


**Technical Specification for the Verification
and Inspection of Weighing Instruments**

S/N

CNMV 76

Rev.

7

1. These Guidelines are formulated in accordance with Paragraph 2 of Article 14 and Paragraph 2 of Article 16 of the Weights and Measurements Act.

2. The promulgation dates, document numbers and enforcement dates of these Guidelines and made revisions are as follows:

Rev	Date of Promulgation	Document No. (Ching-Piao-Szu-Tsu)	Date of Enforcement	Content of Amendment
1	2003-03-13	No. 09240002410	2003-04-01	
2	2003-08-20	No. 09240007320	2003-09-01	1. Unification of weighing instrument terminology, consolidation of contents of related section, and removal of regulations for balances. 2. Addition of terminology definition. 3. Simplification of regulations for proof of verification.
3	2005-05-30	No. 09440001110	2005-07-01	1. Addition of regulations for verification of portable weighbridges. 2. Revision of accuracy classes and tolerances for non-automatic weighing instruments other than weighbridges. 3. Addition of regulations for conversion of "Taiwan catty", "Taiwan tael" and Taiwan qian". 4. Removal of additional performance tests for electronic non-automatic weighing instruments with the price computing function and the number of verification scale intervals exceeding 10,000. 5. Removal of regulations for verification tolerances for balance weights.
4	2010-02-02	No. 09940000600	2010-03-16	1. Redefining the catchweigher as automatic gravimetric filling weighing instrument. 2. Adding the requirements of verification of auxiliary indicating devices, multi-interval weighing instruments, and multiple range weighing instruments. 3. Adding the procedures for gradual increase and decrease procedures in verification of non-automatic weighing instruments. 4. Adding the requirements for reservation of space and size to place the verification mark.
5	2012-10-31	No. 10140006423	2014-01-01	1. Revising the method of eccentricity verification. 2. The clause of the validity of automatic gravimetric filling weighing instrument and discontinuous totalizing automatic weighing instrument. 3. The clause of seal on electric types of weighing instruments with price-computing function.
6	2014-06-23	No. 10340003930	2014-06-23	1. Removing the clause of seal on electric types of weighing instruments with price-computing function. 2. Adding the requirements on issuing the verification certificate of discontinuous totalizing automatic weighing instrument and automatic gravimetric filling weighing instruments.
7	2022-00-00	No. 11140000000	2022-00-00	Adding the requirements for sampling verification

3. These Guidelines have been established in line with the following international guidelines:

- OIML R76-1 Nonautomatic weighing instruments Part 1 : Metrological and technical requirements-Tests (1992)
 OIML R107-1 Discontinuous totalizing automatic weighing instruments (totalizing hopper weighers) Part 1 : Metrological and technical requirements-Tests (1997)

Date of Promulgation 2022-00-00	Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs	Date of Enforcement 2022-00-00
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NO GUARANTEE ON THE TRANSLATION

In case of discrepancies between the English translation and Chinese text, the Chinese text shall govern

Terminology

1.1 Weighing instrument

Measuring instrument that serves to determine the mass of a body by using the action of gravity on this body.

The instrument may also be used to determine other quantities, magnitudes, parameters or characteristics related to mass. According to its method of operation, a weighing instrument is classified as an automatic or non-automatic instrument.

1.2 Non-automatic weighing instrument

Instrument that requires the intervention of an operator during the weighing process, for example to deposit on or remove the measured load from the receptor the load to obtain the result. The result can be observed directly either by displaying or printing. The term of indication will represent the result of measurement in both indicating methods..

According to the method of measurement, weighing instruments can be classified as static and dynamic types.

1.2.1 Non-self-indicating instrument

Instrument the position of equilibrium is obtained entirely by the operator.

1.2.2 Price-computing instrument

Instrument calculates the price to pay on the basis of the indicated mass and the unit price.

1.2.3 Fixed weighbridge

A non-automatic weighing instrument that is fixed on the ground permanently measures the weight of an object remaining still on its carrier.

1.2.4 Portable weighbridge

A portable weighbridge is a portable weighing pad that can be place on the ground to accommodate a still motor vehicle to measure the load on each wheel (or the axle) of the vehicle and summarize its total weight.

1.3 Automatic weighing instrument

Automatic weighing instrument is an instrument that weighs without the intervention of an operator and/or follows a predetermined program of automatic process characteristic of the instrument.

