National Measurement Regulations 1999

Statutory Rules 1999 No. 110 as amended

made under the

National Measurement Act 1960

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Part 1 Preliminary

1 Name of regulations [*see* Note 1]

These regulations are the *National Measurement Regulations 1999*.

2 Commencement [*see* Note 1]

These regulations commence on 1 October 1999, immediately after the commencement of Schedule 1 to the *National Measurement Amendment (Utility Meters) Act 1999*.

3 Definitions

In these regulations, unless the contrary intention appears:

Act means the *National Measurement Act 1960*.

approval, of a pattern of a measuring instrument, means approval of the pattern under regulation 60.

approval holder means the person in whose name a certificate of approval is in force.

approved pattern, of a measuring instrument, means the pattern approved under regulation 60.

approving authority means:

(a) for patterns of measuring instruments generally — the Chief Metrologist; or

(b) for a particular pattern of a measuring instrument — a body or person appointed under subregulation 76 (1) in relation to patterns of measuring instruments of the same kind as the particular pattern of a measuring instrument.

artefact means a physical object that is not a standard of measurement.

Australian certified reference material means a reference material certified under regulation 48.

certificate means:

(a) a certificate of verification; or

(b) a certificate issued under regulation 37 or 48; or

(c) a certificate of approval.

certificate of approval means a certificate issued under regulation 60.

certificate of verification means:

(a) a certificate issued under regulation 13; or

(b) a certificate issued under regulation 34C; or

(c) a batch verification certificate issued under regulation 2.36B of the *National Trade Measurement Regulations 2009*.

certification means:

(a) for a measuring instrument — certification of the instrument under regulation 37; and

(b) for a reference material — certification of the material under regulation 48.

certified measuring instrument means a measuring instrument certified under regulation 37.

certifying authority means:

(a) for measuring instruments generally — the Chief Metrologist; or

(b) for reference materials generally — the Chief Metrologist; or

(c) for a particular measuring instrument or reference material — a body or person appointed under regulation 73 in relation to measuring instruments or reference materials of the same kind as the particular measuring instrument or reference material.

defence equipment means equipment used, or intended for use, by the Defence Force.

Inspectors' Class 1 standard means a reference standard of measurement that has been verified in accordance with regulation 13 and that complies with the requirements of regulations 27 and 32 for the maximum permissible uncertainty and the maximum permissible variation of an Inspectors' Class 1 standard.

Inspectors' Class 2 standard means a reference standard of measurement that has been verified in accordance with regulation 13 and that complies with the requirements of regulations 28 and 33 for the maximum permissible uncertainty and the maximum permissible variation of an Inspectors' Class 2 standard.

Inspectors' Class 3 standard means a reference standard of measurement that has been verified in accordance with regulation 13 and that complies with the requirements of regulations 29 and 34 for the maximum permissible uncertainty and the maximum permissible variation of an Inspectors' Class 3 standard.

legal measuring instrument means a measuring instrument used, or intended for use, in the determination of a physical quantity:

(a) for:

(i) law enforcement; or

(ii) demonstrating compliance, or lack of compliance, with a law of the Commonwealth or of a State or Territory; or

(b) that is, or may be, relevant to a proceeding in which the quantity is an issue.

linear interpolation, for a denomination, means a calculation of an amount that is in a linear sequence between the amounts stated for the denominations that are immediately smaller and larger than the denomination.

maximum permissible error, for a material measure or measuring instrument, means the maximum limit of error that:

(a) if a certificate is issued on or after 1 July 2007 for the material measure or measuring instrument — is mentioned in the certificate; or

(b) otherwise — is mentioned in Schedule 1 of the *National Trade Measurement Regulations 2009* or Schedule 12 to these Regulations, for a material measure or measuring instrument of that kind.

Note Paragraph (b) extends to certificates of approval that refer to Document 118, *Schedule of Maximum Permissible Errors for Trade Measuring Instruments*, published by the former National Standards Commission in 1986, as the source of maximum permissible errors.

maximum permissible uncertainty, for a standard of measurement, means the maximum uncertainty permitted in the verification of the standard under these Regulations.

maximum permissible variation, for a standard of measurement, means the maximum amount by which the standard may differ from the denomination indicated by the standard in these Regulations.

point of sale system means a component of a measuring instrument that is:

(a) approved for use for trade; and

(b) used for creating labels, receipts or documents; and

(c) able to convert the result of a measurement made by the measuring instrument; and

(d) not able to control the measuring instrument or to affect its metrological performance.

recertification, for a measuring instrument or reference material, means certification of the instrument or material after the initial certification of the instrument or material.

reverification, for a standard of measurement or a measuring instrument, means verification of the standard or instrument after the initial verification of the standard or instrument.

SI, for a unit of measurement, means the system of measurement known as the International System of Units.

State secondary standard means a reference standard of measurement that has been verified in accordance with regulation 13 and that complies with the requirements of regulation 25 for the maximum permissible uncertainty of a State secondary standard.

State tertiary standard means a reference standard of measurement that has been verified in accordance with regulation 13 and that complies with the requirements of regulation 26 for the maximum permissible uncertainty of a State tertiary standard.

time, for a standard of measurement, means time that is not derived from the calendar.

variant means a change made to the pattern of an instrument, subject to the arrangement of the components of the instrument

and the measuring element being substantially of the same design as that of the approved pattern.

verification means:

(a) for a standard of measurement — verification of the standard under regulation 13; or

(b) for an artefact — verification of a physical quantity of an artefact under regulation 34C.

verifying authority means:

(a) for standards of measurement and artefacts — the Chief Metrologist; or

(b) for a particular reference standard of measurement — a body or person appointed under regulation 73 in relation to reference standards of measurement of the same kind as the particular reference standard of measurement; or

(c) for a particular artefact — a body or person appointed under regulation 73 in relation to an artefact of the same kind as the particular artefact.

Note The following terms used in these regulations are defined in subsection 3 (1) of the Act:

- Australian legal unit of measurement
- Australian primary standard of measurement
- Australian secondary standard of measurement
- measuring instrument
- measuring instrument with an approved pattern
- metric system of measurement
- pattern
- reference material
- reference standard of measurement
- standard of measurement
- State primary standard of measurement
- the Chief Metrologist
- unit of measurement
- use for trade
- utility meter.

4 References to appointments, approvals and certificates

(1) In these regulations:

(a) a reference to an appointment as a certifying, verifying or approving authority, or approval of the pattern of a measuring instrument, includes a reference to the appointment or approval as varied; and

(b) a reference to variation or cancellation of the appointment or approval includes a reference to variation or cancellation of the instrument of appointment or certificate of approval; and

(c) a reference to variation of the appointment or approval includes a reference to a variation of a condition of the appointment or approval by addition, omission or substitution.

(2) In these regulations, a reference to a certificate issued by a certifying, verifying or approving authority is a reference to a certificate of that kind that is signed:

(a) if the authority is a body corporate — by an officer or employee of the body authorised in writing by the body to sign and issue certificates of the same kind as the certificate; or

(b) if the authority is not a body corporate:

(i) by the authority; or

(ii) by a person authorised in writing by the authority in accordance with a permission given under regulation 71.

Part 2 Units of measurement

5 Australian legal units of measurement (Act, s 7A (1))

The Australian legal unit of measurement for a physical quantity mentioned in an item in Schedule 1 is the unit of measurement the name, symbol and definition of which are mentioned in the item.

Note The Chief Metrologist may issue written guidelines governing the way in which Australian legal units of measurement may be combined to produce an Australian legal unit of measurement — see Act, paragraph 7B (1) (a).

6 Additional legal units of measurement (Act, s 7A (2))

(1) Each unit of measurement for a physical quantity mentioned in column 2 in an item in Part 1 of Schedule 2, the name, symbol and definition of which are mentioned in the item, is an additional legal unit of measurement.

(2) An additional legal unit of measurement may be used:

(a) for a purpose mentioned in Part 2 of Schedule 2; and

(b) if paragraph (a) applies — in an agreement, arrangement or other instrument.

7 Prefixes specifying numerical values (Act, s 7A (3))

A prefix the name and symbol of which are set out in an item in Schedule 3 is prescribed as specifying the numerical value in column 2 in the item.

