

[TO BE INTRODUCED IN THE NATIONAL ASSEMBLY]

A
BILL

to provide for the establishment of National Metrology Institute of Pakistan

WHEREAS it is expedient to establish National Metrology Institute of Pakistan as an apex body, for the establishment of infrastructure of metrology to implement and operate a unified and coherent national measurement system as per international requirements and practices for quality assurance and management system and to support the legal metrology in Pakistan and matters ancillary thereto or connected therewith;

It is hereby enacted as follows:-

1. Short title, extent and commencement. — (1) This Act shall be called the National Metrology Institute of Pakistan Act, 2020.

(2) It extends to the whole of Pakistan.

(3) It shall come into force at once.

2. Definitions. — In this Act, unless there is anything repugnant in the subject or context,—

- (i) "APMP" means the Asia Pacific Metrology Program;
- (ii) "BIPM" means the Bureau Internationale Des Poids Et-Mesures i.e International Bureau of Weights and Measures;
- (iii) "Board" means the Board of Governors of the Institute constituted under this Act;
- (iv) "calibration" means "operation that, under specified conditions in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties (of the calibrated instrument or secondary standard) and in a second step, uses this information to establish a relation for obtaining a measurement result from an indication."
- (v) "Chairman" means the Chairman of the Board;
- (vi) "chemical standards" means certified reference materials and standard solutions;
- (vii) "Director-General" means the Director-General of the Institute;
- (viii) "Executive Committee" means the Executive Committee of the Board, constituted under this Act;

- (ix) "Government" means the Federal Government;
- (x) "General Conference of Weights and Measures" means the Conference General des Poids et Mesures (CGPM) established under the convention de Metre;
- (xi) "Institute" means the National Metrology Institute of Pakistan;
- (xii) "inter-laboratory comparison" means organization, performance and evaluation of measurements and tests on the same or similar items or measuring by two or more laboratories in accordance with predetermined conditions;
- (xiii) "IPO-Pakistan" means the Intellectual Property Organization of Pakistan;
- (xiv) "IP assets" means the intellectual property assets of the Institute, registered by IPO-Pakistan;
- (xv) "ISO" means International Organization for Standardization;
- (xvi) "ISO/IEC 17025" means international standard for general requirements for the competence of testing and calibration laboratories;
- (xvii) "member" means member of the Board;
- (xviii) "metrology" means the field of knowledge concerned with measurements and includes units of measurements and their field of application and all theoretical and practical problems relating to measurements or the science of measurement;
- (xix) "metrological traceability" means property of a measurement results, whereby the results can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty;
- (xx) "OIML" mean the Organization Internationale De-Metrology Legele i.e International Organization of Legal Metrology;
- (xxi) "PCSIR" means the Pakistan Council of Scientific and Industrial Research;
- (xxii) "physical standards" means measurements that serve as a basis for planning, scheduling and control of production;
- (xxiii) "PNAC" means Pakistan National Accreditation Council;
- (xxiv) "prescribed" means prescribed by rules or regulations;
- (xxv) "primary standards" means a standard that is sufficiently accurate, such that it is not calibrated by or subordinate to other standards. Primary standards are defined via other quantities like length, mass and time.

Primary standards are used to calibrate other standards referred to as working standards;

- (xxvi) "proficiency testing (PT)" means evaluation of participant's performance against pre-established criteria by means of inter-laboratory comparisons;
- (xxvii) "PSQCA" means the Pakistan Standards and Quality Control Authority, established under the Pakistan Standards and Quality Control Authority Act, 1996 (VI of 1996);
- (xxviii) "quality" means conformity to a given requirement or specification of a product or service or result;
- (xxix) "quality assurance" means a system of activities whose purpose is to provide an assurance that the overall quality control is in fact being done effectively;
- (xxx) "quality control" means a process by which bodies review the quality of all factors involved in production or service;
- (xxxi) "reference standard" means standards used to check the quality and metrological traceability of products, to validate analytical measurement methods, or for the calibration of instruments;
- (xxxii) "regulations" means regulations made under this Act;
- (xxxiii) "RMO" means Regional Metrology Organization of the Institute;
- (xxxiv) "rules" means rules made under this Act;
- (xxxv) "secondary standards" means standards which are prepared in the laboratory for a specific analysis and are standardized against a primary standard;
- (xxxvi) "services" means type of economic activity that is intangible, not stored and does not result in ownership;
- (xxxvii) "SI" means International Systems of Units as adopted by the 11th General Conference of Weights and Measurements (CGPM) through its resolution 12, in 1960;
- (xxxviii) "standards" means a level of quality or achievement, especially one that relevant expert consider normal or acceptable or a technical specification or other document available to the public, drawn up with the cooperation and consensus or general approval of all interests effected by it, based on the consolidated results of science, technology and experience

aimed at the promotion of optimum community benefits and introduced under this Act;

- (xxxix) "testing" means the action or process of examining a substance under known condition, in order to determine its identity and quality or one of the constituents and includes the action by which the physical properties, materials and machines are tested in order to determine their particular requirements or performances;
- (xl) "training" means training of technical staff in the field of standardization, testing, quality control, legal metrology, inspection and industrial research of public and private sector in Pakistan, as well as of trainees from other countries.
- (xli) "TDAP" means the Trade Development Authority of Pakistan;
- (xlii) "Technical Advisory Committee" means the Technical Advisory Committee constituted under this Act; and
- (xliii) "units of measurement" means a definite magnitude of a quantity, defined and adopted by convention or by law that is used as a standard for measurement of the same kind of quantity.

3. Establishment of the National Metrology Institute of Pakistan. — (1)

On the commencement of this Act, the existing National Physical and Standard Laboratories (NPSL), an entity of the PCSIR, shall stand separated from PCSIR, reconstituted and established as the National Metrology Institute of Pakistan (NMIP) hereinafter called as the Institute, in accordance with the provisions of this Act.

(2) The Institute being the national custodian of metrological standards shall be an organization having perpetual succession and a common seal, with powers, subject to the provisions of this Act, to acquire and hold property and shall by the said name sue and be sued.

(3) The Institute shall be at its existing place in Islamabad and it may establish its regional campuses anywhere in Pakistan, as the need may be, with the prior approval of the Board.

4. Functions of the Institute.— The Institute shall —

- (1) realize, acquire, keep, maintain, update, archive and disseminate at national level, the primary, reference and secondary