



23rd APLMF Meeting
Tokyo, Japan

Economy Report

Thailand

Report developed/approved by

Organisation

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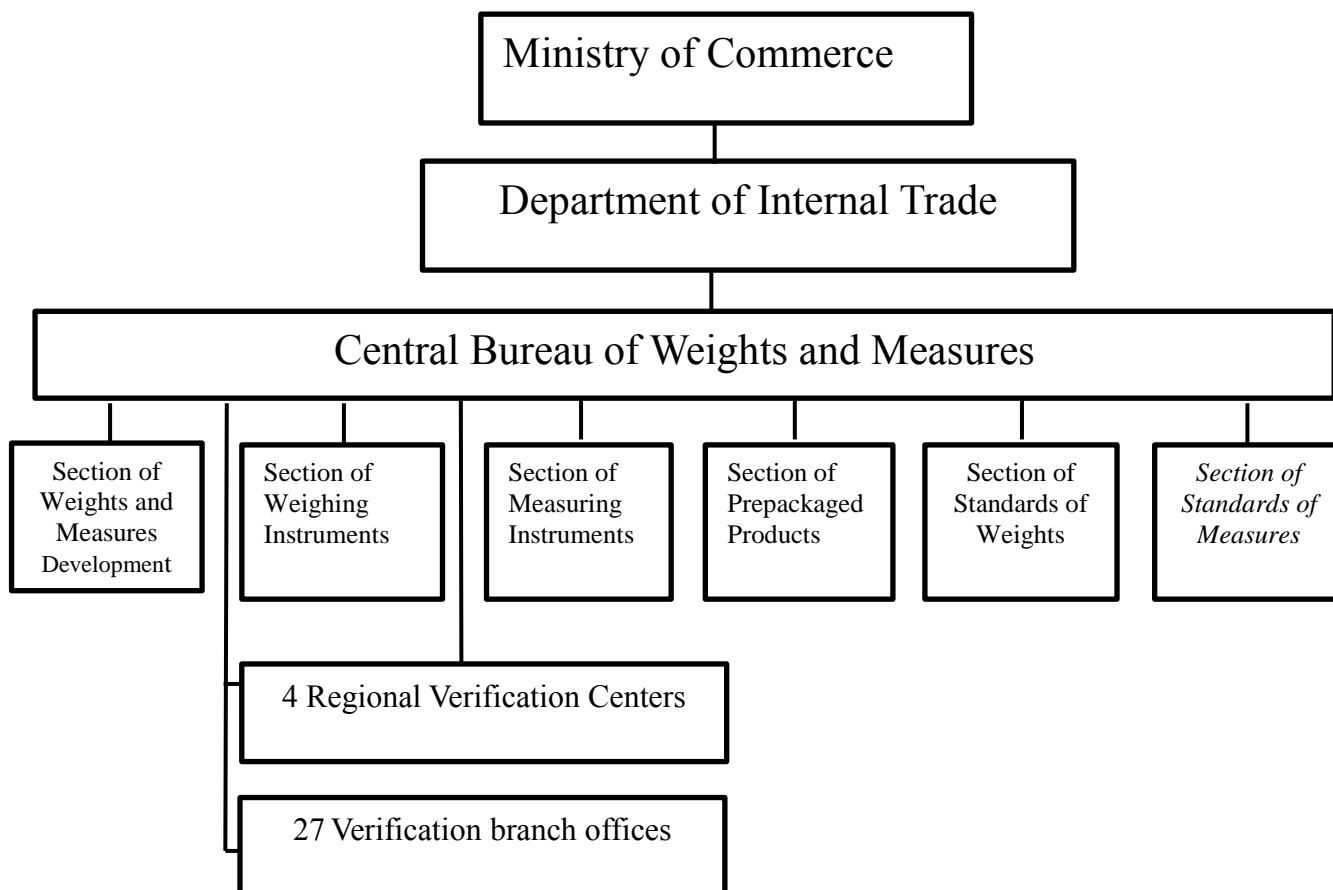
SECTION 1 – Organisation and structure for metrology

Organisation Structures

National Organization for Legal Metrology

The Department of Internal Trade (DIT)
 Ministry of Commerce
 Nonthaburi Road, Nonthaburi 11000
 Thailand

The Central Bureau of Weights and Measures of Thailand has the responsibility for all legal metrology activities, and acts under the direction of the Department of Internal Trade (DIT). The function of the Central Bureau of Weights and Measures include the registration, verification, inspection and general control of licenses, and of measuring instruments used in Thailand, in conformity with the requirements of the Law and Ministerial Regulations.