Note The Chief Metrologist may issue written guidelines governing the way in which Australian legal units of measurement or a combination of Australian legal units of measurement may be combined with these prefixes to produce Australian legal units of measurement — see Act, paragraph 7B (1) (b).

Part 3 Standards of measurement

Division 1 General

8 Definition for Part 3

In this Part:

verify includes reverify.

9 Verification of Australian primary and secondary standards of measurement

The Chief Metrologist may verify an Australian primary or secondary standard of measurement.

10 Verification of standards of measurement generally

(1) This regulation does not apply to verification of a State primary standard of measurement.

Note For verification of State primary standards of measurement, see section 9 of the Act.

(2) Verification of a standard of measurement must be conducted in an appropriate way, having regard to the nature of the standard of measurement.

Division 2 Verification of standards of measurement

11 Application of Division 2

This Division does not apply to:

(a) an Australian primary or secondary standard of measurement; or

(b) a State primary standard of measurement.

Note For verification of State primary standards of measurement, see section 9 of the Act.

12 Application for verification of standards of measurement

(1) Application may be made for verification of a standard of measurement.

(2) An application must be:

(a) made in the form provided by the Chief Metrologist to verifying authorities for issue to applicants; and

(b) accompanied by the standard of measurement; and

(c) given to a relevant verifying authority.

(3) The verifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(4) The verifying authority may refuse to proceed with the application until the applicant complies with the notice.

13 Verification of standards of measurement

(1) On application under regulation 12, the verifying authority:

(a) may verify a standard of measurement; and

(b) if the standard is verified — must issue a certificate of verification to the applicant; and

(c) may issue a copy of the certificate to anyone else the authority considers should be given a copy.

(2) The Chief Metrologist may verify a standard of measurement other than on application.

(2A) A verifying authority other than the Chief Metrologist:

(a) may, with the written consent of the Chief Metrologist, reverify a standard of measurement otherwise than on application; but

(b) is not otherwise authorised to verify or reverify a standard of measurement otherwise than on application.

Note Regulation 90AB preserves rights and entitlements accrued in relation to verifications and reverifications conducted before the commencement of paragraph (2A) (a).

(3) If the standard of measurement is verified under the supervision of a verifying authority, the authority may verify the standard.

(4) The verifying authority must not verify a standard of measurement mentioned in paragraph (a) of the definition of ***standard of measurement*** in subsection 3 (1) of the Act unless the standard bears a mark that identifies the standard.

14 Decision not to verify, or delay in verifying, standard of measurement

(1) If the verifying authority decides not to verify a standard of measurement, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

15 Marking of verified standards of measurement

(1) On verification of a standard of measurement, the verifying authority must mark the standard with a statement of:

(a) the date of verification; and

(b) if, under regulation 30, the standard has a value equal to its denomination — that fact.

(2) However, if compliance with subregulation (1) is impracticable because of the nature, shape or size of a standard of measurement, the standard is taken to comply with subregulation (1) if it is enclosed in a sealed container that is marked in accordance with subregulation (1).

Division 3 Marks and certificates of verification

16 Marks on, or attached to, standards of measurement

(1) An Australian primary or secondary, or a State primary, standard of measurement must bear an identifying mark before it is verified.

(2) Immediately after verifying an Australian primary or secondary, or a State primary, standard of measurement, the Chief Metrologist must mark the standard with a statement of the date of verification of the standard.

(3) A mark mentioned in subregulation (1), (2) or 13 (4) or regulation 15 must be:

(a) legible; and

(b) on, or attached to, the standard:

(i) permanently; or

(ii) in such a way that the mark cannot be obliterated or removed without being destroyed.

(4) However, if compliance with subregulation (3) is impracticable because of the nature, shape or size of a standard of measurement, the standard is taken to comply with subregulation (3) if it is enclosed in a sealed container that is marked in accordance with subregulation (3).

17 Certificates of verification of Australian primary and secondary standards of measurement

(1) The certificate of verification of an Australian primary or secondary standard of measurement must state:

(a) the date of verification; and

(b) the value ascertained for the standard on that date in terms of an Australian legal unit of measurement; and

(c) the accuracy with which the standard is verified; and

(d) a description of any mark on, or attached to, the standard or a sealed container in which the standard is enclosed under these regulations; and

(e) the period, from the date of verification, for which the certificate is given.

(2) For paragraph (1) (c), the accuracy of a standard of measurement is ascertained and expressed in a manner determined in writing by the Chief Metrologist.

18 Certificates of verification of State primary standards of measurement

(1) When a State primary standard of measurement is verified, a certificate of verification must be issued to the appropriate State authority.

(2) The certificate of verification of a State primary standard of measurement must state:

(a) that it verifies the State primary standard of measurement in an appropriate manner, having regard to the nature of the standard of measurement; and

(b) the date of verification; and

(c) the value ascertained for the standard on that date in terms of an Australian legal unit of measurement; and

(d) the accuracy with which the standard is verified; and

(e) the value (stating the uncertainty) of any relevant environmental or other influence factors, like temperature and pressure, at the time of the verification; and

(f) a description of any mark on, or attached to, the standard under these regulations; and

(g) the period, from the date of verification, for which the certificate is given.

(4) For paragraph (2) (d), the accuracy of a State primary standard of measurement must be ascertained in a manner determined in writing by the Chief Metrologist.

(5) For paragraph (2) (d), the accuracy with which a State primary standard of measurement must be verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 4 — the

maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(b) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 5 — the maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(c) for a standard for the measurement of mass of a denomination not stated in column 1 in Schedule 5 — the maximum permissible uncertainty appropriate to that denomination when linear interpolation is applied to the maximum permissible uncertainty stated for the denominations in column 2 in that Schedule.

19 Certificates of verification of reference standards of measurement

(1) A certificate of verification of a reference standard of measurement must state:

(a) the name and address of the verifying authority; and

(b) that the standard is verified as a reference standard of measurement:

(i) if a verifying authority verified the standard — by the verifying authority; or

(ii) if a verifying authority supervised verification of the standard — under the supervision of the verifying authority; and

(c) the date of verification; and

(d) the value ascertained for the standard on that date in terms of an Australian legal unit of measurement; and

(e) the accuracy with which the standard is verified; and

(f) the value (stating the uncertainty) of any relevant environmental or other influence factors, like temperature and pressure, at the time of the verification; and

(g) a description of any mark on or attached to, the standard under these regulations; and

(h) the period, from the date of verification, for which the certificate is given.

(2) For paragraph (1) (e), the accuracy of a reference standard of measurement must be ascertained and expressed in a manner determined in writing by the Chief Metrologist.

Note For further provisions relating to paragraph (1) (e), see regulations 25, 26, 27 and 28.

20 Notification of determinations

(1) The Chief Metrologist must send a copy of a determination made under subregulation 17 (2), 18 (4) or 19 (2) to each verifying authority appointed to verify standards of measurement to which the determination relates.

(3) A determination applies to a verifying authority when the authority is given a copy of the determination under subregulation (1).

21 Recognition of foreign reference standards of measurement

(1) The Chief Metrologist may issue a written notice recognising a reference standard of measurement that is verified (however described) in a foreign country as a reference standard of measurement if:

(a) the verified values of the standard of measurement are established by means of, by reference to, by comparison with or by derivation from the primary standards of measurement of the foreign country; and

(b) appropriate comparability is established between:

(i) the relevant primary standards of measurement of the foreign country; and

(ii) one or more Australian primary standards of measurement.

(2) A recognised reference standard of measurement is taken to be a verified reference standard of measurement.

(3) A written notice issued under subregulation (1) in relation to a reference standard of measurement is taken to be a certificate issued under regulation 19 for the reference standard of measurement.

Division 4 When verifications cease to have effect and may be cancelled

22 When verification ceases to have effect

The verification of a standard of measurement ceases to have effect at the end of the period stated in the certificate of verification for the standard of measurement as the period for which the certificate is given.

23 Grounds for cancellation of verification

The grounds for cancelling the verification of a standard of measurement are that the value ascertained for the standard of measurement is:

(a) incorrect; or

(b) exceeding the maximum permissible variation for the standard.

