PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Organization of:

EKO Instruments Co., Ltd.
1-21-8 Hatagaya Shibuya-ku, Tokyo 151-0072

and hereby declares that the Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2017

Whereby, technical competence has been confirmed for the associated scope supplement, in the fields of:

Mechanical Calibration, Optical Calibration
(As detailed in the supplement)

Accreditation claims for conformity assessment activities shall only be made from the addresses referenced within this certificate and shall apply solely to those activities identified in the related scope.
This Accreditation is granted subject to the Accreditation Body rules governing the Accreditation referred to above, and the Organization hereby commits to observing and complying with those rules in their entirety.

For PJLA:

Tracy Szerszen
President

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
May 8, 2013	June 13, 2025	July 31, 2027
Accreditation No.:	*Certificate No.:*	
74158	L25-447	

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.pjlabs.com

Certificate of Accreditation: Supplement

EKO Instruments Co., Ltd.
1-21-8 Hatagaya Shibuya-ku, Tokyo 151-0072
Contact Name: Akihito Akiyama Phone: 03-3469-6711

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	LOCATION OF ACTIVITY
Mechanical	Rotational viscometer LV Model Spindle 61	6 mPa·s to 6 000 mPa·s	41 mPa·s	Standard solution for viscometer calibration on the basis of JISZ8809 JS500 JS2000 JS14000 JS1000 JS52000 JS160000 B Type Rotational viscometer	'Rotational Viscometer Calibration Operating Instructions (LM-03)' On basis of: Clause 9 of JISZ8803	F
	Rotational viscometer LV Model Spindle 62	30 mPa·s to 30 000 mPa·s	200 mPa·s			F
	Rotational viscometer LV Model Spindle 63	120 mPa·s to 120 000 mPa·s	820 mPa·s			F
	Rotational viscometer LV Model Spindle 64	600 mPa·s to 600 000 mPa·s	4 100 mPa·s			F
	Rotational viscometer RV Model Spindle 02	40 mPa·s to 40 000 mPa·s	300 mPa·s			F
	Rotational viscometer RV Model Spindle 03	100 mPa·s to 100 000 mPa·s	750 mPa·s			F
	Rotational viscometer RV Model Spindle 04	200 mPa·s to 200 000 mPa·s	1 500 mPa·s			F
	Rotational viscometer RV Model Spindle 05	400 mPa·s to 400 000 mPa·s	3 000 mPa·s			F
	Rotational viscometer RV Model Spindle 06	1 000 mPa·s to 1 000 000 mPa·s	7 500 mPa·s			F
	Rotational viscometer HA Model Spindle 02	80 mPa·s to 80 000 mPa·s	2 000 mPa·s			F
	Rotational viscometer HA Model Spindle 03	200 mPa·s to 200 000 mPa·s	4 900 mPa·s			F
	Rotational viscometer HA Model Spindle 04	400 mPa·s to 400 000 mPa·s	9 800 mPa·s			F
	Rotational viscometer HA Model Spindle 05	800 mPa·s to 800 000 mPa·s	20 000 mPa·s			F
	Rotational viscometer HA Model Spindle 06	2 000 mPa·s to 2 000 000 mPa·s	49 000 mPa·s			F

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Mechanical	Rotational viscometer HB Model Spindle 02	320 mPa·s to 320 000 mPa·s	8 600 mPa·s	Standard solution for viscometer calibration on the basis of JISZ8809 JS500 JS2000 JS14000 JS1000 JS52000 JS160000 B Type Rotational viscometer	'Rotational Viscometer Calibration Operating Instructions (LM-03)' On basis of: Clause 9 of JISZ8803	F
	Rotational viscometer HB Model Spindle 03	800 mPa·s to 800 000 mPa·s	20 000 mPa·s			F
	Rotational viscometer HB Model Spindle 04	1 600 mPa·s to 1 600 000 mPa·s	39 000 mPa·s			F
	Rotational viscometer HB Model Spindle 05	3 200 mPa·s to 3 200 000 mPa·s	78 000 mPa·s			F
	Rotational viscometer HB Model Spindle 06	8 000 mPa·s to 8 000 000 mPa·s	200 000 mPa·s			F

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Optical	Pyrheliometer (outdoor calibration) ISO9060:2018 Class A	700 W/m^2 to 1 200 W/m^2	0.47 % of reading	Standard Pyrheliometer (MS-57) Data logger (CR1000X)	Pyrheliometer and Pyranometer Calibration Operating Instructions (Clause 2) (LM-10) On basis of: WMO-No.8:2018 and ISO9059:1990	F
	Pyrheliometer (indoor calibration) ISO9060:2018 Class A	700 W/m^2 to 1 200 W/m^2	0.45 % of reading	Standard Pyrheliometer (MS-57) Digital multi-meter (34401A)	Pyrheliometer Indoor Calibration Operating Instructions (Clause 2) (LM-10A) On basis of: WMO-No.8:2018 and ISO9847:2023	F
	Pyranometer ISO9060:2018 Class A	700 W/m^2 to 1 400 W/m^2	0.49 % of reading	Standard pyranometer (MS-802) and (MS-80) Digital multi-meter (34401A)	Pyrheliometer and Pyranometer Calibration Operating Instructions (Clause 3) (LM-10) On basis of: WMO-No.8:2018 and ISO9847: 2023	F

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Optical	Pyranometer ISO9060:2018 Class B	700 W/m^2 to 1 400 W/m^2	1.0 % of reading	Standard pyranometer (MS-60) Digital multi-meter (34401A)	Pyrheliometer and Pyranometer Calibration Operating Instructions (Clause 3) (LM-10) On basis of: WMO-No.8:2018 and ISO9847: 2023	F
	Pyranometer ISO9060:2018 Class C	700 W/m^2 to 1 400 W/m^2	1.1 % of reading	Standard pyranometer (MS-40) Digital multi-meter (34401A)	Pyrheliometer and Pyranometer Calibration Operating Instructions (Clause 3) (LM-10) On basis of: WMO-No.8:2018 and ISO9847: 2023	F
	Silicon-pyranometer (ML-01), (ML-02) ISO9060:2018 Class C	700 W/m^2 to 1 400 W/m^2	1.5 % of reading	Standard silicon-pyranometer (ML-01) Digital multi-meter (34401A)	Pyrheliometer and Pyranometer Calibration Operating Instructions (Clause 3) (LM-10) On basis of: WMO-No.8:2018 and ISO9847: 2023	F

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Accreditation is granted to the facility to perform the following conformity assessment activities:

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.

2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.

3. Location of activity: Location Code – Location
   F - Conformity assessment activity is performed at the CABs fixed facility