

LEGAL NOTICE NO. 67

REPUBLIC OF TRINIDAD AND TOBAGO

THE METROLOGY ACT, 2004

REGULATIONS

MADE BY THE MINISTER UNDER SECTION 23 OF THE METROLOGY ACT,
2004 AND SUBJECT TO NEGATIVE RESOLUTION OF PARLIAMENT

THE METROLOGY REGULATIONS, 2015

PART I

PRELIMINARY

1. These Regulations may be cited as the Metrology Regulations, Citation
2015.

2. In these Regulations—

Interpretation

“acceptance limits of error” means the limits of error that
apply to a device when the performance of the device is
tested—

- (a) at the time the class, type or design of that device
is examined for approval;
- (b) at initial verification where the device is inspected
prior to its first use in trade; or
- (c) at the time the measuring elements of the device
are serviced or repaired following:
 - (i) normal use; or
 - (ii) failure of the device on verification to
measure within the applicable limits of
error outlined in these Regulations for
the specific device;

“Act” means the Metrology Act, 2004;

Act No. 18 of
2004

“automatic weighing device” means a weighing device that
weighs without the intervention of an operator and follows
a predetermined program of automatic processes that are
characteristic of the device and that may include—

- (a) the automatic weighing of bulk commodities in
interrupted and successive drafts of predetermined
amounts, the values of which are summed to derive
a total net weight;

(b) the automatic and dynamic weighing of pre-assembled discrete loads; and

(c) the automatic classification of articles or loads into several subgroups according to their mass;

“beam scale” means an equal-arm oscillating weighing device with pans below the beam;

“Bureau” means the Trinidad and Tobago Bureau of Standards;

“bulk meter” means a measuring device including a vehicle tank meter designed to measure fuel for individual deliveries of 500 litres or more whether or not individual deliveries of less than 500 litres may also be made with the same device as long as the device can measure the quantity delivered;

“counter machine” means an equal-arm oscillating weighing device with pans above the beam, or a self-indicating machine to be used on a counter for general trade, any of which having a capacity of not more than 50 kg;

“crane machine” means a self-indicating, electronic, hydraulic or spring actuated weighing device that is suspended and has a capacity of 1000 kg or greater;

“discrimination” means the ability of a weighing device to react to small variations of load as specified in these Regulations;

“electronic weighing device” means any self-indicating weighing device in which the load produces electrical signals which are processed so as to indicate or record weight or mass;

“error of a weighing device” means the difference, when the device is loaded with a working standard weight, between the indicated mass and the mass value assigned to that standard weight;

“examination”, in relation to a device, means the investigation and assessment of the structure, materials used for construction, condition and principles of operation of the device, including the identification of the extent and causes of alteration or deterioration if they exist;

“fuel” means gas, liquid fuel, lubricants or any mixture of liquid fuel and lubricants;

- “fuel dispenser” means a measuring system intended for the refuelling of motor vehicles, small boats and small aircraft;
- “initial verification” means the first verification of a measuring device before it is used in trade;
- “in-service limits of error” means the limits of error that apply to a device when the performance of the device is tested at any time other than a time referred to in the definition of “acceptance limits of error”;
- “in-service verification” means the periodic testing of a measuring device when it is in use on trade;
- “label” means any written, printed, or graphic matter affixed to, attached to, blown into, formed or moulded into, embossed on, or appearing upon a package containing any product for the purposes of branding, identifying, or giving information with respect to the product or to the contents of the package;
- “load receptor” means the part of a weighing device on which goods being weighed are placed or hooked;
- “measuring device” means an instrument or object for use in the measurement of any physical attribute and includes instruments or objects for use in the measurement or weight, volume, capacity, area, length, dimension, gauge, number, time, electrical current, temperature, light intensity and combinations thereof;
- “metric unit” means a unit of the International System of Units;
- “nominal quantity”, in relation to a package, means the weight or volume indicated on the pre-package as the quantity of product which the pre-package contains;
- “non-automatic weighing device” means a weighing device that weighs discrete loads requiring an operator’s intervention during the weighing process;
- “non-graduated device” means a measuring device not fitted with a scale numbered in units of mass, volume, length or other units of measurement;
- “oscillating weighing device” means a weighing device with a beam or steelyard which oscillates about or returns to the position of equilibrium when disturbed from that position;

“pattern approval” means the evaluation of a measuring device or system against requirements for construction and operations as outlined in these Regulations;

“platform machine” means a weighing device, mechanical or electronic, other than a weighbridge with—

(a) a load receptor that is a platform 3 m by 2 m in size or less; or

(b) a capacity of 10,000 kg or less;

“pre-package” means the combination of a product and the packing material in which it is pre-packed for sale;

“pre-packed” has the meaning given to it in the Act;

“prescribed measuring device” means a measuring device referred to in regulation 3;

“price indicator” means a display showing the value in money of the quantity measured;

“recognized national body” means a national metrology institute of a country other than Trinidad and Tobago or body designated or identified by any such institute as having functions similar to that of the Bureau;

“recognized international body” means an institution associated with the Metre Convention and international measurement;

“scale interval” means the value expressed in units of mass, volume, length or other units of measurement of—

(a) the difference between the values corresponding to two consecutive scale marks, for analog indication; or

(b) the difference between two consecutive indicated values, for digital indication;

“self-indicating weighing device” means a weighing device on which the whole or part of the weight or mass of the goods being weighed is indicated by a pointer moving over a scale or chart graduated in units of mass, or a graduated chart moving in relation to a fixed pointer, or a digital display, or by means of a printed record;

“sensitivity” in relation to a weighing device, means the displacement of the pointer or change of indication produced by a small change of load;

“spring balance” means a mechanical weighing device in which the weight or mass is determined by the extension or compression of a spring, such extension or compression being indicated by a pointer or a dial or by a moving graduated scale;

“steelyard” means an unequal-arm single-lever weighing device, the shorter arm of which carries a load-hook suspended from knife-edges whilst the longer arm has a poise weight moving over a graduated scale to indicate the weight of the load, and includes a device where it is part of a platform machine, weighbridge or other similar weighing device;

“tank” means a measuring container for use in trade for measuring the volume of liquid received or delivered, and includes a fixed, portable and vehicle-mounted measuring container;

“tare mechanism” means a mechanism of the weighing device which sets the indication to zero when a load is on the load receptor of the weighing device;

“tolerable deficiency” means the permitted deficiency in the quantity of product in a pre-package;

“valuable goods” means precious metals, jewellery or pharmaceutical products;

“vehicle tank meter” means a bulk meter installed on a vehicle;

“verification” means a procedure, other than pattern approval, for ascertaining and confirming that a measuring device is in conformity with these Regulations and includes the examination, stamping with verification marks and issuing of verification certificates;

“verification certificate” means the certificate that is issued by an Inspector to certify that a measuring device is in conformity with these Regulations;

“verification scale interval” means the value, expressed in units of mass, used for the classification and verification of a weighing device;

“volume indicator” means a display showing the volume of fluid delivered;

“weighbridge” means a weighing device, mechanical or electronic, for weighing a load carried by a vehicle with—

(a) a load receptor that is a platform greater than 3 m by 2 m in size; or

(b) a capacity of over 10,000 kg;

“zero setting mechanism” means a mechanism for a weighing device which sets the indication to zero when there is no load on the load receptor of the weighing device.

PART II

APPROVAL OF PATTERNS OF PRESCRIBED MEASURING DEVICES

Prescribed
measuring
devices
Schedule I

3. The measuring devices that are used or intended to be used in connection with trade and listed in Schedule 1 shall be prescribed measuring devices for the purposes of the Act.