Division 5 Accuracy, value and uncertainty of standards of measurement

25 Accuracy of State secondary standards of measurement — maximum permissible uncertainty

For paragraph 19 (1) (e), the accuracy with which a State secondary standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 4 — the maximum permissible uncertainty stated for the denomination in column 3 in that Schedule; or

(b) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 5 — the maximum permissible uncertainty stated for the denomination in column 3 in that Schedule; or

(c) for a standard for the measurement of volume of a denomination stated in column 1 in Schedule 6 — the maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(d) for a standard for the measurement of mass or volume of a denomination not stated in column 1 in Schedule 5 or 6 — the maximum permissible uncertainty appropriate to the denomination when linear interpolation is applied to the maximum permissible uncertainty stated:

(i) for a standard for the measurement of mass — in column 3 in Schedule 5; or

(ii) for a standard for the measurement of volume — in column 2 in Schedule 6.

26 Accuracy of State tertiary standards of measurement — maximum permissible uncertainty

For paragraph 19 (1) (e), the accuracy with which a State tertiary standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 5 — the maximum permissible uncertainty stated for the denomination in column 4 in that Schedule; or

(b) for a standard for the measurement of volume of a denomination stated in column 1 in Schedule 6 — the maximum permissible uncertainty stated for the denomination in column 3 in that Schedule; or

(c) for a standard for the measurement of mass or volume of a denomination not stated in column 1 in Schedule 5 or 6 — the maximum permissible uncertainty appropriate to the denomination when linear interpolation is applied to the maximum permissible uncertainty stated:

(i) for a standard for the measurement of mass — in column 4 in Schedule 5; or

(ii) for a standard for the measurement of volume — in column 3 in Schedule 6.

27 Accuracy of Inspectors' Class 1 standards of measurement — maximum permissible uncertainty

For paragraph 19 (1) (e), the accuracy with which an Inspectors' Class 1 standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 7 — the maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(b) for a standard for the measurement of area of a denomination stated in column 1 in Schedule 8 — the maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(c) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(d) for a standard for the measurement of volume of a denomination stated in column 1 in Schedule 10 — the maximum permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(e) for a standard for the measurement of area, mass or volume of a denomination not stated in column 1 in Schedule 8, 9 or 10 — the maximum permissible uncertainty appropriate to the denomination when linear interpolation is applied to the maximum permissible uncertainty stated:

(i) for a standard for the measurement of area — in column 2 in Schedule 8; or

(ii) for a standard for the measurement of mass — in column 2 in Schedule 9; or

(iii) for a standard for the measurement of volume — in column 2 in Schedule 10.

28 Accuracy of Inspectors' Class 2 standards of measurement — maximum permissible uncertainty

For paragraph 19 (1) (e), the accuracy with which an Inspectors' Class 2 standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 7 — the maximum permissible uncertainty stated for the denomination in column 4 in that Schedule; or

(b) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the maximum permissible uncertainty stated for the denomination in column 4 in that Schedule; or

(c) for a standard for the measurement of mass of any other denomination — the maximum permissible uncertainty appropriate to the denomination when it is applied to the maximum permissible uncertainty stated in column 4 in Schedule 9.

29 Accuracy of Inspectors' Class 3 standards of measurement — maximum permissible uncertainty

For paragraph 19 (1) (e), the accuracy with which an Inspectors' Class 3 standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the maximum permissible uncertainty stated for the denomination in column 6 in that Schedule; or

(b) for a standard for the measurement of mass of any other denomination — the maximum permissible uncertainty appropriate to the denomination when linear interpolation is applied to the maximum permissible uncertainty stated in column 6 in Schedule 9.

30 Equivalent values — maximum permissible variation

(1) This regulation applies subject to regulation 31.

(2) For paragraph 19 (1) (d), each of the following standards of measurement has a value equal to the value of its denomination of length, area, mass or volume, unless the value ascertained for the standard varies by an amount exceeding the maximum permissible variation applicable to the denomination:

(a) an Inspectors' Class 1 standard of measurement;

(b) an Inspectors' Class 2 standard of measurement;

(c) an Inspectors' Class 3 standard of measurement.

Note The maximum permissible variation for the 3 classes of inspectors' standards of measurement are stated in regulations 32, 33 and 34.

31 Equivalent values — maximum permissible uncertainty

(1) Each of the following standards of measurement has a value equal to the value of its denomination of length, area, mass or volume, unless the accuracy with which the standard is verified exceeds the maximum permissible uncertainty stated in subregulation (2):

(a) an Inspectors' Class 1 standard of measurement;

(b) an Inspectors' Class 2 standard of measurement;

(c) an Inspectors' Class 3 standard of measurement.

(2) The maximum permissible uncertainty is:

(a) for a denomination mentioned in regulation 32 — stated in column 2 for the denomination in the relevant Schedule; and

(b) for a denomination mentioned in regulation 33 — stated in column 4 for the denomination in the relevant Schedule; and

(c) for a denomination mentioned in regulation 34 — stated in column 6 for the denomination in the relevant Schedule.

32 Maximum permissible variation — Inspectors' Class 1 standards

For regulation 30, the maximum permissible variation for an Inspectors' Class 1 standard of measurement is:

(a) for the measurement of length, area, mass or volume of a denomination stated in column 1 in Schedule 7, 8, 9 or 10 — the maximum permissible variation stated in column 3 for the denomination in the relevant Schedule; and

(b) for the measurement of area, mass or volume of a denomination not stated in column 1 in Schedule 8, 9 or 10 — the maximum permissible variation appropriate to the denomination when linear interpolation is applied to the maximum permissible variation stated in column 3 for the denomination in the relevant Schedule.

33 Maximum permissible variation — Inspectors' Class 2 standards

For regulation 30, the permissible variation for an Inspectors' Class 2 standard of measurement is:

(a) for the measurement of length or mass of a denomination stated in column 1 in Schedule 7 or 9 — the maximum permissible variation stated in column 5 for the denomination in the relevant Schedule; and

(b) for the measurement of mass of a denomination not stated in column 1 in Schedule 9 — the maximum permissible variation appropriate to the denomination when linear interpolation is applied to the maximum permissible variation stated in column 5 in that Schedule.

34 Maximum permissible variation — Inspectors' Class 3 standards

For regulation 30, the maximum permissible variation for an Inspectors' Class 3 standard of measurement is:

(a) for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the maximum permissible variation stated in column 7 for the denomination in that Schedule; and

(b) for the measurement of mass of a denomination not stated in column 1 in Schedule 9 — the maximum permissible variation appropriate to the denomination when linear interpolation is applied to the maximum permissible variation stated in column 7 in that Schedule.

Part 3A Artefacts

Division 1 General

34A Verification relating to artefacts

(1) A verifying authority may verify a physical quantity of an artefact by making a measurement of the physical quantity.

(2) Verification of the physical quantity of the artefact must be conducted in an appropriate way, having regard to the nature of the artefact.

Division 2 Verification of artefacts

34B Application for verification of physical quantity of an artefact

(1) Application may be made for verification of a physical quantity of an artefact.

(2) The application must be:

(a) made in the form provided by the Chief Metrologist to verifying authorities for issue to applicants; and

(b) accompanied by the artefact; and

(c) given to a relevant verifying authority.

(3) The verifying authority may, by written notice, require the applicant to lodge with the authority any additional information the authority needs to consider the application properly.

(4) The verifying authority may refuse to proceed with the application until the applicant complies with the notice.

34C Verification of physical quantity of artefacts

(1) On application under regulation 34B, the verifying authority:

(a) may verify a physical quantity of the artefact; and

(b) if the physical quantity of the artefact is verified:

(i) must issue a certificate of verification to the applicant; and

(ii) may issue a copy of the certificate to anyone else the authority considers should be given a copy.

(2) The certificate of verification of a physical quantity of an artefact must state:

(a) the name and address of the verifying authority; and

(b) the date of the verification; and

(c) the result of the verification ascertained on the day of verification; and

(d) the accuracy with which the physical quantity of the artefact is verified; and

(e) the value (stating the uncertainty) of any relevant environmental or other influence factors, such as temperature or pressure, at the time of the verification; and

(f) a description of:

(i) any mark on, or attached to, the artefact; or

(ii) a sealed container attached to the artefact.

(3) For paragraph (2) (d), the accuracy of a verification of a physical quantity of an artefact is to be ascertained and expressed in a manner determined in writing by the Chief Metrologist.