1.3.1 Discontinuous totalizing automatic weighing instrument

An automatic weighing instrument that weighs a bulk product by dividing it into discrete loads, determining the mass of each discrete load in sequence, summing the weighing results and delivering the discrete loads to bulk. (e.g., the so-called hopper weighers).

1.3.2 Automatic gravimetric filling weighing instrument

Instruments which fill containers with predetermined and virtually constant mass of product from bulk by automatic weighing, and which comprises

essentially automatic feeding device(s) associated with weighing unit(s) and the appropriate control and discharge devices.

1.4 Electronic instrument

An electronic instrument is a weighing instrument equipped with electronic devices.

1.5 Weighing capacity

1.5.1 Maximum capacity (Max)

Maximum weighing capacity, not taking into account the additive tare capacity.

1.5.2 Minimum capacity (Min)

Value of the load below that the weighing results may be subject to an excessive relative error.

1.5.3 Weighing range

Range between the minimum and maximum capacities.

1.6 Scale divisions

1.6.1 Actual scale interval (d)

Value, expressed in units of mass of the difference between the values corresponding to two consecutive scale arks or the difference between two consecutive indicated values.

1.6.2 Verification scale interval (e)

Value, expressed in units of mass, used for the classification and verification of an instrument.

1.6.3 Number of verification scale intervals

Quotient of the maximum capacity and the verification scale interval:

$$n = \text{Max}/e$$

1.6.4 Multi-interval instrument

Instrument having one weighing range that is divided into partial weighing ranges each with different scale intervals, with the weighing range determined automatically according to the load applied, both on increasing and decreasing loads.

1.6.5 Multiple range instrument

Instrument having two or more weighing ranges with different maximum capacities and different scale intervals for the same load receptor, each range extending from zero to its maximum capacity.

1.7 Tare device

Device for setting the indication to zero when a load is on the load receptor:

- Without altering the weighing range for net loads (additive tare device); or
- Reducing the weighing range for net loads (subtractive tare device).

1.8 Auxiliary indicating devices

1.8.1 Rider

Detachable poise of small mass may be placed and moved either on a graduated bar integral with the beam or on the beam itself.

1.8.2 Device for interpolation of reading (vernier or nonius)

Device connected to the indicating element and sub-dividing the scale of an instrument, without special adjustment.

1.8.3 Complementary indicating device

Adjustable device by means of which it is possible to estimate, in units of mass, the value corresponding to the distance between a scale mark and the indicating component.

1.8.4 Indicating device with a differentiated scale division

Adjustable device by means of which it is possible to estimate, in units of mass, the value corresponding to the distance between a scale mark and the indicating component.

1.9 Build-up system

The testing processes that using a certain device such as a hydraulic press to simulate a specific load and read the load via a transducer.

2. Scope: This specification applies to non-automatic weighing instruments, automatic gravimetric filling weighing instruments and discontinuous totalizing automatic weighing instruments (together hereafter referred to as weighing instruments) subject to verification and inspection, but do not apply to dynamic non-automatic weighing instruments.

3. Metrology requirements and construction

3.1 Accuracy class

The verification scale interval, number of verification scale intervals and minimum capacity of non-automatic weighing instruments except for fixed weighbridge shall comply with Table 1.

Table 1

Accuracy Class	Verification Scale Interval e	Number of Verification Scale Intervals $n = \text{Max}/e$		Minimum Capacity Min (lower limit)
		Min	Max	
Special class ⓐ	$0.001 \text{ g} \leq e$	50000	—	100 e
High class ⓑ	$0.001 \text{ g} \leq e \leq 0.05 \text{ g}$ $0.1 \text{ g} \leq e$	100 5000	100000 100000	20 e 50 e
Medium class ⓒ	$0.1 \text{ g} \leq e \leq 2 \text{ g}$ $5 \text{ g} \leq e$	100 500	10000 10000	20 e 20 e
Ordinary class ⓓ	$5 \text{ g} \leq e$	100	1000	10 e

Symbols of accuracy classes are ovals of any shape, or two horizontal lines joined by two half-circles are permitted. A circle shall not be used.