Approval of
patterns of
measuring
devices

4. (1) The Bureau shall examine and approve the pattern of all measuring devices manufactured in, or imported into, Trinidad and Tobago before the devices are made available for sale. No manufacturer or importer of a prescribed measuring device shall make the device available for sale in Trinidad and Tobago unless the Bureau has examined and approved the pattern of the prescribed measuring device or recognizes the pattern of the device as approved or recognized by the Bureau in accordance with this Part as under subregulation (4).

(2) No person shall use a prescribed measuring device in trade unless the pattern of device is approved by the Bureau in accordance with this Part.

(3) The examination of prescribed measuring devices for the purpose of pattern approval shall be carried out in accordance with these Regulations as applicable and such specifications as the Bureau may approve under subregulation (5).

(4) The Bureau may recognize the patterns of prescribed measuring devices that have been approved by such recognized national or international bodies of legal metrology as the Bureau may determine.

(5) For the purposes of carrying out pattern approval of prescribed measuring devices, the Bureau shall establish specifications for the design, construction and performance to which a prescribed measuring device shall conform and such specifications shall be published in the *Gazette*.

Application
for pattern
approval

5. (1) A manufacturer or importer of a prescribed measuring device shall submit an application for pattern approval to the Bureau on such form as the Bureau may approve.

(2) Subject to regulation 6, an application under sub-regulation (1) shall be accompanied by a model of the prescribed measuring device together with such drawings, specifications and other information as would enable the Bureau to adequately assess the application.

6. (1) The Bureau may exempt a manufacturer or importer of a prescribed measuring device from the deposit of a model required under regulation 5(2) after consideration of an application for exemption from the manufacturer or importer. Exemption

(2) An application for exemption under subregulation (1) shall be accompanied by—

- (a) all the necessary data and technical drawings as may be required by the Bureau; and
- (b) proof of approval of the pattern by a recognized national or international body.

7. The Bureau shall notify an applicant under regulation 5(1) of its decision in writing within ninety days of the date of the application. Notification of approval of application

PART III

REQUIREMENTS FOR PRESCRIBED MEASURING DEVICES

8. A weight for general trade shall—

- (a) be of a denomination specified in Table 1 of Schedule 2 and have that denomination marked on its top surface;
- (b) be made of cast iron, brass, bronze, stainless steel or other materials approved by the Organisation Internationale de Metrologie Legale (OIML);
- (c) if made of cast iron, be of a denomination of 100 g or greater;
- (d) be hexagonal or cylindrical in shape unless it is a weight of a denomination of 5 kg or greater in which case the weight which may also be in the shape of a rectangular block;
- (e) have no part which can be removed without breaking a ring, handle or seal;
- (f) be free from flaws and smooth on all surfaces except for markings of denomination or other identification;
- (g) if marked with the manufacturer's identification, have that marking without numerals, and with letters no larger than one-half of the size of the letters or numerals marking the denomination;

Weights for general trade

- (h) have not more than one adjusting cavity which—
 - (i) may be partly filled with lead;
 - (ii) permits future adjustment; and
 - (iii) is tapered so as to prevent the lead from being dislodged by shock and wear; and
- (i) have on initial verification or re-adjustment, an error no greater than the limits of error for its denomination as specified in Table 1 of Schedule 2.

Weights for
trade in
valuable
goods

9. A weight for trade in valuable goods—
- (a) shall be of a denomination specified in Table 2 of Schedule 2 and, subject to paragraph (e), have that denomination marked on its top surface;
 - (b) shall be made of brass, bronze, stainless or another corrosion resistant material approved by the OIML;
 - (c) shall, if made of aluminium alloy, be of denomination of 500 mg or less;
 - (d) may be protected by a coating, provided that such coating is made of corrosion and friction resistant material;
 - (e) shall, if of a denomination of 1 g to 20 kg, be cylindrical in shape;
 - (f) shall, if of a denomination of 500 mg or less, be—
 - (i) a wire shaped into one, two or five sections; or
 - (ii) a flat sheet shaped into a triangle, a rectangle or a pentagon; and
 - (g) shall have on initial verification or re-adjustment, an error no greater than the limits of error for its denomination as specified in Table 2 of Schedule 2.

Weighing
devices

10. (1) A weighing device for use in accordance with the Act may—
- (a) be an oscillating equal-arm beam scale, either suspended without a locking device or otherwise supported with or without a locking device;
 - (b) be a counter machine of Roberval or Beranger pattern designed for equal load on each load receptor, but not a counter machine with sliding or tare weights nor a machine with unstable position of equilibrium;
 - (c) be a steelyard or wall beam of a capacity exceeding 50 kg but not exceeding 1000 kg, for use only for weighing animals or bulk agricultural products;
 - (d) if individually approved by the Bureau for a particular use, be a spring balance or a crane machine; or

- (e) be one of the following:
 - (i) a platform machine;
 - (ii) a weighbridge;
 - (iii) a precision balance;
 - (iv) a self-indicating weighing device (including a price computing or printing electronic weighing device); or
 - (v) an automatic weighing device.

- (2) A weighing device for use in accordance with the Act shall—
 - (a) be properly constructed and not wholly or partly be of a material, mode of construction, nature or condition likely to make it unsuitable for use;
 - (b) be constructed and sited so that the weighing of the goods and the indicated weight is simultaneously clearly visible to the purchaser;
 - (c) not have unusual or novel features unless they are approved by the Bureau;
 - (d) be complete in itself;
 - (e) be sufficiently strong to withstand the wear and tear of normal use;
 - (f) be clean;
 - (g) not have interchangeable or reversible parts, unless the interchanging or reversal of the parts, as the case may be, does not affect its accuracy;
 - (h) not have removable parts if the removal of the parts affects its accuracy, unless it is impossible to use the device for weighing without the removable parts;
 - (i) not have a broken part (including a scoop, pan or plate) if that part is essential for its use;
 - (j) not have a load receptor of a size or shape which may cause incorrect weighing by interfering with the housing of the device, or where applicable by disturbing the contact between the knife edge and the bearings of the weighing device;
 - (k) not have a load receptor which is readily absorbent because of imperfect glazing, or extensive cracks or chips;
 - (l) have any friction plate, friction stay, friction hook or friction loop made of hardened steel or other material approved by the OIML; and
 - (m) not have bearings or knife-edges which are loose, not properly aligned, worn out or defective.

Classes of accuracy

11. (1) The classification of weighing devices into different classes of accuracy shall be based on—

- (a) the value of the verification scale interval (e) as indicated in Table 3 of Schedule 2 which fixes the value of the minimum verification scale interval for each class;
- (b) the number of verification scale interval (n) as indicated in Table 4 of Schedule 2; and
- (c) the minimum capacity, as indicated in Table 4 of Schedule 2, which fixes a lower limit to the permissible range of weighing.

(2) Non-automatic weighing devices shall be classified into the following classes of accuracy with corresponding symbols:

- (a) Special Accuracy Class I;
- (b) High Accuracy Class II;
- (c) Medium Accuracy Class III; or
- (d) Ordinary Accuracy Class IIII.

Permissible error of weighing device

12. (1) The maximum permissible error of a weighing device at initial verification is set out in Table 5 of Schedule 2.

(2) The maximum permissible error of a weighing device at in-service verification shall be twice the maximum permissible error on initial verification as set out in Table 5 of Schedule 2.

Graduations of weighing device

13. (1) The graduations of a weighing device shall—

- (a) be distinct and clearly legible to the operator and the customer;
- (b) be uniformly spaced; and
- (c) in the case of a steelyard—
 - (i) be notches or incised or embossed lines;
 - (ii) be in one plane at right angles to the beam; and
 - (iii) be parallel to each other,

and the poise weight shall clearly show which graduation it marks.