(4) The verifying authority must not verify a physical quantity of an artefact unless the artefact bears an identifying mark.

34D Decision not to verify, or delay in verifying, physical quantity of artefact

(1) If the verifying authority decides not to verify a physical quantity of an artefact, the authority must give written notice of the reason to the applicant as soon as practicable.

(2) If the authority has not granted an application, or given notice to the applicant under subregulation (1), within 3 months after receiving the application, the authority must, at the request of the applicant, given written notice to the applicant of the reasons for the delay.

34E Marking of artefacts

(1) Before verifying a physical quantity of an artefact, the verifying authority must satisfy itself as to whether the artefact bears an identifying mark.

(2) If the artefact does not bear an identifying mark, the verifying authority must mark the artefact with an identifying mark.

(3) If:

(a) the artefact does not bear an identifying mark; and

(b) it is impracticable to mark the artefact with an identifying mark because of the nature, shape or size of the artefact;

the verifying authority must enclose an identifying mark in a sealed container and attach the sealed container to the artefact.

Part 4 Measuring instruments

Division 1 Preliminary

35 Definitions for Part 4

In this Part:

certify includes recertify.

measuring instrument does not include a measuring instrument in use for trade.

Division 2 Certification of measuring instruments

36 Application for certification of measuring instruments

(1) Application may be made for certification of a measuring instrument.

(2) An application must be:

(a) made in the form provided by the Chief Metrologist to certifying authorities for issue to applicants; and

(b) accompanied by the measuring instrument; and

(c) given to a relevant certifying authority.

(3) The certifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(4) The certifying authority may refuse to proceed with the application until the applicant complies with the notice.

37 Certification of measuring instruments

(1) On application under regulation 36, the certifying authority:

(a) may examine the measuring instrument; and

(b) may certify the measuring instrument; and

(c) if the instrument is certified — must issue a certificate for the instrument to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given a copy.

(2) The certifying authority may refuse to examine a measuring instrument if the examination would create a significant risk of personal injury or death, or damage to property.

(3) A certifying authority may certify a measuring instrument other than on application.

(4) If the measuring instrument is certified under the supervision of a certifying authority, the authority may certify the instrument.

(5) For a measuring instrument to be certified, it must:

(a) have an approved pattern; and

(b) bear a mark that identifies the particular instrument.

(6) The certifying authority must mark a certified measuring instrument with the date of certification.

38 Decision not to certify, or delay in certifying, measuring instruments

(1) If the certifying authority decides not to certify a measuring instrument, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

39 Determinations — accuracy of measuring instruments

(1) The Chief Metrologist may determine the manner in which the accuracy of measuring instruments of a particular kind must be ascertained by a certifying authority for these regulations.

(2) The accuracy of a measuring instrument of a kind to which a determination under subregulation (1) applies must be ascertained for these regulations in accordance with the determination.

(3) The Chief Metrologist must give a copy of a determination made under subregulation (1) to each certifying authority appointed in relation to a measuring instrument to which the determination applies.

(4) A determination applies to a certifying authority when the certifying authority is given a copy of the determination under subregulation (1).

40 Recognition of foreign certification of measuring instruments

(1) The Chief Metrologist may issue a written notice recognising a measuring instrument that has been certified (however described) in a foreign country as a certified measuring instrument if:

(a) the certified values of the measuring instrument are established by means of, by reference to, by comparison with or by derivation from, the primary standards of measurement of the foreign country; and

(b) appropriate comparability is established between:

(i) the relevant primary standards of measurement of the foreign country; and

(ii) one or more Australian primary standards of measurement.

(2) A recognised measuring instrument is taken to be a certified measuring instrument.

(3) A written notice issued under subregulation (1) in relation to a measuring instrument is taken to be a certificate issued under regulation 37 for the measuring instrument.

Division 3 Marks and certificates

41 Marking of measuring instruments

For paragraph 37 (5) (b) and subregulation 37 (6), a mark on a measuring instrument must be:

(a) legible; and

(b) on, or attached to, the instrument:

(i) permanently; or

(ii) in such a way that the mark cannot be obliterated or removed without being destroyed.

42 Matters to be stated in certificates

A certificate must state:

(a) the name and address of the certifying authority; and

(b) that the measuring instrument is certified:

(i) if a certifying authority certified the instrument — by the certifying authority; or

(ii) if a certifying authority supervised certification of the instrument — under the supervision of the certifying authority; and

(c) the identity of the certified measuring instrument by reference to the identifying mark on, or attached to, the instrument; and

(d) the number of the certificate; and

(e) the date of certification; and

(f) that the measuring instrument is found to operate within the maximum permissible errors for that type of measuring instrument; and

(g) the accuracy with which the instrument is certified; and

(h) the period, from the date of certification, for which the certificate is given.

Division 4 When certification ceases to have effect and may be cancelled

43 When certification ceases to have effect

The certification of a measuring instrument ceases to have effect at the end of the period stated in the certificate for the measuring instrument as the period for which the certificate is given.

44 Grounds for cancellation of certification

The grounds for cancelling the certification of a measuring instrument are:

(a) that the measuring instrument does not operate within the maximum permissible error for the instrument; or

(b) that the metrological performance of the measuring instrument has been significantly affected since the instrument was last certified.

Part 5 Reference materials

Division 1 Preliminary

45 Definition for Part 5

In this Part:

certify includes recertify.

Division 2 Certification of reference materials

46 Application for certification of reference materials

(1) Application may be made for certification of a reference material.

(2) An application must be:

(a) made in the form provided by the Chief Metrologist to certifying authorities for issue to applicants; and

(b) accompanied by the reference material, or a sample of the material; and

(c) given to a relevant certifying authority.

(3) The certifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(4) The certifying authority may refuse to proceed with the application until the applicant complies with the notice.

47 Application to vary certification of reference materials

(1) The holder of a certificate issued by the certifying authority may apply for variation of the certificate by lodging with the authority:

(a) a written application; and

(b) the certificate, or a copy of the certificate; and

(c) the Australian certified reference material, or a sample of the material.

(2) The certifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(3) The certifying authority may refuse to proceed with the application until the applicant complies with the notice.

48 Certification of reference materials

(1) On application under regulation 46, the certifying authority:

(a) may examine the reference material; and

(b) may certify the reference material; and

(c) if the material is certified — must issue a certificate for the material to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) A certifying authority may certify a reference material other than on application.

(3) If the reference material is certified under the supervision of a certifying authority, the authority may certify the material.

(4) Certification of the reference material is subject to a condition stated in the certificate.

(5) The certifying authority must not certify the reference material unless the material bears a mark that identifies the particular material.

(6) Certification of the reference material must be conducted in an appropriate manner, having regard to the nature of the material to be certified.

(7) The certifying authority must mark the Australian certified reference material with the date of certification.

49 Variation of certification of reference materials

(1) On application under regulation 47, a certifying authority:

(a) may examine the reference material; and

(b) may vary the certification of a reference material certified by the authority; and

(c) if the certification is varied — must give the certificate for the reference material, as varied by the authority, to the applicant; and

(d) may give a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) The certifying authority must not examine a reference material if the examination would create a significant risk of personal injury or death, or damage to property.

(3) Variation of the certification of a reference material is subject to a condition stated in the certificate in relation to the variation.

50 Decision not to certify, or delay in certifying, reference material

(1) If the certifying authority decides not to certify a reference material, or to vary the certificate in a way not sought by the applicant, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

51 Notice of variation

(1) This regulation applies to variation of the certification of a reference material under regulation 49.

(2) If the certificate is varied by a certifying authority other than the Chief Metrologist, the authority must notify the Chief Metrologist in writing of the variation.

(3) The certifying authority must, as soon as practicable and to the extent that is practicable, give written notice of the variation and the reasons for the variation:

(a) if the applicant is not the manufacturer of the Australian certified reference material:

(i) for material manufactured in Australia — to the manufacturer; or

(ii) for material manufactured outside Australia — to the agent of the manufacturer in Australia; and

(b) to purchasers and users of the Australian certified reference material who are known to the authority.

52 Determinations by Chief Metrologist

(1) The Chief Metrologist may determine:

(a) the manner, methods or characteristics of methods by which the property values of reference materials of a stated kind must be established for certification for these regulations; and

(b) a matter about a particular reference material, or reference materials of a particular kind, that is relevant to the proper use of the material or materials that must be stated in a certificate under paragraph 55 (j).

