q	L595Q	1.1568	A
5 g 1KK4		5.000170	0.0170	5.000122	0.0122	0.0048	0.034	Y	7.95	SS	II	650Q	L595Q	1.1574	A
10 g 1KK4		9.999986	-0.0034	9.999872	-0.0128	0.0059	0.050	Y	7.95	SS	II	1958Q	L595Q	1.1570	A
20 g 1KK4		19.999877	-0.0123	19.999689	-0.0311	0.0055	0.074	Y	7.95	SS	II	1958Q	L595Q	1.1569	A
30 g 1KK4		30.000410	0.0410	30.000127	0.0127	0.0073	0.074	Y	7.95	SS	II	1958Q	L595Q	1.1569	A
50 g 1KK4		49.999954	-0.046	49.999907	-0.093	0.011	0.12	Y	7.95	SS	II	1958Q	L595Q	1.1570	A
100 g 1KK4		100.000234	0.234	100.000139	0.139	0.020	0.25	Y	7.95	SS	II	1958Q	L595Q	1.1577	A
200 g 1KK4		200.000268	0.268	200.000080	0.080	0.044	0.50	Y	7.95	SS	II	699Q	L595Q	1.1528	A

AS FOUND Data

Nominal Value	Unique ID	True Mass	True Mass Corr. (mg)	Conv. Mass	Conv. Mass Corr. (mg)	(k=2) Unc. (± mg)	MPE (± mg)	MPE Pass	Assumed Density (g/cm ³)	Assumed Material	Const. Type	Balance Used	Reference Standard Set Used	Air Density (mg/cm ³)	Clear Level
500 mg 1KK4		500.0802	0.0802	500.0798	0.0798	0.0014	0.010	N	7.95	SS	I	503Q	L595Q	1.1571	A
5 g 1KK4		4.9999457	-0.0543	4.9999410	-0.0590	0.0048	0.034	N	7.95	SS	II	650Q	L595Q	1.1571	A
100 g 1KK4		99.999771	-0.229	99.999677	-0.323	0.020	0.25	N	7.95	SS	II	1958Q	L595Q	1.1568	A



Thank You



This time is allocated for questions. You should have a space provided for submitting questions.

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If a question is not answered, please submit directly to webinar@pjlabs.com



Save the Date

Overview of Key Requirements of ISO/IEC 17020 :2012 “Inspection”



A calendar for October 2021. The title is "October 2021". The days of the week are abbreviated as S, M, T, W, T, F, S. The dates are arranged in a grid. The date 20 is circled in blue. The calendar is set against a black background.

October 2021						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Wednesday, Oct 20th 2021