(2) In the case of a self-indicating weighing device, the scale intervals shall not be greater than the maximum permissible error on initial verification as specified in regulation 12.

(3) The Bureau may approve scale intervals greater than the maximum permissible error as specified in regulation 12 for a weighing device used for animal weighing or bulk agricultural products if the total number of scale intervals of the device is not less than 500.

- (4) Smaller scale intervals shall be permitted if—
- (a) they are expressed in permitted units of mass using exclusively the numerals 1, 2 or 5 divided or multiplied by 10, as appropriate; or
 - (b) the limits of error of the weighing device do not exceed one (1) scale interval on initial verification and two (2) scale intervals on in-service verification.

14. (1) The balance position of a weighing device shall be indicated where— Indication of balance position

- (a) in the case of an oscillating weighing device, the beam returns to the position of equilibrium when disturbed;
- (b) in the case of a self-indicating weighing device, the pointer or graduated indicating plate as applicable or with difference chart, comes to rest at the position of equilibrium or the zero scale mark, with the bubble of any spirit level being in its correct position;
- (c) in the case of a counter machine of Roberval or Beranger pattern, the two pointers, each attached to a subsidiary beam, come to rest directly opposite each other; or
- (d) as applicable, the balance position is indicated by digital display,

zero being indicated on the display or printed at no load.

(2) Any balance box, balance screw or gravity ball on a weighing device shall be adjustable only by the use of a mechanical appliance.

15. (1) A weighing device shall—

- (a) not be erected on a loose, weak or unstable base;
- (b) be levelled as its construction requires;
- (c) not be exposed to wind or draught which affects the indication; and
- (d) be so constructed and sited that the weighing of goods and the indicated mass are simultaneously clearly visible to a purchaser.

Additional requirements for weighing devices

(2) The platform or rails of a platform machine or weighbridge shall hold a load completely.

(3) A weighing device shall have the following markings:

- (a) maximum capacity in the form “Max _”;
- (b) minimum capacity in the form “Min _”; and
- (c) verification scale interval in the form “e _”.

(4) All weighing devices shall have a permanent place for the application of verification marks which shall be so placed that—

- (a) the part on which it is located cannot be removed from the device without destroying the impressions;
- (b) the easy application of the mark is possible without altering the metrological qualities of the device; and
- (c) it is easily visible to any person who wishes to check the verification marks.

Self-
indicating
weighing
devices

16. (1) All indicating, printing and tare mechanisms of a self-indicating weighing device shall, within any one weighing range, have the same scale interval for any given load.

(2) In a self-indicating weighing device—

- (a) a digital indication shall display at least one numeral beginning at the extreme right; and
- (b) a decimal fraction shall be separated from its integer by a decimal mark (point or comma), with the indication showing at least one numeral to the left of the mark and all numerals to the right.

(3) A weighing device shall be fitted with a levelling mechanism and a level indicator firmly fixed on the device in a place clearly visible to the user.

(4) The following devices are exempt from the requirements of subregulation (3):

- (a) freely suspended devices; and
- (b) devices installed in a fixed position.

Measure of
volume
liquids for
trade

17. (1) A measuring device used to measure the volume of liquids for use for trade shall—

- (a) measure the volume in a denomination specified in Table 6 of Schedule 2 and have that denomination indelibly marked on its outside in legible numerals or letters;
- (b) when provided with subdivisions, have only intervals of subdivisions corresponding to the numerals 1, 2 or 5 divided or multiplied by 10 as appropriate;
- (c) be made of glass, aluminum, brass, bronze, copper, nickel, sheet, iron, silver, steel (including stainless steel), tin plate, white metal or other materials and the material may be anodized, electro-plated, enamelled, galvanized, tinned or otherwise protected;

- (d) if made of brass, bronze or copper, unless otherwise coated, have the inside surface well tinned with pure tin;
- (e) if coated, have no signs of peeling;
- (f) be made of hard and sufficiently thick material;
- (g) not visibly deformed during filling;
- (h) not be seriously damaged or deformed;
- (i) have no strengthening rib or ring which might be mistaken for a scale mark;
- (j) have no false bottom;
- (k) if made of metal, not have a bottom rim deeper than necessary to protect the bottom of the measuring device;
- (l) have no lip or retaining edge which increases its capacity by more than ten per cent;
- (m) if it has no tap, drain completely when tilted to an angle of 30° below the horizontal; and
- (n) if it has a tap, drain completely without a prolonged dribble when the tap is open and the measuring device is levelled.

(2) The capacity of a measuring device used to measure volume other than a graduated glass measure shall be clearly defined as follows:

- (a) where the device has a lip or retaining edge, its capacity shall be clearly indicated below the lip or retaining edge;
- (b) where the device is in the form of a milk can, its capacity shall be clearly indicated at the bottom or neck of the can;
- (c) where the device is a glass measure the brim of device shall be used to measure its capacity, or its capacity shall be clearly indicated by an indelible line marking the bottom of the meniscus of the liquid; or
- (d) where the device is any other type of device which is not graduated, the brim of the device shall be used to measure its capacity.

(3) A graduated glass measure shall—

- (a) be conical or cylindrical;
- (b) have a level base at right angles to the axis of the measure; and
- (c) have scale marks which are—
 - (i) parallel to the base of the measure; and
 - (ii) not less than 1.5 mm apart,

and any back scale marks shall be on the same horizontal plane as the front scale marks, when the base of the measure is horizontal.

(4) If it is used in a laboratory and conforms in shape, marking, denomination and limits of error to international standards, a measuring device made of glass or having a denomination below 50 ml shall not be subject to verification.

Fuel
dispenser

18. (1) A fuel dispenser shall—

- (a) be of a pattern approved by the Bureau;
- (b) be constructed to dispense only one type of fuel through an outlet;
- (c) have a clear and legible volume indicator;
- (d) have no counter or totalizing device which might be confused with the volume indicator;
- (e) have no leaks;
- (f) subject to subregulations (2) to (4), have a delivery hose 5 m or less in length, including the length of the nozzle but excluding the length of any swing or radial arm;
- (g) if it is affixed to land, be—
 - (i) securely mounted on a solidly constructed level base;
 - (ii) sited so that a purchaser has an unobstructed view of the volume indicator, and of any price indicator; and
 - (iii) sited so that the adjusting mechanism, any seal and the verification mark relating thereto are readily accessible;
- (h) if used to measure lubricating oil, have its delivery hose permanently fixed to the nozzle;
- (i) have a price indicator fitted with a mechanism which clearly indicates the price per litre and regulates the indicator; and
- (j) have the manufacturer's name marked on it.

(2) In the case of the fuel dispenser with a retractable delivery hose, the hose shall be measured when fully extended.

(3) A fuel dispenser which is used to refuel ships or aircraft may have a delivery hose longer than 5 m.

(4) The Bureau may give written permission for a fuel dispenser to have a delivery hose longer than 5 m.

(5) A fuel dispenser equipped with a meter shall—

- (a) not deliver fuel unless the volume indicator and any price indicator have been reset to zero;

- (b) have an air separator and a cut-off valve to ensure non-registration if the supply of fuel stops; and
- (c) have a delivery hose permanently fixed to the nozzle.

(6) A fuel dispenser, when new or in service, shall have no error greater than $\pm 0.5\%$ of the volume purported to be delivered as specified in Table 6 of Schedule 2.

(7) A fuel dispenser shall be marked with the name and address or trademark of the manufacturer.