(2) The property values of a reference material of a kind to which a determination by the Chief Metrologist applies must be established in the manner set out in that determination.

(3) The Chief Metrologist must give a copy of a determination to a certifying authority who is appointed in relation to a reference material to which the determination relates.

(4) A determination applies to a certifying authority when the certifying authority is given a copy of the determination under subregulation (3).

53 Recognition of foreign reference materials

(1) The Chief Metrologist may issue a written notice recognising a reference material, or a reference material of a stated kind, that is certified (however described) in a foreign country as a Australian certified reference material if:

(a) the certified values of the reference material, or of reference materials of that kind, are established by means of, by reference to, by comparison with or by derivation from, the primary standards of measurement of the foreign country; and

(b) appropriate comparability is established between:

(i) the relevant primary standards of measurement of the foreign country; and

(ii) one or more Australian primary standards of measurement.

(2) A recognised reference material, or a recognised reference material of a stated kind, is taken to be a Australian certified reference material.

(3) A written notice issued under subregulation (1) in relation to a reference material, or a reference material of a stated kind, is taken to be a certificate issued under regulation 48 for the reference material or the reference material of that kind.

Division 3 Marks and certificates

54 Marking of reference materials

(1) For subregulations 48 (5) and (7), a mark on a reference material must be:

(a) legible; and

(b) on, or attached to, the material:

(i) permanently; or

(ii) in such a way that the mark cannot be obliterated or removed without being destroyed.

(2) However, if compliance with subregulation (1) is impracticable because of the nature, shape or size of the reference material, the reference material is taken to comply with subregulation (1) if it is enclosed in a sealed container that is marked in accordance with subregulation (1).

55 Matters to be stated in certificates

A certificate must state:

(a) the name and address of the certifying authority; and

(b) that the reference material is certified:

(i) if a certifying authority certified the material — by the certifying authority; or

(ii) if a certifying authority supervised certification of the material — under the supervision of the certifying authority; and

(c) the date of certification; and

(d) the name or description of the reference material; and

(e) the certified property values of the reference material and their uncertainties and level of confidence; and

(f) the date on which the property values of the reference material were established for certification of the material; and

(g) a description of the reference material by reference to:

(i) the identifying mark on, or attached to, the material under regulation 48; and

(ii) the batch number (if that number is not the same as the number mentioned in that regulation); and

(h) information about the storage and transportation of the reference material including, if appropriate, their effect on the stability of the material and on the validity of:

(i) the certification; and

(ii) the certified property values and the uncertainties of those values; and

(i) the period, from the date of certification, for which the certificate is given; and

(j) any other matter about the reference material that the Chief Metrologist determines under paragraph 52 (1) (b) should be stated in certificates of the same kind as the certificate.

Division 4 When certification ceases to have effect or may be cancelled or varied

56 When certification ceases to have effect

The certification of a reference material ceases to have effect at the end of the period stated:

(a) in the certificate for the reference material as the period for which the certificate is given; or

(b) by the manufacturer of the material as the period within which the material should be used to obtain the results specified by the manufacturer.

57 Grounds for cancellation or variation of certification

(1) The grounds for cancelling the certification of a reference material are that the reference material does not conform to the property values for the material, or their uncertainties and level of confidence, stated in the certificate.

(2) The grounds for varying the certification of a reference material, other than on application, are:

(a) the grounds stated in subregulation (1); and

(b) that it is not appropriate to cancel the certification.

Part 6 Patterns of measuring instruments

Division 1 Examinations for pattern approval

58 Application for approval of patterns of measuring instruments

(1) Application may be made for approval of the pattern of a measuring instrument.

(2) An application must be:

(a) made in the form provided by the Chief Metrologist to approving authorities for issue to applicants; and

(b) accompanied by detailed drawings and specifications of the pattern of the measuring instrument; and

(c) given to a relevant approving authority.

(3) The approving authority may, by written notice given to the applicant, require the applicant to lodge with the authority:

(a) the whole or a part of the pattern of a measuring instrument that is the subject of the application; and

(b) the whole or a part of a measuring instrument constructed in accordance with the pattern; and

(c) any additional information that the authority needs to consider the application properly.

(4) The approving authority may refuse to proceed with the application until the applicant complies with the notice.

59 Application to vary approval of approved patterns

(1) An approval holder may apply for variation of the pattern approved by an approving authority by lodging:

(a) a written application with the authority; and

(b) the certificate of approval of the pattern or a copy of the certificate; and

(c) detailed drawings and specifications showing the variation.

(2) The approving authority may, by written notice given to the applicant, require the applicant to lodge with the authority:

(a) the whole or a part of the pattern of a measuring instrument as proposed to be varied; and

(b) the whole or a part of the measuring instrument constructed in accordance with the pattern as proposed to be varied; and

(c) any additional information that the authority needs to consider the application properly.

(3) The approving authority may refuse to proceed with the application until the applicant complies with the notice.

60 Approval of patterns of measuring instruments

(1) On application under regulation 58, the approving authority:

(a) may, on payment of any relevant fee, examine the pattern of a measuring instrument; and

(b) may approve the pattern of a measuring instrument by certifying that the instrument is suitable for use for trade or as a legal measuring instrument; and

(c) if the pattern of the measuring instrument is approved — must issue a certificate of approval to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) The approving authority must not examine a measuring instrument lodged with the application if the examination would create a significant risk of personal injury or death, or damage to property.

(3) Approval of the pattern of a measuring instrument lodged with the application may be given subject to retention by the Chief Metrologist of the whole or a part of the measuring instrument.

(3A) The Chief Metrologist may issue a certificate of approval other than on application.

(4) Approval of the pattern of a measuring instrument is subject to:

(a) a condition that a measuring instrument on which the number of the approved pattern is marked must comply with the pattern and any other condition to which the approval is subject; and

(b) any other condition stated in the certificate of approval.

Note Regulation 90AA relates to certificates of approval of the patterns of measuring instruments issued before 1 July 2004.

61 Variation of approval of patterns of measuring instruments

(1) On application under regulation 59, the approving authority:

(a) may, on payment of any relevant fee, examine the approved pattern as proposed to be varied; and

(b) may vary the approval of the pattern of a measuring instrument approved by the authority; and

(c) if the approval is varied — must issue the certificate as varied by the authority to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) The approving authority must not examine a measuring instrument lodged with the application if the examination would create a significant risk of personal injury or death, or damage to property.

(3) If the approval is varied by an approving authority that is not the Chief Metrologist, the authority must notify the Chief Metrologist in writing of the variation.

(4) Variation of the approval of the pattern of a measuring instrument lodged with the application may be given subject to retention by the Chief Metrologist of the whole or a part of the measuring instrument.

(5) The Chief Metrologist may, other than on application, vary a certificate of approval issued by the Chief Metrologist.

62 Decision not to approve, or delay in approving, patterns of measuring instrument

(1) If the approving authority decides not to approve an application, or to vary an approval in a way not sought by the applicant, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

63 Certificates of approval

A certificate of approval must:

(a) state the name and address of the approving authority; and

(b) describe the pattern of the measuring instrument to which the certificate relates; and

(c) state the number of the approved pattern; and

(d) state the date of issue of the certificate; and

(e) state that the pattern of the measuring instrument is approved under these regulations as suitable for use for trade or as a legal measuring instrument; and

(f) state any condition to which approval of the pattern is subject.

Division 2 Other examinations

64 Examination of instruments for compliance with approved patterns

(1) This regulation applies if:

(a) the pattern of a measuring instrument is approved under regulation 60; and

(b) the Chief Metrologist has in its possession a measuring instrument that is, or purports to be, in accordance with the approved pattern.

(2) The Chief Metrologist may examine the measuring instrument to ascertain whether the instrument is in accordance with the approved pattern.

(3) In examining the measuring instrument, the Chief Metrologist must:

(a) if practicable, use substantially the same test procedures as were used by the Chief Metrologist in testing the pattern of the measuring instrument for approval; or

(b) if paragraph (a) does not apply — ensure that the result of the examination is not affected by the fact that those procedures are not used to examine the measuring instrument.