Custodian of National Standard

National standards are kept and maintained by:
 National Institute of Metrology (Thailand)
 3/4-5 Moo 3, Klong 5, Klong Luang, Pathumthani 12120, Thailand

National organizations responsible for maintaining primary standards

Primary standards are held and maintained by the National Institute of Metrology (Thailand).

Regional and local verification organization

At present there are 27 verification branch offices and 4 verification centres within the organization of the Central Bureau of Weights and Measures, spreading over the country. Each verification branch office and verification centre performs under the Weights and Measures Law and the policy of DIT to inspect, verify all measuring instruments used for trade. In addition, each verification centre provides calibration services in its region for verification branch offices and customers from industry.

Instrument Calibration and Evaluation Systems

The Central Bureau of Weights and Measures is responsible for calibrating, inspecting and verifying all measuring instruments prescribed in the Weights and Measures Law. There is no other accredited organization or laboratory that can perform the duty related to legal metrology.

For voluntary application, not legal, there are laboratories accredited by Thai Laboratories Accreditation Scheme (TLAS) provide calibration and testing services for the public.

RANGE OF EQUIPMENT SUBJECT TO LEGAL METROLOGY

All measuring instruments intended for trade use and covered by the Weights and Measures Law, must pass verification and be sealed with a verification mark before being put on the market or used.

VERIFICATION (CONFORMITY ASSESSMENT), INSPECTION AND REVERIFICATION

Legal and Technical Requirements for Verification and Reverification

All measuring instruments prescribed for trade use or any other applications under this Law, or the Ministerial Regulations, must be verified by the Central Bureau of Weights and Measures, Branch offices or the organizations, manufacturers or repairers designated by DIT.

There are two types of verifications for the measuring instruments. The first verification of a measuring instrument, which has never been verified, is called an initial verification and the reverification after repairing and expiration of the term of validity for verification is called a reverification.

The requirements for verification or reverification are as follows:

- The instrument must operate within the appropriate limits of error that may be tolerated under the Ministerial Regulations.
- The instrument must provide graduations in a unit of measurement under Metric System or certain additional customary units of measurement within the meaning of Weights and Measures Law.

Range of Equipment Verified and Reverified and any Statistical Information Available

The range of equipment verified or reverified include the following:

- Non-automatic weighting instruments
- Automatic weighting instruments:
 - Belt-Conveyor Scale Systems
 - Automatic Bulk Weighing Systems
- Weights
- Liquid Measures
- Dry Measures
- Linear Measures:
 - Measuring tapes
 - Straight rules
 - Fabric-Measuring Devices
 - Liquid-Measuring Devices
- Mass Flow Meters
- Water Meters
- LPG -Measuring Devices
- Gas Meter
- Rice Moisture Meters

Fee Structure

Fee for verification or reverification ranging from US \$ 1-200 depending on type and capacity of measuring instrument.

LEGAL METROLOGY PRACTITIONERS

Numbers

152 officials are involved in legal metrology functions; 49 officials in the Central Bureau of Weights and Measures, and 103 officials in the regional verification branch officials.

Qualification/Training

The qualifications of the weights and measures officials are in the fields of engineering and physics. Inspectors must complete the Inspector Training Course and be authorized by DIT.

Training Organizations and Courses Organized

The Central Bureau of Weights and Measures provides and organizes the following courses:

- Inspector Training Course;
- Verification of Measuring Instruments;
- Calibration of Measuring Instruments
- Checking the Net Content of Prepacked Products.

Each course, except Inspector Training Course, is offered every year, mainly emphasizing on verifying, inspecting and calibrating methods, and law.

Legislative Frameworks

Primary Legislation	<p>1923 - Weights and Measures Act BE2466</p> <p>1999 - Weights and Measures Act BE2542</p> <p>2006 - Revised Weights and Measures Act BE2542</p> <p>2014 - Revised Weights and Measures Act BE2542</p>
Secondary Legislation	<p>Ministerial Regulations</p> <ul style="list-style-type: none"> - Type of Weighing and Measuring Instrument under the Law, the Accuracy of Weighing and Measuring Instrument, Private Mark Registration. - Fees. - The weights and Measures Inspector Identification Card. - Granting and Issuing Licences and Permit. <p>Ministerial Notification</p> <ul style="list-style-type: none"> - The Weighing and Measuring Instruments which are exempted the verification requirement - The Weighing and Measuring Instrument of the permanently fixed type which is relocated and such Instrument has been verified. - Prepackaged Products. - The kind of commodities which purchasing, selling or distributions in the kingdom have to use the Metric System of Weights and Measures. - The prescribing the practices to be follow by the users of the Digital Truck Scale. - The prescribing the practices to be follow by the users of the Rice Moisture Meter. -The Notification of the establishment of a Branch Bureaus.