3.2 The following items must be clearly indicated on each weighing instrument:

- (1) Serial number.
- (2) Verification scale interval (e)
- (3) Maximum weighing capacity (Max).
- (4) Minimum weighing capacity (Min).
- (5) Name of manufacturer; for imported instruments, name of importer must also be marked; instruments applied for re-verification without the aforesaid labeling, name of repairer must be indicated.
- (6) When power supply required, the voltage, current and frequency must be indicated. However, the indication of frequency is not needed if direct current is being used.
- (7) Accuracy class (fixed weighbridges, automatic gravimetric filling weighing instruments and discontinuous totalizing automatic weighing instruments excluded).
- (8) Actual scale interval (d=) (when $d < e$)
- (9) Original country

Indication of the items prescribed in the preceding paragraph must be direct, tightly secured and wear-resistant.

The following are examples of indication of the maximum capacity, minimum capacity and verification scale interval for multi-interval instruments:

Max 3/6/15 kg

Min 20 g

$e = 1/2/5$ g

The following are examples of indication of the maximum capacity, minimum capacity and verification scale interval for multiple range instruments:

W1: Max 3 kg Min 20g $e = 1$ g

W2: Max 6 kg Min 40g $e = 2$ g

W3: Max 15 kg Min 100g $e = 5$ g

3.3 The numbers of verification scale intervals of weighing instruments must comply with the following requirements:

- 3.3.1 For mechanical or electronic non-automatic weighing instruments with ratio platforms or sliding poises lever, the number of verification scale intervals shall be not less than 1000; for simple steelyards with scale pointer or sliding poises, the number of verification scale intervals shall be not less than 200.
- 3.3.2 For discontinuous totalizing automatic weighing instruments, the number of verification scale intervals shall be not less than 200.
- 3.3.3 For fixed weighbridges, the number of verification scale intervals shall be not less than 1000.

- 3.3.4 For portable weighbridges, the number of verification scale intervals shall be not less than 100.
- 3.3.5 For automatic gravimetric filling weighing instrument, the number of verification scale intervals shall be not less than 100.
- 3.4 If a measuring instrument equips with a level indicator, the level indicator shall be installed at a place convenient for observation.
- 3.5 The graduation plate or graduation pan of a mechanical weighing instrument shall be installed firmly, free from danger of loosening or deformation.
- 3.6 If an instrument is provided with a ratio platform for extending the indicating range of the numbered scale, the ratio between the value of the weights placed on the platform to balance a load and the load itself shall be 1/5, 1/10, 1/50, 1/100 or 1/200 and shall be indicated legibly and permanently on the beam in a position close to the ratio platform and the weights. .
- 3.7 For mechanical weighing instruments using ratio platform with weights or sliding poises, the ratio platform and the graduated bar shall be marked with the same serial number.
- 3.8 If made of cast iron, weights and increment of ration platform shall have holes for the purpose of embedding metal to make them easy to engrave marks.
- 3.9 For verification against a fixed weighbridge, if the verification cannot be performed according to the claimed maximum capacity, the actual maximum tested capacity shall be regarded as the maximum capacity of the fixed weighbridge under test.
- 3.10 The sling for the weights shall not be made of metal.
- 3.11 Verification scale interval
- The verification scale interval of all types of weighing instruments shall comply with the requirements in Table 2.

Table 2

Instrument Type	Verification Scale Interval
Graduated, without auxiliary indicating device	$e = d$
Graduated, with auxiliary indicating device	e is chosen by the manufacturer according to the requirements in 3.1 and 3.12.2
Non-graduated	e is chosen by the manufacturer according to the requirements in 3.1.

3.12 Additional requirements for auxiliary indicating devices

3.12.1 Type and application

Only instruments of Class ^I and Class ^{II} may be fitted with one of the following auxiliary indicating devices, namely rider, device for

interpolation of reading, complementary displaying device, or indicating device with a differentiated scale division.

These auxiliary devices are permitted only to the right of the decimal sign. A multi-interval instrument shall not be fitted with an auxiliary indicating device.