(4) If, after examining the measuring instrument, the Chief Metrologist considers that the instrument is not in accordance with the approved pattern, the Chief Metrologist may, in accordance with regulation 82, withdraw or decide to cancel approval of the pattern of the measuring instrument.

(5) If the non-compliance of a measuring instrument with the approved pattern of the instrument is sufficiently serious to justify further action being taken, the Chief Metrologist may report the non-compliance in writing to:

(a) the Director of Public Prosecutions; and

(b) the corresponding authority of a State or Territory.

65 Re-examination of approved patterns

(1) This regulation applies if:

(a) the pattern of a measuring instrument is approved under regulation 60; and

(b) the Chief Metrologist is provided with a measuring instrument by an authorised person acting in the performance of his or her duty; and

(c) the Chief Metrologist is told by the authorised person that:

(i) the measuring instrument is in accordance with the approved pattern; and

(ii) the instrument is not suitable for trade or as a legal measuring instrument.

(2) The Chief Metrologist may re-examine the pattern of the measuring instrument.

(3) If, after re-examining the pattern of the measuring instrument, there are reasonable grounds for considering that the pattern is not suitable for use for trade or as a legal measuring instrument, the Chief Metrologist:

(a) may, in accordance with regulation 82, withdraw or decide to cancel approval of the pattern of the measuring instrument; and

(b) must give a written statement of the results of the tests conducted by the Chief Metrologist in its re-examination of the pattern of the measuring instrument:

(i) if the measuring instrument was manufactured in Australia — to the manufacturer; or

(ii) if the measuring instrument was manufactured outside Australia — to the agent of the manufacturer in Australia.

(4) In this regulation:

authorised person means a person who is authorised (however described) under a Commonwealth, State or Territory law for trade measurement, or weights and measures, in relation to the administration of the law.

Division 3 Cancellation, variation and withdrawal of approvals

66 Cancellation of approvals on application

(1) An approval holder may apply to an approving authority for cancellation of the approval of the pattern of a measuring instrument approved by the authority.

(2) The application may be made by lodging with the approving authority:

(a) a written application; and

(b) the relevant certificate of approval.

(3) As soon as practicable, the approving authority must:

(a) cancel approval of the pattern of the measuring instrument; and

(b) give written notice of the cancellation to:

(i) the applicant; and

(ii) anyone else the authority considers should be given notice of the cancellation.

67 Grounds for cancelling and varying approvals other than on application

(1) The grounds for cancelling the approval of the pattern of a measuring instrument, other than on application, are:

(a) that a measuring instrument constructed in accordance with the approved pattern is not suitable:

(i) for use for trade or as a legal measuring instrument; or

(ii) for the particular use for trade or as a legal measuring instrument stated in the certificate of approval; or

(b) that an approving authority makes a decision under subregulation 64 (4) or paragraph 65 (3) (a).

(2) The grounds for varying the approval of the pattern of a measuring instrument, other than on application, are:

(a) the grounds stated in subregulation (1); and

(b) that it is not appropriate to cancel the approval.

68 Effect of variation and cancellation of approvals

If an approved pattern is varied or cancelled under this Part or under Part 8, a measuring instrument manufactured in accordance with the pattern before the variation or cancellation has effect is taken to continue to be in accordance with a pattern approved under these Regulations.

69 Effect of withdrawal of approvals

If approval of the pattern of a measuring instrument is withdrawn under paragraph 82 (3) (c), the instrument is not a measuring instrument with an approved pattern.

Part 7 Authorities

Division 1 General

70 Definition for Part 7

In this Part:

authority means a verifying, certifying or approving authority.

71 Application for permission for person to sign certificates

(1) An authority may apply in writing to the Chief Metrologist to permit a stated person to sign certificates of a stated kind for the authority.

(2) The Chief Metrologist may give written permission to the authority to permit the person to sign the certificates.

Division 2 Appointment of authorities

72 Application for appointment of verifying or certifying authority

(1) An application for appointment as a verifying or certifying authority must be:

(a) made in the form provided by the Chief Metrologist to applicants; and

(b) be given to the Chief Metrologist.

(2) The Chief Metrologist may vary the appointment on written application by the authority to which the appointment relates.

(3) If the Chief Metrologist decides not to approve an application, or to vary an approval in a way not sought by the applicant, the Chief Metrologist must give written notice of the reasons for its decision to the applicant as soon as practicable.

(4) If the Chief Metrologist has not granted an application or given notice to the applicant under subregulation (3) within 3 months after receiving the application, the Chief Metrologist must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

73 Verifying and certifying authorities

(1) On application under regulation 72, the Chief Metrologist may appoint as a verifying or certifying authority an applicant who:

(a) in the opinion of the Chief Metrologist, is capable, or has direct control of staff who are capable, of:

(i) verifying a standard of measurement; or

(ii) verifying a physical quantity of an artefact; or

(iii) certifying a reference material; or

(iv) certifying a measuring instrument;

to which the application relates; or

(b) holds National Association of Testing Authorities accreditation that the Chief Metrologist considers appropriate to the functions mentioned in paragraph (a).

(2) The appointment:

(a) must be in writing; and

(b) may be made subject to a condition stated in the instrument of appointment.

(3) The appointment has effect when the Chief Metrologist gives the instrument of appointment to the appointee.

74 Verifying authorities

(1) An appointment as a verifying authority must state:

(a) the kind or kinds of reference standards of measurement and physical quantities of artefacts (if any) to which the appointment applies; and

(b) the range of denominations of standards of measurement and physical quantities of artefacts (if any) that may be verified by the appointee; and

(c) the least uncertainty with which standards of measurement and physical quantities of artefacts (if any) may be verified by the appointee.

(2) A verifying authority may arrange for the testing needed for verification of a standard of measurement or physical quantity of an artefact to be conducted by another body or person under the supervision of the authority.

75 Certifying authorities

(1) An appointment as a certifying authority must state whether the appointment is made in relation to measuring instruments or reference materials generally or to measuring instruments or reference materials of a particular kind or of particular kinds.

(2) A certifying authority may arrange for the testing needed for certification of a measuring instrument or reference material to be conducted by another body or person under the supervision of the authority.

76 Approving authorities

(1) The Chief Metrologist may appoint a competent body or person to perform, on behalf of the Chief Metrologist, any or all of the following functions of the Chief Metrologist under these regulations:

(a) to examine measuring instruments and patterns of measuring instruments;

(b) to approve patterns of measuring instruments;

(c) to issue certificates of approval;

(d) to vary or cancel approvals of patterns of measuring instruments;

(e) to reconsider its decisions not to vary or cancel approvals of patterns of measuring instruments.

(2) The Chief Metrologist may vary the appointment by giving notice of the variation to the approving authority to which the appointment relates.

(3) The appointment:

(a) must be in writing; and

(b) must state whether the appointment is made for patterns of measuring instruments generally or for patterns of measuring instruments of a particular kind or of particular kinds; and

(c) may be made subject to a condition stated in the instrument of appointment.

(4) The appointment has effect when the Chief Metrologist gives the instrument of appointment to the appointee.

(5) For subregulation (1):

competent body or person means a body or person who is competent to carry out the functions mentioned in subregulation (1).

77 General conditions of appointment of authorities

(1) An appointment as an authority is subject to the following conditions:

(b) that the authority participate in training, related to the performance of the duties of an authority, required by the Chief Metrologist;

(c) that the authority report, as required by the Chief Metrologist, about its performance of those duties;

(d) that the authority, and any responsible agent or employee of the authority, comply with the Act and these regulations and any condition stated in the instrument of appointment.

(2) An appointment as a verifying authority is subject to the condition that the verifying authority comply with a determination applying to the authority under regulation 20.

(3) An appointment as a certifying authority is subject to the condition that the certifying authority comply with a determination applying to the authority under regulation 39 or 52.

78 Cancellation of appointments on application

(1) An authority may apply for cancellation of an appointment as an authority by lodging with the Chief Metrologist:

(a) a written application; and

(b) the instrument of appointment.

(2) As soon as practicable, the Chief Metrologist must:

(a) cancel the appointment; and

(b) give written notice of the cancellation to the applicant.