(8) A fuel dispenser for self-service shall be marked with full instructions as to operation.

(9) A fuel dispenser for use in the presence of the buyer shall be clearly and prominently marked with the price per unit quantity of all grades of product offered for sale by means of that fuel dispenser.

19. (1) A bulk meter, including a vehicle tank meter, shall be of a Bulk meters pattern approved by the Bureau and shall—

- (a) have devices which prevent air from passing through the meter to such an extent as to affect the accuracy of delivery and ensure that no registration takes place when the supply of fuel stops;
- (b) have no leaks;
- (c) have numerals on any indicator which are indelible, clear and legible;
- (d) have the manufacturer's name marked on it;
- (e) have the maximum and minimum rates of flow in litres or cubic meters per minute clearly marked;
- (f) have primary indicating or recording elements which can advance only by the flow of the liquid through the meter, except that the meter reading may be cleared by an advance movement which cannot be stopped before zero is reached; and
- (g) when a pre-set mechanism is incorporated, automatically stop delivery registration and flow when the pre-set volume has been delivered.

(2) The limits of error of a bulk meter shall be ± 0.5 per cent of the quantity tested.

20. (1) Except where permitted in accordance with sub-Trade of fuel regulation (2), fuel shall be sold, or in a commercial transaction, delivered in bulk from a mobile tanker through a fuel dispenser, or through a bulk meter.

(2) A compartment of a vehicle tank is permitted for trade of fuel where it—

- (a) has been approved and verified by the Bureau within errors not exceeding $\pm 0.5\%$ of its entire content; and
- (b) is used for one individual delivery of the entire content of one or more compartments.

Additional
markings for
bulk meters

21. (1) Bulk meters shall have the following markings:

- (a) in the case of a volumetric liquid meter, the minimum and maximum flow rates, and where the meter is equipped with an automatic temperature compensator, the words “Volume corrected to $27^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ”;
- (b) in the case of a tank, the maximum capacity;
- (c) in the case of a tank that contains one or more indicator of internal capacity, the capacity of the tank at the level of each indicator and where there is more than one indicator, the various capacities shown in descending order;
- (d) in the case of a tank that has been calibrated to a valve located immediately at the outlet of the tank or that has been calibrated to an emergency valve, the words “dry line calibration”;
- (e) in the case of a tank that has not been calibrated as set out in paragraph (d), the words “wet line calibration”;
- (f) in the case of two or more measuring tanks installed on a vehicle, a number or letter in an identifiable sequence commencing with the tank closest to the front of the vehicle and proceeding to the tank closest to the rear of the vehicle; and
- (g) any other information that is required by the notice of approval issued under regulation 7.

(2) Where two or more measuring tanks are installed on a vehicle, the information required by subregulation (1)(a) to (d) may appear in one location if the tanks are identified in accordance with subregulation (1)(f) and the information is correlated to the number or letter shown on the tank.

(3) Subject to subregulations (4), (5) and (6), the information required by subregulation (1) shall be shown in numbers or letters of not less than 12 mm in height.

(4) Every indicator of internal capacity in a measuring tank shall be marked in numbers or letters at least 6 mm in height—

- (a) to show the capacity of the tank at the level of the indicator; or
- (b) to identify the indicator.

(5) Where the indicator of internal capacity is identified in accordance with subregulation (4)(b), the identification and the capacity of the tank at the level of that indicator shall be shown on the outside of the neck or fill opening of the tank in numbers or letters of at least 12 mm in height.

(6) When two or more measuring tanks are installed on a vehicle, the discharge valve for each tank shall be marked in numbers or letters of not less than 6 mm in height to show the tank from which the commodity is discharged.

22. A measuring device used to measure length for use in trade shall—
Measures of length

- (a) be made of brass, hardened steel, woven tape or an approved material;
- (b) be protected against corrosion;
- (c) be capped at both ends with metal if it is a measure of wood;
- (d) have subdivisions in metres, centimetres or millimetres;
- (e) have all marks and inscriptions so arranged as not to interfere with the reading of lengths; and
- (f) have an error no greater than the limits of error for its denomination as specified in Table 7 of Schedule 2.

PART IV

VERIFICATION AND CERTIFICATION OF MEASURING DEVICES

23. (1) All prescribed measuring devices shall be verified by an Inspector in accordance with these Regulations.
Verification measuring devices

(2) A prescribed measuring device which is new or previously unused in connection with trade, shall be verified before it is used in trade.

(3) Notwithstanding that a prescribed measuring device has been verified pursuant to these Regulations, it shall be subject to such periodic in-service verifications as the Chief Inspector may from time to time determine.

24. (1) Where, in accordance with section 8(1) of the Act, the Chief Inspector gives public notice of the attendance of Inspectors to conduct examinations of prescribed measuring devices, owners or users of such devices are required to submit them to an Inspector for verification at the place and time indicated in the notice.
Examination of prescribed measuring devices

(2) Where a prescribed measuring device cannot reasonably be submitted to an Inspector in accordance with subregulation (1), the owner of the prescribed measuring device may submit to the Chief Inspector, on the form approved by the Bureau, a request for the attendance of an Inspector at the place of business where the measuring device is kept, for the purpose of conducting a verification of the device.

Inspection of
prescribed
measuring
devices

25. (1) An Inspector shall examine all prescribed measuring devices submitted to him for verification in accordance with the Act and these Regulations.

(2) In conducting an examination under subregulation (1), an Inspector shall—

- (a) inspect the prescribed measuring device to determine whether it conforms with the requirements of these Regulations for devices of that type in terms of materials and principles of construction; and
- (b) conduct the appropriate tests in accordance with this Part to determine the accuracy of the prescribed measuring device.

(3) At the initial verification of a weighing device an Inspector shall ensure—

- (a) that there is pattern approval; and
- (b) with respect to electronic devices, that variations in the force of gravity are taken into consideration.

Verification
marks

26. (1) Where an Inspector determines that a prescribed measuring device conforms to these Regulations, the Inspector shall stamp the measuring device with an appropriate verification mark as shown in Schedule 3.

(2) A verification mark may be placed—

- (a) in the case of a measuring device that has a plate permanently affixed to the device, on a blank area of that plate;
- (b) in the case of a measuring device that does not have a plate permanently affixed to the device, on a part of the device where it will be readily legible to a person using the device under normal conditions of use; and
- (c) in the case of a weight that has a lead plug, on the lead plug.

(3) Notwithstanding subregulation (2), where a measuring device is so small that it is not practicable to mark it in accordance with that subregulation, the verification mark shall be located on the container in which the device is kept when not in use.

(4) In addition to stamping a prescribed measuring device with a verification mark pursuant to this regulation, an Inspector may attach a self-locking wire, lead or other seal to such parts of the device as may be necessary to ensure that no adjustment, alteration or repair can be made to the device without breaking or removing the seal.

27. (1) Where an Inspector has stamped a prescribed measuring device with a verification mark pursuant to regulation 26, the Inspector shall issue a certificate of verification in the form set out in Schedule 5, in respect of that measuring device.

(2) In cases where a prescribed measuring device is too small or delicate to be stamped with a verification mark, but nevertheless meets the requirements of these Regulations, the Inspector shall endorse any certificate issued in respect thereof with words to that effect.

(3) A certificate issued under subregulation (1) shall be issued for a specified period and shall expire on the anniversary date of its issue, or such other date as the Chief Inspector may determine.

(4) Where a certificate of verification has expired in accordance with this regulation, the verification mark in respect of which it was issued shall no longer be valid.