International arrangements and engagement

OIML	-2016 the member state of the International Organization of Legal Metrology . (1995 the corresponding member).
APLMF	-1999 the full member of the Asia-Pacific Legal Metrology Forum.
ACCSQ	-2001 Working Group on Legal Metrology under the ASEAN Consultative Committee for Standards and Quality: ACCSQ

In 2016 Thailand cooperate with the APLMF under the MEDEA Project held the training course on the Verification of Fuel Dispensers on 11 – 13 July 2016.



There are 17 participants from 12 countries Bangladesh, Bhutan, Cambodia, Indonesia, Malaysia, Mongolia, Nepal, Philippines, Papua New Guinea, Sri Lanka, Vietnam and Thailand.



The 5 trainers from Australia Cambodia Philippines and Thailand



The Demonstration of testing.

SECTION 2 – Key activities of 2015/16

Develop the Weights and Measures Laboratories and Pre-packaged Products Inspection body

-The ISO17025 for 3 laboratories: Mass, Volumatic and Dimension.



Scope of Accreditation for	Mass	:	1 mg to 50 kg (Class E2) 100 kg to 500 kg (Class M1)
	Volumatic Flask	:	50 to 1,000 cm ³
	Graduated Cylinder	:	50 to 2,000 cm ³
	Pyknometer	:	100 cm ³
	Spherical displacement of plummet	:	100 cm ³
	Proving tank	:	5 l to 100 l
	One piece rigid measures:		15 cm to 500 cm
	Flexible steel tape measures with tensioning weight or sinker		0 cm to 3,000 cm

- the ISO 17020 for pre-packaged Products Inspection



Field of Inspection : Net Quantity in Weight, Volume, Length and count

Protecting consumers

-Thailand Estimate Mark



The Condition of the Mark application

1. The manufacturers have to send the staffs to train about the requirement of ISO 17020.
2. The manufacturers have to process the quality system of checking the net content of pre-packaged products which according to the Ministerial Notification concerned the Prepackaged Products
3. The CBWM Officer will audit the process of the quality system by checking as follows:
 - The Staff's Certification of ISO 17020 Training Course.
 - The Quality Manual.
 - The instruments (which use for checking the net content of prepacked) have to be certified.
 - Random checking the Prepacked products.
4. Around 30 days after first audit the CBWM Officer will audit again (same process of no.3)
5. Reporting the DIT Director for allowing to use the Mark.

Now there are 3 Manufacturers have been accredited and allowed to use the Mark as follows:

1. Siam Makro Public Company Limited.
(The products which are allowed to use the mark as: Tomato Ketchup, Sukiyaki Sauce, Sweet Chili Sauce, Chili Sauce, Plum Sause, Dark Soy Sause, Soy Bean Paste, Brown Rice, Rice, Sticky Rice, Black Sticky Rice, Soy Bean Oil, Sugar, Creamer, Detergent, Mayonnaise, Salad Cream, Instant Coffee other kind of dried meats.)
2. Chumporn Palm Oil Industry Public Company Limited
(The product which is allowed to use the mark is Palm Oil.)
3. White House Cleaning Products Company Limited
(The product which is allowed to use the mark is Bathroom cleaning liquid.)



SECTION 3 – Future focus

New initiatives planned (next 1-2 years)

- The Latest revised the weights and Measures Act is included the type approval system in this Act, So the initiatives planed CBWM will focus on the type approval system as follow.
 - Study on type approval procedure from the other economies which have had a type approval function in the metrology system.
 - Collect database of capability of manufacturers of weighing and measuring instruments.
 - Draft the Ministerial Notification for Type Approval.
 - Discuss with the Stakeholder, about the Draft.
- Revise the other weights and measure requirements:
 - Weighing Instrument**
 - Non-automatic weighting instruments,
 - Automatic weighting instruments:
 - Belt-Conveyor Scale Systems
 - Automatic Bulk Weighing Systems
 - Weights
 - Measuring Instrument**
 - Liquid Measures
 - Dry Measures
 - Linear Measures:
 - Measuring tapes
 - Straight rules
 - Automatic level gauges for measuring the level of liquid in stationary storage tanks
 - Liquid-Measuring Devices and LPG -Measuring Devices
 - Mass Flow Meters
 - Water Meters
 - Gas Meter