79 Grounds for cancelling and varying appointments other than on application

(1) The grounds for cancelling the appointment of an authority, other than on application, are as follows:

(a) that the authority has not complied with a condition to which the appointment is subject;

(b) that, in the opinion of the Chief Metrologist, the authority does not have the necessary or appropriate facilities or standards to perform the functions or duties to which the appointment relates;

(c) that, in the opinion of the Chief Metrologist, the authority does not have the necessary competent staff to perform the functions or duties to which the appointment relates.

(2) The grounds for varying the appointment of an authority, other than on application, are the grounds stated in subregulation (1), but in circumstances that do not require cancellation of the appointment.

Part 8 Dealing with verification, certification, approval and appointment other than on application

Division 1 Preliminary

80 Definitions for Part 8

In this Part:

appointment means an appointment as an authority.

authority means a verifying, certifying or approving authority.

certificate does not include a certificate of verification of:

(a) an Australian primary or secondary standard of measurement; or

(b) a State primary standard of measurement.

Chief Metrologist includes:

(a) for cancellation of a certificate of verification or certificate issued under regulation 37 — the verifying or certifying authority that issued the certificate; and

(b) for variation or cancellation of a certificate issued under regulation 48 — the certifying authority that issued the certificate; and

(c) for variation, cancellation or withdrawal of a certificate of approval — the approving authority that issued the certificate.

instrument means:

(a) a certificate; or

(b) a permission under regulation 71; or

(c) an instrument of appointment.

instrument holder means:

(a) an authority; or

(b) the holder of a certificate.

81 Application of Part 8

This Part applies if a reasonable ground exists:

(a) to cancel the verification of a standard of measurement; or

(b) to cancel the certification of a measuring instrument or reference material; or

(c) to vary the certification of a reference material, other than on application; or

(d) to vary or cancel the approval of the pattern of a measuring instrument, other than on application; or

(e) to withdraw the approval of the pattern of a measuring instrument; or

(f) to cancel a permission given under regulation 71; or

(g) to vary or cancel an appointment, other than on application.

Division 2 Cancellation, variation and withdrawal of instruments

82 Cancellation, variation and withdrawal of instruments

(1) The Chief Metrologist must give the instrument holder written notice that:

(a) if the Chief Metrologist proposes to vary the instrument — tells the instrument holder of the proposed variation; and

(b) if the Chief Metrologist proposes to cancel or withdraw the instrument — tells the instrument holder of the proposed cancellation or withdrawal; and

(c) states the ground for the proposed variation, cancellation or withdrawal; and

(d) outlines the facts and other circumstances forming the basis for the view that the ground exists; and

(e) invites the instrument holder to state in writing to the Chief Metrologist, within a stated period of at least 28 days after the notice is given to the instrument holder, why the instrument should not be varied, cancelled or withdrawn as proposed by the Chief Metrologist (the ***proposed action***).

(2) The Chief Metrologist may take the proposed action before giving the invitation mentioned in paragraph (1) (e) if the Chief Metrologist considers that it is necessary to do so.

(3) If, after considering any written statement made to the Chief Metrologist by the instrument holder within the stated period, there are reasonable grounds for considering that a ground exists to take the proposed action, the Chief Metrologist may:

(a) if the proposed action is to vary the instrument in a stated way — vary the instrument in that way; or

(b) if the proposed action is to cancel the instrument — cancel the instrument or vary it in any way; or

(c) if the proposed action is to withdraw the approval — withdraw the approval.

(4) If the Chief Metrologist varies, cancels or withdraws the instrument, the Chief Metrologist:

(a) must tell the instrument holder in writing of the decision, give the holder written reasons for the decision, and tell the holder that the holder may apply to have the decision reconsidered; and

(b) may give written notice of the variation, cancellation or withdrawal to anyone else whom the Chief Metrologist considers should be given notice of the variation, cancellation or withdrawal.

83 When variation, cancellation and withdrawal have effect

The variation, cancellation or withdrawal of an instrument has effect:

(a) when the instrument holder is told in writing of the decision by the Chief Metrologist and given written reasons for the decision; or

(b) if the Chief Metrologist tells the instrument holder that the decision takes effect on a later day — on the later day.

Part 9 Reconsideration and review

84 Definition for Part 9

In this Part:

decision maker means:

(a) a verifying, certifying or approving authority; and

(b) for a permission under regulation 71 or an application for appointment, or an appointment, as an authority — the Chief Metrologist.

85 Certain decisions may be reconsidered

(1) The following decisions are decisions to which this regulation applies:

Item	Provision under which decision made	Brief description of decision
1	subregulation 12 (4)	not to examine a standard of measurement until the applicant complies with a notice
2	subregulation 13 (1)	not to verify a standard of measurement
2A	subregulation 34B (4)	not to verify an artefact until the applicant complies with a notice
2B	subregulation 34C (1)	not to verify an artefact
3	subregulation 36 (4)	not to examine a measuring instrument until the applicant complies with a notice
4	subregulation 37 (1)	not to certify a measuring instrument on application or to give a certificate in a way not sought by the applicant

Item	Provision under which decision made	Brief description of decision
5	subregulation 46 (4) or 47 (3)	not to examine a reference material until the applicant complies with a notice
6	subregulation 48 (1)	not to certify a reference material on application or to give a certificate in a way not sought by the applicant
7	subregulation 49 (1)	not to vary a certificate on application or to vary a certificate on application in a way not sought by the applicant
8	subregulation 58 (4) or 59 (3)	not to examine the pattern of a measuring instrument until the applicant complies with a notice
9	subregulation 60 (1)	not to approve the pattern of a measuring instrument on application or to give a certificate in a way not sought by the applicant
10	subregulation 61 (1)	not to vary a certificate on application or to vary a certificate on application in a way not sought by the applicant
11	regulation 71	not to give a permission or to cancel a permission
12	subregulation 72 (3)	not to vary an appointment on application
13	subregulation 72 (3)	to vary an appointment in a way not sought by the applicant
14	subregulation 73 (1)	not to make an appointment
15	subregulation 82 (3)	to vary, cancel or withdraw an instrument or certificate other than on application

(2) A person affected by a decision to which this regulation applies (the ***initial decision***) may ask the decision maker in writing to reconsider the decision.

(3) The request must be made within:

(a) 28 days after the person or anyone else was told in writing of the initial decision, and given reasons for the decision, by the decision maker; or

(b) any longer period allowed by the decision maker.

(4) The request for reconsideration must state the decision that the person wants the decision maker to make and outline why the decision maker should make that decision.

(5) Within 28 days after receiving the request, the decision maker must reconsider the initial decision and:

(a) confirm the decision; or

(b) vary the decision; or

(c) set the decision aside and substitute a new decision.

(6) The decision maker must tell the person in writing of the result of the reconsideration and, if the decision maker does not make the decision that the person wants the decision maker to make:

(a) give the person written reasons for the reconsidered decision; and

(b) tell the person that the person may apply to the Administrative Appeals Tribunal to have the decision reviewed by the Tribunal.

86 Certain decisions may be reviewed

Application may be made to the Administrative Appeals Tribunal under the *Administrative Appeals Tribunal Act 1975* for review of a decision that has been reconsidered under regulation 85.

Part 10 Miscellaneous

88 Conversion factors (Act, s 11)

The conversion factors stated in column 4 in an item in Schedule 11 are prescribed for the conversion of units of measurement stated in column 2 in that item to units of measurement stated in column 3 in the item.

Examples

1 To convert yards to metres use the conversion factor in Column 4 of item 3 of Schedule 11 which is 0.9144, so that:

2 yards × 0.9144 = 1.8288 metres.

2 To convert roods to square metres use the conversion factor in Column 4 of item 11 of Schedule 11 which is 1210 $(0.9144)^2$, so that:

16 roods × 1210 × $(0.9144)^2$ = 16 187.425 69 square metres.

3 To convert slugs to kilograms use the conversion factor in Column 4 of item 22 of Schedule 11 which is 32.174 × 0.453 592 37, so that:

7 slugs × 32.174 × 0.453 592 37 = 102.157 166 39 kilograms.

4 To convert cubic yards to cubic metres use the conversion factor in Column 4 of item 25 of Schedule 11 which is $(0.9144)^3$, so that:

88 cubic yards × $(0.9144)^3$ = 67.280 827 503 cubic metres.