28. Where, upon examination, an Inspector determines that a prescribed measuring device does not conform to these Regulations, he shall—

- (a) remove or obliterate as he deems fit, any existing verification mark on the device;
- (b) issue a notice of cancellation of the certificate of verification for that device;
- (c) affix a label with the words “NOT FOR USE IN TRADE” as set out in Schedule 4 to the measuring device to prohibit its further use in connection with trade; and
- (d) inform the owner of the measuring device in writing of the reasons for its failure to comply with these Regulations.

Notification
of results of
examination

29. Where an examination is for the purpose of an initial verification and the prescribed measuring device does not comply with the requirements of these Regulations, the Inspector shall notify the owner in writing of the results of this examination and such notice shall stipulate that the measuring device is prohibited for use in trade.

Resubmission
of device for
verification

30. The owner of a prescribed measuring device who has been duly notified that the device has been prohibited for use in trade in accordance with regulation 28 or 29, may, after it has been repaired, serviced or calibrated as advised by an Inspector, resubmit the measuring device for verification in accordance with regulation 24.

PART V

TESTING OF PRESCRIBED MEASURING DEVICES

Testing of
measuring
devices

31. (1) A weight shall be tested by comparison with the equivalent working standard weight or group of working standard weights having errors less than one-third of the limits of error specified in Table 1 or Table 2 of Schedule 2 as applicable, by direct comparison on a Class II or higher class balance.

(2) If a weight does not conform to this regulation, an Inspector shall not pass it as correct at verification and it shall be labelled "NOT FOR USE IN TRADE", in accordance with section 7(1)(e) of the Act.

(3) A weight for general trade which has been passed as correct at verification, shall be stamped with a verification mark—

- (a) if the weight has an adjusting hole, on the lead or similar material in that hole; or
- (b) in any other case, on the base surface of the weight.

(4) Stamped weights for use in general trade, shall, when in service, have errors not exceeding the limits of error for in-service verification as specified in the third column of Table 1 of Schedule 2.

(5) Where a precision weight for trade in valuable goods is determined to be correct at verification, the container in which the weight is kept when not in use shall be stamped with an appropriate verification mark.

(6) Precision weights for trade in valuable goods shall, when in service, have errors not exceeding the limits of error for in-service verification as specified in the third column in Table 2 of Schedule 2.

32. (1) For the purposes of the verification of a new, in-service or repaired weighing device an Inspector shall—

- (a) visually inspect all parts of the weighing device including those which may be dismantled and reassembled without changing the correct operation of the weighing device;
- (b) ensure that it conforms to the requirements outlined for weighing devices; and
- (c) carry out other tests which are considered necessary in relation to the intended use of the weighing device.

(2) For the purposes of the in-service verification of a weighing device, an Inspector shall carry out the inspection and testing under subregulation (1) and shall, in addition visually inspect any verification marks on the device or the verification certificate as appropriate.

(3) An Inspector may verify a weighing device at the site of its intended use or the user may present a portable weighing device for verification at a place and time fixed by the Inspector.

(4) An Inspector shall test the limits of error of a weighing device with working standard weights calibrated to the National Reference Standard within errors of less than one-third of the limits of error for that device as specified in Tables 1 and 2 of Schedule 2.

(5) If a weighing device does not conform to the requirements outlined for weighing devices, an Inspector shall not pass it as correct at verification and it shall be labelled “NOT FOR USE IN TRADE” in accordance with section 7(1)(e) of the Act.

(6) Subject to subregulation (1), where an Inspector passes a weighing device as correct at verification, he shall stamp it with a verification mark either—

- (a) on the weighing device; or
- (b) on a lead plug or tag inserted or attached in a conspicuous and easily accessible part of the weighing device, so as not to damage the device.

(7) If a weighing device can be opened for adjustment, an Inspector shall affix a seal to prevent access without breaking the seal.

33. The following tests shall be carried out on each weighing device for the purposes of verification:

- (a) a Balance Test, that is to say, with nothing on the platform or load receptor the Inspector shall ascertain that zero balance is indicated consistently;

- (b) an Accuracy Test as follows:
- (i) test loads from zero up to and including the maximum capacity shall be applied to the centre of the load receptor and similarly removed back down to zero and the test load shall be made up of working standard weights with errors not more than one-third ($\frac{1}{3}$) of the limits of error for that device;
 - (ii) when testing a device at the place of use, instead of standard weights any other constant load may be used, provided that standard weights of at least one half ($\frac{1}{2}$) Max are used;
 - (iii) subject to subparagraph (iv), if the repeatability error is not greater than $0.3e$, the portion of standard weights may be reduced to one-third ($\frac{1}{3}$) Max;
 - (iv) if the repeatability error is not greater than $0.2e$, the portion of standard weights may be reduced to one-fifth ($\frac{1}{5}$) Max;
 - (v) the repeatability error has to be determined with a load, whether weights or any other load, by placing the load three times on the load receptor. For devices with a maximum capacity greater than 1t instead of standard weights, any other constant load may be used, provided that standard weights of at least 1t or 50% of the maximum capacity, whichever is greater, are used;
 - (vi) on steelyard indicator devices, every numbered graduation on the steelyard and each counter poise shall be tested; and
 - (vii) a self-indicating device shall be tested at least six points on the dial or indicator including quarter, half, three-quarter and maximum load; the tests shall be both load increasing and load-reducing;
- (c) a Discrimination Test as follows:
- (i) a non-self-indicating device, an extra load equivalent to 0.4 times the absolute value of the maximum permissible error for the applied load but not less than 1 mg, when gently placed on, or withdrawn from, the device at equilibrium shall produce a visible displacement of the indicating element;

- (ii) a self or semi-self-indicating device with—
 - (A) an analog indication, an extra load equivalent to the absolute value of the maximum permissible error for the applied load but not less than 1 mg, when gently placed on, or withdrawn from, the device at equilibrium, shall cause a permanent displacement of the indicating element corresponding to not less than 0.7 times the extra load;
 - (B) digital indication, an additional load equal to 1.4 times the actual scale interval, when gently placed on, or withdrawn from, the device at equilibrium shall change indication unambiguously. This applies only to devices with $d \geq 5$ mg;
- (d) a Sensitivity Test as follows:
 - (i) an extra load equivalent to the absolute value of the maximum permissible error for the applied load, but not less than 1 mg, shall be placed on the device at equilibrium and shall cause a permanent displacement of the indicating element of at least—
 - (A) 1 mm for a device of Class I or II;
 - (B) 2 mm for a device of Class III or IIII with $\text{Max} \leq 30$ kg; or
 - (C) 5 mm for a device of Class III or IIII with $\text{Max} > 30$ kg; and
 - (ii) the sensitivity tests shall be carried out by placing extra loads with a slight impact, in order to eliminate the effects of discrimination threshold;
- (e) a Repeatability Test, that is to say, when a load of one half ($\frac{1}{2}$) of the maximum capacity is weighed three or more times, the absolute value of the difference between the indications of consecutive weighings shall not exceed the absolute value of the permissible limits of error; and
- (f) an Eccentricity Test as follows:
 - (i) when a load of one-third ($\frac{1}{3}$) of the capacity of the weighing device is displaced from the centre of the load receptor to a position off-centre, the indicated weight shall remain within the permissible limits of error;

- (ii) in the case of a platform machine, the test shall be conducted with standard weights equivalent to one-third ($\frac{1}{3}$) the purported maximum capacity at four points equidistant between the centre and each of the four corners of the platform or load receptor; the range of variation on this test shall be within the permissible limits of error;
- (iii) in the case of a weighbridge, a rolling load shall be applied at different positions of the load receptor, these positions shall be at the beginning, the middle and the end of the load receptor in the normal driving direction; the position shall then be repeated in the reverse direction; and
- (iv) when, for a balanced equal-armed weighing device, the load and working standard weights are interchanged on the load receptors, the indicated weight shall not change by more than twice the absolute value of the permissible limits of error.