3.12.2 Verification scale interval

The verification scale interval, e , is determined by the expression:

$$d < e \leq 10 d \quad (\text{See Table 3a and Table 3b})$$

$$e = 10^k \text{ kg}, \quad k \text{ is a positive or negative integer, or zero.}$$

This requirement does not apply to Class ① instruments with $d < 1 \text{ mg}$. See examples for instruments with $e = 1 \text{ mg}$ as shown in Table 3b:

Table 3a

d =	0.1 g	0.2 g	0.5 g
e =	1 g	1 g	1 g
e =	10 d	5 d	2 d

Table 3b

d =	0.01 mg	0.02 mg	0.05 mg	< 0.01 mg
e =	1 mg	1 mg	1 mg	1 mg
e =	100 d	50 d	20 d	> 100 d

3.12.3 Minimum capacity

The minimum capacity of the instrument is determined in conformity with the requirements in Table 1 in Section 3.1. However, in the last column of this Table, the verification scale interval, e , is replaced by the actual scale interval, d .

3.12.4 Minimum number of verification scale intervals

For an instrument of Class ① with $d < 0.1 \text{ mg}$, n may be less than 50,000.

3.13 Additional requirements for multi-interval weighing instruments

3.13.1 Partial weighing range

Each partial range (index $i = 1, 2, \dots$) is defined by:

its verification scale interval e_i , $e_{i+1} > e_i$;

its maximum weighing capacity Max_i ; and

its minimum weighing capacity $\text{Min}_i = \text{Max}_{i-1}$ (if $i = 1$, the minimum capacity $\text{Min}_1 = \text{Min}$) .

The number of verification scale intervals, n_i , for each partial range is equal to

$$n_i = \text{Max}_i / e_i$$

3.13.2 Accuracy class

e_i and n_i in each partial weighing range, and Min_1 shall comply with the requirements given in Table 1 in Section 3.1 according to the accuracy

class of the instrument.

3.13.3 Maximum capacity of the partial weighing range

With the exception of the last partial weighing range, the requirements in Table 4 shall be complied with, according to the accuracy class of the instrument:

Table 4

Accuracy Class	I	II	III	III
Max _v /e _{v+1}	≥ 50000	≥ 5000	≥ 500	≥ 50

3.14 Additional Requirements for multiple range weighing instruments

3.14.1 On multiple range instruments the verification scale intervals are e_1, e_2, \dots, e_r with $e_1 < e_2 < \dots < e_r$. Similar subscripts are also used with the terms Min, (n) and Max.

3.14.2 On multiple range instruments, each range is treated as if it were an instrument with one range.

4. Verification, inspection and tolerances

4.1 Verification equipment: Traceability is required.

- (1) Errors of standard weights used for verification of the weighing instruments shall be not more than 1/3 of the maximum permissible errors of the corresponding weighing capacity of the weighing instruments.
- (2) Not less than ten 1t standard weights shall be prepared for verification of a fixed weighbridge with a maximum capacity of 10t or above.
- (3) An appropriately assessed Build-up system may be used for verification of the portable weighbridge.

4.2 Verification process of weighing instruments (suspension type excluded) shall be conducted on stable horizontal plane.

4.3 When the verification of a weighing instrument and its auxiliary devices cannot be implemented separately, the verification of the instrument and its auxiliary devices shall be implemented as an integrated instrument. .

4.4 When a weighing instrument has two or more mass indicating devices, the differences between the indicated values shall be not more than 1/3 of the verification maximum permissible errors.

4.5 The accumulated errors of the indicator of any weighing instrument shall be not exceed the sum of the verification maximum permissible errors.

4.6 If a weighing instrument equips with a stopper of indication, the difference between the indicated values before and after the stopper shall be not exceed the verification maximum permissible errors.

4.7 For electronic weighing instruments (fixed weighbridge and discontinuous totalizing automatic weighing instruments excluded) if the loaded capacity is