Inspection of
weighbridges

34. An inspector shall check that a weighbridge—

- (a) has adequate drainage with no accumulation of water, mud or debris in the pit;
- (b) has smooth, straight and horizontal approaches for a distance of at least half the length of the platform at each end of the weighbridge;
- (c) is so positioned that the operator has an unobstructed view of the whole platform from the dial, steelyard or electronic display;
- (d) is on a platform that is so protected that vehicles can only go into it or leave it at the ends;
- (e) has adequate foundations to support it at maximum load without movement; and
- (f) has, if not fitted with a tare-beam, a counterpoise weight, of distinctive shape from other counterpoise weights for the device, which accurately compensates for the weight of any loose receptor or frame used with the device and which has the words "TARE WEIGHT" legibly and conspicuously stamped on its edge.

Testing of
liquid
measures

35. (1) An Inspector shall test a measure of volume other than a laboratory measure made of glass—

- (a) using the gravimetric method by placing the volume measure on a weighing device of suitable capacity and filling it with water to its graduated scale or indication point; and

(b) by filling it to its capacity with the liquid for which the measure is used, except when that liquid is oil or is of high viscosity in which circumstance water shall be used, and by emptying those contents into a working standard test measure having limits of error not exceeding one-fourth of those specified in Table 6 of Schedule 2 and by allowing a drainage time of thirty seconds.

(2) If a measure of volume does not conform to this regulation, an Inspector shall not pass it as correct at verification.

(3) When an Inspector passes a measure of volume as correct at verification, a verification mark shall be placed—

(a) at the bottom of the inside of any lip or retaining edge of a metal measure; or

(b) in any other case, near the marking of capacity.

(4) Measures for dispensing of medicine shall comply with specifications approved by the Bureau for the applicable approved pattern.

36. (1) A fuel dispenser shall be tested under practical working conditions with the liquid fuel or lubricant that the device is intended to deliver. Testing of fuel dispensers

(2) No fuel dispenser shall be tested unless it is completed with all parts and attachments necessary for the operation of measurement and delivery.

(3) An Inspector may open a locked or sealed tank or container from which liquid fuel or lubricant may have been withdrawn for verification in order to return the liquid fuel or lubricant.

(4) Any liquid fuel or lubricant which is drawn from a tank or container for testing shall be returned to the trader or the person in charge of the fuel dispenser.

(5) Working standards used for the testing of fuel dispensers shall be calibrated to $27^{\circ}\text{C}\pm 1^{\circ}\text{C}$.

(6) A fuel dispenser shall satisfy the following tests:

(a) an Accuracy Test, that is to say, the quantities delivered on tests at 20 L, 10 L, 5 L or any other quantity specified by the Bureau shall be accurate within the acceptance limits of error set out in Table 6 of Schedule 2;

- (b) a Speed Variation Test, that is to say, the quantities delivered shall be accurate within the appropriate limits of error whether the fuel dispenser be operated at a slow speed (not slower than 10 L per minute) or at maximum speed;
- (c) a Leakage Test, that is to say, if the leakage back to the storage tank is suspected, the fuel dispenser shall be fully primed, left for one hour and re-tested for accuracy at 5 L without further priming. Accuracy shall be within the appropriate acceptance limits of error; and
- (d) a Price Check, that is to say, where fuel dispensers are constructed to indicate the total price of delivered quantities, the total price indicated for any quantity shall correspond with the marked price per unit quantity for the appropriate grade within plus or minus one cent.

(7) The verification mark shall be stamped upon a conspicuous and easily accessible part of the fuel dispenser and seals shall be affixed to prevent access to the working parts or any adjustment to the device without the seals being broken.

Can fillers 37. Can fillers shall satisfy the tests specified by the Bureau for the approved pattern concerned.

Cubic measures 38. (1) The accuracy of cubic measures shall wherever possible, be determined by means of an approved linear Working Standard.

(2) Where an approved linear Working Standard is not practicable, a measured quantity of a suitable commodity may be used.

(3) The acceptance limits of error for cubic measures shall be one-half of 1% in excess only.

(4) The in-service limits of error for cubic measures shall be 1% in excess of deficiency.

Test for measures of length 39. (1) An Inspector shall test a measure of length on verification—

- (a) against a working standard having errors not exceeding one-third of the limits of error specified in Table 7 of Schedule 2; or
- (b) in the case of a tape measure—
 - (i) at a temperature of $20^{\circ}\text{C} \pm 10^{\circ}\text{C}$; and

- (ii) while it is supported horizontally over its complete length, and is subjected to the tensile force indicated on that measure or if not indicated, 50 newton in the case of a metal measure, or 10 newton in the case of a measure not made of metal.

(2) Where a measure of length does not conform to regulation 22 or pass the tests in subregulation (1), an Inspector shall not pass it as correct at verification.

(3) A measure of length, when tested, shall possess no error greater than the limits of error for its denomination or any intermediate value of graduation specified in Table 7 of Schedule 2.

40. (1) A bulk meter shall be tested—

Testing of bulk
meters

- (a) after any dry hose has been flushed and the instrument reset to zero;
- (b) using standard test measures or a calibrated master meter or a proving loop;
- (c) by passing the liquid intended to be normally used through the meter into standard test measures in as many deliveries and of such volumes as considered necessary or by comparison of the indication of the meter under test with the indication of a calibrated master meter or proving loop; and
- (d) with varying heads of liquid or with varying bore by manipulation of the delivery valve as far as is practicable.

(2) The verification mark shall be stamped upon a conspicuous and easily accessible part of the meter and seals shall be affixed to prevent access to the working parts or any adjustment to the device without the seals being broken.

PART VI

SAMPLING AND TESTING OF GOODS

41. (1) Pre-packages shall meet the requirements of the Act at any point of distribution including point-of-pack, import, wholesale and retail sale. Sampling and testing of goods

(2) The average quantity of goods in a pre-package in an inspection lot shall be at least equal to the nominal quantity.

(3) The actual quantity of goods in a pre-package shall accurately reflect the nominal quantity subject to the applicable tolerable deficiencies stated in Table 2 of Schedule 6.

(4) An Inspector shall reject an inspection lot where—

- (a) the sample size in column 2 of Table 1 contains more deficient pre-packages than is allowed in column 4 of Table 1 in Schedule 6; and
- (b) one or more inadequate pre-packages in the sample contain a quantity of product less than the applicable tolerable deficiencies allowed for in Table 2 of Schedule 6.

(5) Where an Inspector determines that a sample of pre-packages does not meet the requirements of the Act, he may—

- (a) issue written directions to the seller in accordance with section 7(1)(j) of the Act; or
- (b) seize and detain the whole lot in accordance with section 7(1)(c) of the Act.

Pre-packages

42. A pre-package shall not—

- (a) have a false bottom, sidewalls, lids or covering;
- (b) be constructed or filled, wholly or partially, in such a way that may deceive the consumer; or
- (c) contain excessive, non-functional slack fill.

Testing pre-packaged goods

43. (1) For the purposes of checking the net weight or measure of pre-packed goods, the Inspector shall—

- (a) determine an appropriate number of goods as one lot of the goods being offered for sale in store;
- (b) draw random samples of the goods; and
- (c) perform tests to determine the net weight or measure the goods, which may include the test to determine drained weight.

(2) The tolerable deficiencies for all pre-packed goods are specified in Table 2 of Schedule 6.

(3) For the purposes of this regulation, an Inspector may—

- (a) use measuring devices provided by the Bureau; or
- (b) use measuring devices on the seller's business premises where such measuring devices have been verified in accordance with these Regulations.

PART VII

MISCELLANEOUS

44. (1) Every person who is carrying on or wishes to carry on the business of selling, manufacturing, assembling, repairing, adjusting, importing or exporting prescribed measuring devices, or is employed or is seeking to be employed in the business of repairing or adjusting prescribed measuring devices, shall apply to the Bureau on the form approved by the Bureau, for a certificate certifying his fitness to carry on such a business, or to be employed in such a business as the case may be.

(2) An application under subregulation (1) shall be accompanied by such information as the Bureau may determine.

(3) The Bureau shall determine the criteria for granting certificates pursuant to the Act and shall publish such criteria in the *Gazette* and in a daily newspaper in national circulation in Trinidad and Tobago.

(4) The Bureau shall inform an applicant of its decision on his application in writing within thirty days from the date of its receipt of the application.

(5) If the Bureau declines to grant a certificate to an applicant, it shall inform the applicant in writing of its reason for so doing and where applicable, that he is entitled to reapply when he meets the criteria set by the Bureau for granting such certificate.

(6) A certificate granted by the Bureau under this Regulation shall be for such period and on such conditions as may be stated therein.

45. The fees payable for pattern approval and for the issuing of verification certificates and certificates pursuant to section 13 of the Act, shall be calculated in accordance with the formula set out in Schedule 7.

SCHEDULE 1

(Regulation 3)

Prescribed Measuring Devices

1	Weights	<p>Medium and high accuracy weights used in general trade</p> <p>Precision weights for trade with valuable goods</p> <p>Weights for the verification of weighing machines</p>
2	Weighing Machines	<p>Non-automatic</p> <p style="padding-left: 40px;">Self-indicating</p> <p style="padding-left: 40px;">Semi self-indicating</p> <p style="padding-left: 40px;">Non self-indicating</p> <p>Automatic</p> <p style="padding-left: 40px;">Continuous totalizing (belt weighers)</p> <p style="padding-left: 40px;">Discontinuous totalizing (hopper weighers)</p> <p style="padding-left: 40px;">Weight/Price labelers and weight labelers</p> <p style="padding-left: 40px;">Weighbridges</p> <p style="padding-left: 40px;">Road Axle weighers</p>
3	Volume measures and measuring systems for commercial transactions	<p>Volume metering devices for liquids other than water</p> <p>Liquid volume metering devices:</p> <p style="padding-left: 40px;">Petroleum</p> <p style="padding-left: 40px;">Liquefied petroleum gas</p> <p style="padding-left: 40px;">Lubricating oil</p> <p>Cold water meters</p> <p>Gas volume meters</p> <p>Dipsticks and diptapes</p> <p>Volume meters for commercial use (alcoholic beverages)</p> <p>Fixed storage tanks</p> <p>Road tankers</p> <p>Non-liquid volume measures</p>
4	Length measures and measuring devices	<p>Rules</p> <p>Tapes</p>

SCHEDULE 2

Table 1

Limits of Error for Weights for General Trade

Denomination	Limits of Error (\pm mg)	
	Initial verification	In-service verification
1 g	10	10
2 g	12	12
5 g	15	15
10 g	20	40
20 g	25	40
50 g	30	60
100 g	50	100
200 g	100	200
500 g	250	500
1 kg	500	1 000
2 kg	1 000	2 000
5 kg	2 500	5 000
10 kg	5 000	10 000
20 kg	10 000	20 000
50 kg	25 000	50 000

Table 2

Limits of Error for Weights for use in Trade with Valuable Goods

Denomination	Limits of Error	
	Initial verification (mg)	In-service verification (± mg)
10 mg	± 0,5, 0	0,5
20 mg	± 0,5, 0	0,5
50 mg	± 0,5, 0	0,5
100 mg	+ 0,5, 0	0,5
200 mg	+ 1, 0	1
500 mg	+ 1, 0	1
1 g	+ 1, 0	1
2 g	± 1,2, 0	1,2
5 g	± 1,5, 0	1,5
10 g	± 2, 0	2
20 g	± 2,5, 0	2,5
50 g	+ 3, 0	3
100 g	+ 5, 0	5

Table 3

Accuracy Classes and Value of the Verification Scale Interval (e)

Type of Weighing Device	Accuracy Class	Maximum Load (Max)	Value of the Verification Scale Interval (e)
Graduated	Classes I, II, III and IIII	-	Shall be equal to the scale interval (d) $e = d$
	Class I	-	For $d \leq 1 \text{ mg}$, $e = 1 \text{ mg}$
Non-graduated	Class I Special	$100 \text{ mg} \leq \text{Max} \leq 1 \text{ g}$	1 mg
		$1 \text{ g} < \text{Max} \leq 100 \text{ g}$	Max/1 000
		$100 \text{ g} < \text{Max}$	Max/10 000
	Class II High	$1 \text{ g} < \text{Max} < 5 \text{ g}$	Max/1 000
		$5 \text{ g} < \text{Max} < 100 \text{ g}$	5 mg
		$100 \text{ g} < \text{Max} < 200 \text{ g}$	Max/20 000
		$200 \text{ g} < \text{Max}$	Max/20 000
		$20 \text{ g} \leq \text{Max} \leq 100 \text{ g}$	0.1 g
	Class III Medium	$100 \text{ g} < \text{Max} < 1 \text{ kg}$	Max/1 000
		$1 \text{ kg} \leq \text{Max} \leq 2 \text{ kg}$	1 g
		$2 \text{ kg} < \text{Max}$	Max/2 000
	Class IIII Ordinary	$1 \text{ kg} < \text{Max} < 2 \text{ kg}$	5 g
$2 \text{ kg} < \text{Max}$		Max/400	

Table 4

The Verification Scale Interval, Number of Verification Scale Intervals and Minimum Capacity in relation to the Accuracy Class of Weighing Devices

Accuracy Class	Verification Scale Interval (e)	Number of Verification Scale Intervals $n = \text{Max}/e$	Minimum Capacity (Min)
Class I	$0.001 \text{ g} < e$	$> 50\,000$	$100e$
Class II	$0.001 \text{ g} < e < 0.05 \text{ g}$	100 to 100 000	$20e$
	$0.1 \text{ g} \leq e$	5 000 to 100 000	$50e$
Class III	$0.1 \text{ g} \leq e \leq 2 \text{ g}$	100 to 10 000	$20e$
	$5 \text{ g} \leq e$	500 to 10 000	$20e$
Class IIII	$5 \text{ g} < e$	100 to 1 000	$10e$

Table 5

Limits of Error of Weighing Devices

Maximum Permissible Errors on Initial Verification	Load Range (m)			
	Class I	Class II	Class III	Class IIII
$\pm 0.5e$	$0 \leq m \leq 50\,000e$	$0 \leq m \leq 5\,000e$	$0 \leq m \leq 500e$	$0 \leq m \leq 50e$
$\pm 1e$	$50\,000e < m < 200\,000e$	$5\,000e < m < 20\,000e$	$500e < m < 2\,000e$	$50e < m \leq 200e$
$\pm 1.5e$	$200\,000e < m$	$20\,000e < m \leq 100\,000e$	$2\,000e < m \leq 10\,000e$	$200e < m < 1\,000e$

e – Verification Scale Interval in mass units

Maximum Permissible error for In-Service Verification is twice the Maximum Permissible Error for Initial Verification.