- more than the maximum capacity plus nine times the verification scale intervals, the display shall not have digital indication.
- 4.8 Weighing instruments shall adopt the legal units of measurement as the main metrological units and may adopt other units as auxiliary units (if Tai-Chin, Tai-Liang and Tai-Chien are used, the conversions are as follows: 1 Tai-Chin=0.6 kg, 1 Tai-Liang=37.5g, 1 Tai-Chin=16 Tai-Liang, and 1 Tai-Liang=10 Tai-Chien.)
- 4.9 The interval of price to pay of price-computing weighing instrument shall be NTD1. The price to pay shall be calculated by multiplication of weighting result and unit price (the price to pay shall be rounded off to dollar.)
- 4.10 The function of automatic zero setting of electronic fixed weighbridges shall be disabled during verification.
- 4.11 Weights shall be used for verification of weighing instruments except portable weighbridges.
- 4.11.1 In verification of non-automatic weighing instruments with a load capacity exceeding 10t, substitutive objects may be used to replace weights and loaded on one by one for verification.
- 4.11.2 In verification of discontinuous totalizing automatic weighing instruments with a load capacity exceeding the maximum weighing capacity by more than 1/2 or 1t, substitutive objects of may be used to replace weights and loaded on one by one for verification.
- 4.12 When a fixed weighbridge over 10t in capacity is to be verified, the applicant or user is required to prepare the needed weights or substitutive objects.
- 4.13 Weighing verification
- This verification is to test the weighing performance of weighing instruments under different load capacities; each testing error shall not exceed the verification maximum permissible errors.
- 4.13.1 Weighing verification against fixed weighbridges and discontinuous totalizing automatic weighing instruments shall be conducted on five different load capacities respectively, including the maximum capacity and load not more than 10% of the maximum capacity. The forementioned maximum capacity shall be the maximum capacity indicated on the weighing instrument.
- 4.13.2 Weighing verification against non-automatic weighing instruments, portable and fixed weighbridges excluded, shall be conducted on at least three different load capacities respectively, including the maximum capacity. Addition and removal of each load capacity shall be performed gradually in the ascending and descending order respectively.
- 4.13.3 Weighing verification of portable weighbridges shall be conducted on five different load capacities respectively and addition and removal of each load

capacity shall be performed gradually in the ascending and descending order respectively. The principles for selecting load capacity are as follows:

- (1) The load capacities must be separated between the minimum and maximum weighing capacities near equally.
- (2) The change point of maximum permissible error shall be included. Instruments with multi-interval weighing instruments equipped with partial weighing ranges, the load capacities all change points of maximum permissible error shall be included.
- (3) The load capacity at the point of scale interval shall be excluded. A load capacity 5e smaller than this point is recommended.
- (4) of maximum permissible error shall be included., a load capacity 5e smaller than the maximum weighing capacity is recommended.

4.13.4 Weighing verification against automatic gravimetric filling weighing instruments shall be conducted on at least three different load capacities respectively, including the maximum capacity.

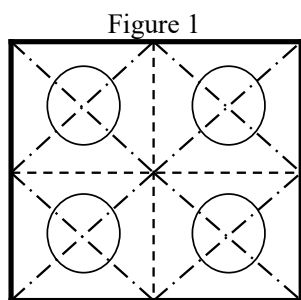
4.14 Eccentricity verification

This verification is to test the weighing performance of an instrument when loading objects on different positions of the load receptor. Each testing error shall not exceed the verification maximum permissible errors.

If the surface area of the load receptor is too small to accommodate the load on a specific position for verification, the verification loads or positions can be reduced.

This verification is not required for suspended non-automatic weighing instruments.

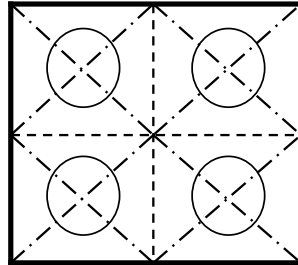
4.14.1 To implement the eccentricity verification on non-automatic weighing instruments (fixed and portable weighbridge excluded), place capacity not less than 1/4 of the maximum capacity on the load receptor at the positions as shown in Figure 1



4.14.2 To implement the eccentricity verification on fixed weighbridge, use either one of following method: Load capacity not less than 1/3 of the maximum capacity shall be placed on the load receptor at the positions as shown in Figure 2 or Figure 3 respectively to conduct the eccentricity verification of a fixed weighbridge with the load supported on two or more sections.

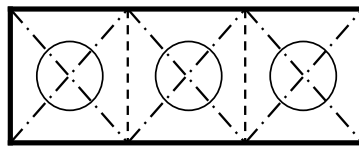
- (1) place capacity not less than $1/4$ of the maximum capacity on each load receptor respectively at the positions as shown in Figure 2.

Fig. 2



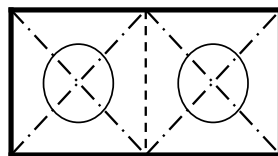
- (2) place capacity not less than $1/3$ of the maximum capacity on each load receptor respectively at the positions as shown in Figure 3.