Table 6**Limits of Error of Volume Measures**

Denomination	Limits of Error (mL)
50 mL	+2
100 mL	±3
200 mL	±5
250 mL	±5
500 mL	+10
1 L	+10
2 L	±20
5 L	±50
10 L	+50
≥20 L	+0.5%

Table 7

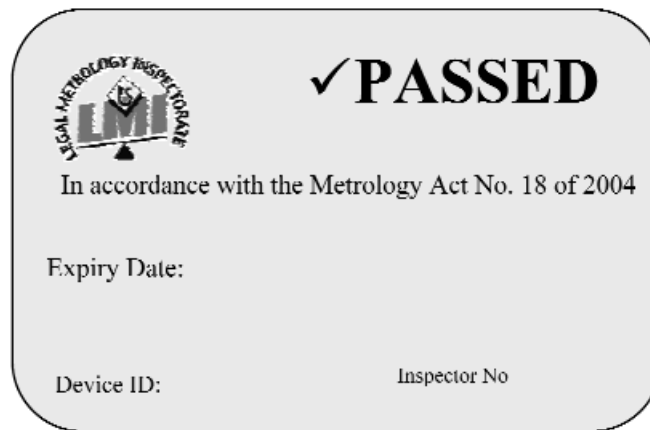
Limits of Error of Measures of Length

Type of instrument	Range	Verification/certification	In-service inspection
flexible and rigid measures	not more than 500mm	$\pm 0.5\text{mm}$	
	more than 500mm but not more than 2m	$\pm 1.0\text{mm}$	
flexible measures	more than 2m but not more than 100m	$\pm 0.05\%$	

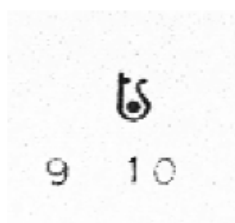
SCHEDULE 3

Verification Marks

Label



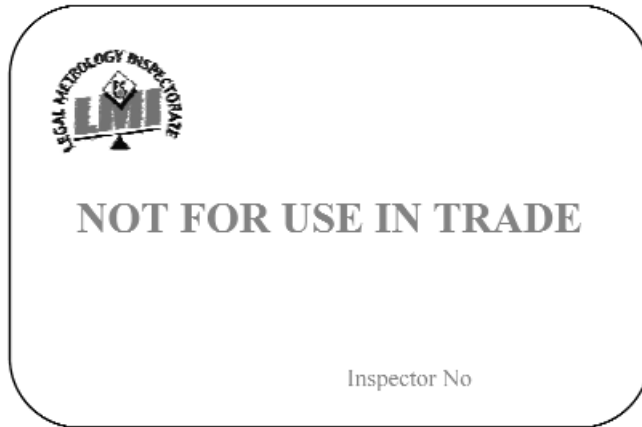
Stamp for Weights



Month Year

SCHEDULE 4

Label To Prohibit The Use Of a Measuring Device in Trade



SCHEDULE 5



Certificate No.

Certificate of Verification

I hereby certify that the following measuring device(s), namely

Brand Name	Capacity	Model Number	Serial Number	Device ID. No

Belonging to.....of.....

was/were verified and found to be correct within ***INITIAL/IN-SERVICE Verification** limits of error and stamped with a verification mark.

The measuring devicewas found to be correct, but not stamped with a verification mark for the following reason(s).....

Date of Issue: Inspector of Metrology

*NB. This Certificate (unless previously cancelled by an Inspector of Metrology) remains in force for a period of, ***SIX MONTHS/ ONE YEAR** from the date of issue. After the expiry of the currency of this Certificate, the device(s) mentioned therein are deemed to be unmarked and therefore illegal for use in connection with trade.*

SCHEDULE 6

Table 1
SAMPLING AND TESTING OF PRE-PACKAGED GOODS

Sampling plans for prepackage requirements

1	2	3	4
Inspection lot size N	Sample size n	SCF $t_{(0.005, n-1)} / \sqrt{\frac{n(N-1)}{(N-n)}}$	Number of pre-packages allowed with $T1$ error
20	14	0.45	0
30	16	0.51	0
50	29	0.34	1
100	49	0.28	2
200	64	0.27	3
300	67	0.29	3
400	81	0.26	4
500	81	0.27	4
600	82	0.27	4
700	82	0.27	4
800	82	0.28	4
900	83	0.28	4
1000	83	0.28	4
1500	83	0.28	4
2000	97	0.26	5
5000	97	0.26	5
10000	98	0.26	5
100000	98	0.26	5

Table 2

Tolerable deficiencies in actual content for pre-packages

Nominal quantity of product (Q_{nom}) in g or mL	Tolerable Deficiency (T) ^a	
	Per cent of Q_{nom}	g or mL
0 to 50	9	-
50 to 100	-	4.5
100 to 200	4.5	-
200 to 300	-	9
300 to 500	3	-
500 to 1 000	-	15
1 000 to 10 000	1.5	-
10 000 to 15 000	-	150
Above 15 000	1	-
^a T values are to be rounded up to the next 0,1 of a g or mL for Q_{nom} less than or equal to 1 000 g or mL, and to the next whole g or mL, for Q_{nom} higher than 1 000 g or mL.		
Nominal quantity of product (Q_{nom}) in length		
	Per cent of Q_{nom}	
$Q_{nom} \leq 5$ m	No tolerable deficiency allowed	
$Q_{nom} > 5$ m	2	
Nominal quantity of product (Q_{nom}) in area		
	Per cent of Q_{nom}	
All Q_{nom}	3	
Nominal quantity of product (Q_{nom}) in count		
	Per cent of Q_{nom}	
$Q_{nom} \leq 50$ items	No tolerable deficiency allowed	
$Q_{nom} > 50$ items	1 ^b	

^b Compute the value of T by multiplying the nominal quantity by 1 per cent and rounding the result up to next whole number. The value may be larger than 1 per cent due to the rounding but this is accepted because the products are whole items and cannot be divided.

SCHEDULE 7

Fees for activities under the Metrology Act (Verification, Certification and Pattern Approval) are determined by the formula:

$$\text{Service Fee} = \frac{\text{Unit Annual Direct and Indirect Cost}}{\text{No. of Available Hours per Annum}} \times \text{Pricing Factor}$$

Unit Annual Direct Costs:

Direct costs are readily identifiable costs that can be attributed directly and unequivocally to a service that is being rendered and costed by the Legal Metrology Inspectorate (LMI) Unit, a unit of the Bureau, specifically. For example-

- Employee expenses – Personnel Expenses – salary, on-going cost for staff
- Operational expenses – Goods and Services – Lab consumables, lab equipment, administrative expenses to conduct the activity, cost for shared resources: technical, research and projects etc.
- Property expenses – lease cost for labs and offices, costs for utilities and maintenance
- Employee benefit expenses – workmen compensation insurance
- Depreciation expenses – depreciation of assets

Unit Annual Indirect Costs:

Indirect costs are costs that are not directly attributable to a particular project or service rendered. Indirect costs are non-specific costs charged across all projects or services rendered based on estimates. They are sometimes referred to as Overheads and can include, for example, ‘Corporate Central’ costs such as costs associated with executive administration, financial services, human resources, records management, information technology, maintenance, marketing and standardization.

No. of Hours per annum worked for the Bureau:

This is defined as the Annual Practical Capacity of Working Hours Available per annum to render LMI services to clients. It considers weekends, public holidays, vacation leave and sick leave, time for training and meetings.

Pricing Factor

This is defined as a value which is multiplied by the cost of the service to produce the recommended price of the service.

Dated this 5th day of May, 2015.

V. BHARAT
*Minister of Trade, Industry, Investment
and Communication*