Fig. 3



- 4.14.3 Load of $1/3$ of the maximum capacity shall be placed on the load receptor at the positions as shown in Figure 4 respectively to conduct the eccentricity verification of a portable weighbridge.

Fig. 4



4.15 Repeatability verification

This verification is to test the performance of the weighing instrument in weighing identical loaded capacities. The difference between any two weighing results shall not exceed the verification maximum permissible error.

- 4.15.1 For the repeatability verification of portable weighbridge, the load that is nearest to the second change point of maximum permissible errors shall be designated as the load capacity. If a weighing instrument does not have a second change point of maximum permissible errors, $2/3$ of the maximum capacity shall be used as the load capacity.

- 4.15.2 For the repeatability verification of automatic gravimetric filling weighing instruments, the defined filling weight shall be designated as the load capacity. If the said filling weight is not defined, 2/3 of the maximum capacity shall be adopted as the load capacity.
- 4.16 The verification maximum permissible errors of weighing instruments can be plus or minus and are as below:
- 4.16.1 The maximum permissible errors of non-automatic weighing instruments (except for fixed weighbridges) shall comply with Table 5.

Table 5

Verification Tolerance	Load m Expressed in Verification Scale Interval e			
	I	II	III	III
$\pm 0.5 e$	$0 \leq m \leq 50000$	$0 \leq m \leq 5000$	$0 \leq m \leq 500$	$0 \leq m \leq 50$
$\pm 1.0 e$	$50000 < m \leq 200000$	$5000 < m \leq 20000$	$500 < m \leq 2000$	$50 < m \leq 200$
$\pm 1.5 e$	$200000 < m$	$20000 < m \leq 100000$	$2000 < m \leq 10000$	$200 < m \leq 1000$

- 4.16.2 The maximum permissible error of fixed weighbridges is 1/1000 of the load capacity. However, if 1/1000 of the load capacity is less than verification scale interval, the maximum permissible error shall be the verification scale interval.
- 4.16.3 The maximum permissible error of discontinuous totalizing automatic weighing instruments is 1/200 of the load capacity. However, if 1/200 of the load capacity is less than verification scale interval, the maximum permissible error shall be the verification scale interval.
- 4.16.4 The maximum permissible errors of automatic gravimetric filling weighing instruments are as shown in Table 6.

Table 6

Verification Tolerance	Load m Expressed in Verification Scale Interval e
$\pm 0.5 e$	$0 \leq m \leq 500$
$\pm 1.0 e$	$500 < m \leq 2000$
$\pm 1.5 e$	$2000 < m$

- 4.16.5 The maximum permissible errors of increment weights are as shown in Table 7

Table 7

Actual Weight	Tolerance
Lighter than 20g	1/2000 of the actual weight
Lighter than 100g	1/3000 of the actual weight
Heavier than 100g	1/5000 of the actual weight

- 4.16.6 The maximum permissible error of weights is 1/1000 of the actual weight of the weight.
- 4.17 The maximum permissible error of inspection is twice as that of verification.
- 4.18 The validity of verification of fixed, portable weighbridges, automatic gravimetric filling weighing instrument and discontinuous totalizing automatic weighing instrument validates since the day that the verification mark is attached until the first day of the next thirteen months.
- 4.19 Sampling Verification**
- 4.19.1 If weighing instruments comply with the following requirements, the applicant may apply for sampling verification:
- (1) The weighing instruments of the same brand and type manufactured by the applicant have been continuously verified for equal to or more than 10 batches within 3 years, the cumulative number of such instruments being verified is equal to or more than 1,000, and the defective rate is equal to or less than 0.5 %. For electronic weighing instruments, they shall be type-approved.
 - (2) The applicant shall take relevant quality management measures, and produce products under the same conditions of manufacturing facility, process, material specifications and suppliers. For electronic weighing instruments, they shall be consistent with the approved type, and quality management statement shall be provided.
- 4.19.2 The weighing instruments sampled from the same batch shall be verified in accordance with all the verification items; the other un-sampled ones shall be verified in accordance with items in the section 3.
- 4.19.3 The sampling plan is shown in Table 8, and the verification results and processing methods of the first sampling are shown in Table 9. If the result of the first sampling can't be confirmed as pass or not, the second sampling will be carried out. If all of the weighing instruments in the second sampling passes verification requirements, the batch passes the sampling verification; if it fails, all weighing instruments in the batch will be verified individually(100 % verification). For those weighing instruments failed the verification will be handled by relevant provisions accordingly.

註解 [Liyu1]: 因英文版無對照表，修正處建議可加註底線。

Table 8 Sampling plan table (selective double sampling plan)

Lot Size	1 st Sampling			2 nd Sampling	
	Sample Size	Max. qty allowed to fail, C-Conforming (C ₁)	Qty fail triggers 100% verification, R-Reject (R)	Sample Size	Cumulative Max. qty allowed to fail, C-Conforming (C ₂)
51~99	35	0	1	--	--
100~300	50	0	2	30	1
301~600	80	1	3	40	2
601~1,000	120	2	4	60	3

Table 9 Results of the first sampling verification and processing methods

Test result	processing methods
$X_1 \leq C_1$	The batch passes random verification.
$X_1 \geq R$	The batch does not pass the sampling verification, and 100% verification shall be performed.
$C_1 < X_1 < R$	2 nd sampling shall be performed.

(Note: X_1 is the number of non-conforming in the first sampling.)

4.19.4 If there are 2 batches of 100% verification occurred in the 10 consecutive sampling verification batches, then the applicant can only apply for sampling test again once the subsequent batches of the same brand and type of weighing instruments manufactured by the applicant complies with the requirement of Section 4.19.1 .

4.19.5 The competent authority of weights and measures may, when necessary, dispatch personnel to audit whether the applicant for sampling verification has executed the relevant quality management measures in accordance with the provisions in Section 4.19.1. In case of non-conformance found, the applicant will not be allowed to apply for sampling verification until the non-conformance is corrected. The applicant can only apply for sampling test again once the subsequent batches complies with the requirement of Section 4.19.1.

5. Verification compliance tag




5.1 There shall be a reserved spot on each weighing instrument to accommodate the verification mark. The sizes are as follows:

- (1) With the exception of weighbridges, The reserved spot for the verification mark shall be 30mm x 20mm, weighbridges excluded.
- (2) The reserved spot for weighbridges for the verification mark shall be 80mm x 40mm.
- (3) The reserved spot for verification mark engraved shall be 10mm x 10mm.

5.2 The positions for the verification mark for weighing instruments are as follows:

5.2.1 Non-automatic weighing instruments:


5.2.1.1 Mechanical types:

- (1) For those with a dial indicator, the verification mark shall be placed on the dial indicator and covered over the dial gauge fastening screw.
- (2) For those with a ratio platform or a bar with accessible sliding poises, the “” symbol shall be engraved on the side of the end of the bar where the weighing capacity is marked, the side of the sliding poises, the top of the copper increment weights, the side of the iron increment weights, and above the serial number on the ratio platform ; a verification compliance tag shall be attached on the weighing instrument body.
- (3) For a steelyard with a sliding poises, the “” symbol shall be engraved on the side of the pivot and the top side of the weight.
- (4) For fixed weighbridges, the “” symbol shall be engraved on the side of the end of the bar where the weighing capacity is marked, the end of the secondary bar, the side of the sliding poise and the top side of the hanging weight; a verification compliance tag shall be clearly attached to a visible spot of the weighing instrument body.

5.2.1.2 Electronic types: the verification compliance tag shall be clearly attached on a visible spot of the instrument body.


5.2.1.3 A verification certificate shall be issued for fixed or portable weighbridges that has passed verification.

5.2.2 Discontinuous totalizing automatic weighing instruments:

5.2.2.1 Mechanical types: The “” symbol shall be engraved on the side of the end of the bar where the weighing capacity is marked, the end of the secondary bar, the side of the sliding poises, and the top side of the hanging weight. A verification compliance tag shall be attached on the instrument body.

5.2.2.2 Electronic types: A verification compliance tag shall be attached on to the side of the marking showing the total weighing capacity or the serial number.

5.2.2.3 A verification certificate shall be issued for discontinuous totalizing automatic weighing instruments that has passed verification.

5.2.3 Weights: The “” symbol shall be engraved on the top side of the weights or the copper locking screw of the iron weight.

5.2.4 Automatic gravimetric filling weighing instruments: Those passed the verification process shall be affix with the verification compliance tags on a position easy scrutiny and verification certificates shall be issued.