5 To convert miles per hour to kilometres per hour use the conversion factor in Column 4 of item 36 of Schedule 11 which is 1.609 344, so that:

100 miles per hour × 1.609 344 = 160.9344 kilometres per hour.

6 To convert calories to joules use the conversion factor in Column 4 of item 39 of Schedule 11 which is 4.186 8, so that:

107 calories × 4.186 8 = 447.9876 joules.

7 To convert horsepower to watts use the conversion factor in Column 4 of item 41 of Schedule 11 which is 745.7, so that:

88 horsepower × 745.7 = 65 621.6 watts.

90 Certificates as evidence

(1) In this regulation:

instrument means:

(a) an authorisation mentioned in paragraph 12 (2) (a); or

(b) a certificate; or

(c) a permission under regulation 71; or

(d) the instrument of appointment of a verifying, certifying or approving authority.

(2) An instrument is evidence of a matter stated in the instrument.

(3) The instrument may be received in evidence:

(a) in any court, whether or not the court is exercising federal jurisdiction; and

(b) in any proceeding before a person who is authorised by a law of the Commonwealth or of a State or Territory, or by consent of the parties to the proceeding, to receive and examine evidence.

(4) Unless the contrary is established:

(a) the instrument is taken to be issued by the person by whom the instrument purports to be issued; and

(b) the instrument is taken to be signed by the person by whom the instrument purports to be signed; and

(c) the person by whom the instrument purports to be signed is taken to be a person authorised under these regulations to sign the instrument.

90AA Pattern approval certificates issued between 1 October 1999 and 1 July 2004

A certificate of approval of the pattern of a measuring instrument that was purported to have been issued by an approving authority in the period starting on 1 October 1999 and ending at the end of 30 June 2004 is taken, for the purposes of these Regulations:

(a) to have been issued in accordance with the requirements of these Regulations as in force when the certificate was purported to have been issued; and

(b) to be a valid certificate.

90AB Preservation of verifications and reverifications made before 1 July 2009

The reverification of a standard of measurement under paragraph 13 (2A) (a) does not affect a right or an entitlement resulting from a verification or a reverification conducted in accordance with these Regulations as in force before 1 July 2009.

90B Fees

(1) For paragraph 20 (1) (l) of the Act, the fees for activities undertaken by the Commonwealth are set out in Schedule 13.

(2) In Schedule 13, level 1 applies to:

(a) the following kinds of measuring instruments:

(i) volume measuring instruments of the following kinds:

(A) simple mechanical liquor measures or dispensers;

(B) simple mechanical indicators or counters for flow;

(C) fuel dispenser consoles (excluding computer-based systems);

(D) pulse counters and pulse generators;

(E) point of sale systems;

(ii) weighing and dimensional measuring instruments of the following kinds:

(A) class 3 and 4 weighing instruments with a maximum range of 100 kg;

(B) simple instruments for weighing or dimensioning;

(C) point of sale systems; and

(b) examination and certification, under mutual recognition agreements, of patterns of measuring instruments of the following kinds:

(i) simple instruments with one or two variants;

(ii) load cells with 1 or 2 variants.

(3) In Schedule 13, level 2 applies to:

(a) the following kinds of measuring instruments:

(i) volume measuring instruments of the following kinds:

(A) simple electronic and multi-liquor measuring systems;

(B) single product fuel dispensers (except for use with gaseous products);

(C) tank level gauges (excluding volume conversion and correction devices);

(D) electronic flowmeter indicators or calculators;

(E) computer-operated consoles for fuel dispensers;

(F) mass flowmetering systems (excluding liquefied petroleum gas);

(ii) weighing and dimensional measuring instruments of the following kinds:

(A) class 2 non-automatic weighing instruments;

(B) class 3 and 4 non-automatic weighing instruments with a range of more than 100 kg and less than 600 kg;

(C) baseworks for non-automatic weighing instruments with a maximum range of more than 600 kg;

(D) loadcells;

(E) simple indicators with no linearisation;

(F) overhead-track weighing instruments;

(G) semi-automatic multi-dimensional measuring instruments;

(H) static wheel weighers;

(I) length measuring instruments;

(J) area measuring instruments; and

(b) examination and certification, under mutual recognition agreements, of patterns of measuring instruments of the following kinds:

(i) simple instruments with 3 or 4 variants;

(ii) load cells with three or four variants;

(iii) instruments with integral printers;

(iv) fuel dispensers.

(4) In Schedule 13, level 3 applies to:

(a) the following kinds of measuring instruments:

(i) volume measuring instruments of the following kinds:

(A) milk metering systems;

(B) other flowmetering systems;

(C) controllers and calculator-indicators with conversion, linearisation or correction functions for flow;

(D) multi-product dispensers;

(E) single product dispensers for use with gaseous products;

(ii) weighing and dimensional measuring instruments of the following kinds:

(A) belt weighers;

(B) weighing-in-motion systems for trains and road vehicles;

(C) catchweighers;

(D) totalising hopper weighers;

(E) class 1 weighing instruments;

(F) controllers and indicators with conversion or linearisation functions for weighing;

(G) automatic multi-dimensional measuring instruments; and

(b) examination and certification, under mutual recognition agreements, of patterns of measuring instruments of the following kinds:

(i) simple instruments with 5 variants;

(ii) automatic instruments; and

(c) examination and certification of patterns of measuring instruments other than those covered by mutual recognition agreements.

(5) In Schedule 13, level 3 also applies to examination and certification, under mutual recognition agreements, of simple instruments with more than 5 variants, subject to each variant in excess of 5 variants attracting an additional extra or miscellaneous fee as set out in the column headed 'Level 3 Fee' in item 2 in table 3 in Part 3 of Schedule 13.

Part 11 Repeals

91 Repeal of previous National Measurement Regulations

Statutory Rules 1961 No. 142, 1963 No. 126, 1964 No. 146, 1965 No. 13, 1968 No. 150, 1970 No. 40, 1972 Nos. 62, 133 and 160, 1973 Nos. 68 and 253, 1977 No. 150, 1979 No. 65, 1981 No. 195, 1983 No. 64, 1984 Nos. 195 and 231, 1985 No. 315, 1986 Nos. 172 and 399, 1988 Nos. 258 and 259, 1991 No. 146 and 1994 Nos. 54 and 319 are repealed.

92 Repeal of National Measurement (Patterns of Measuring Instruments) Regulations

Statutory Rules 1965 No. 147, 1966 No. 66, 1984 No. 232, 1986 No. 370, 1989 No. 325 and 1993 No. 104 are repealed.

Part 12 Transitional provisions

93 Transitional — 1 October 1999

(3) A certificate issued under the Patterns of Measuring Instruments Regulations in relation to a measuring instrument is taken to be a certificate issued under these regulations in relation to the instrument.

(4) Subject to subregulation (4A), an appointment under regulation 77 of the previous regulations is taken to be an appointment under these regulations.

(4A) An appointment mentioned in subregulation (4) expires:

(a) if an expiry date is not specified in the instrument of appointment — on 1 July 2005; and

(b) if an expiry date is specified in the instrument of appointment — on that date.

(5) A certificate issued under regulation 78A, 79 or 80 of the previous regulations is taken to be a certificate issued under these regulations.

(6) In this regulation:

Patterns of Measuring Instruments Regulations means the National Measurement (Patterns of Measuring Instruments) Regulations as in force immediately before the commencement of these regulations.

previous regulations means the National Measurement Regulations as in force immediately before the commencement of these regulations.

94 Transitional — 1 July 2004

(1) In this regulation:

certificate of approval includes a varied certificate of approval.

Commission means the National Standards Commission.

Organisation means the Commonwealth Scientific and Industrial Research Organisation established under the *Science and Industry Research Act 1949*.

(2) An instrument issued by the Commission under regulation 21, 40 or 53 before 1 July 2004 is taken to be a written notice issued by the Chief Metrologist under that regulation.

(3) A determination that was made by the Commission or the Organisation under these Regulations and that was in force immediately before 1 July 2004 continues to have effect on and after that day as if it had been made by the Chief Metrologist under these Regulations.

(4) A certificate of approval issued by the Commission under these Regulations before 1 July 2004 is taken to be issued by the Chief Metrologist under these Regulations.

(5) A certificate issued under these Regulations before 1 July 2004 by the Commission or the Organisation acting in the capacity of a certifying authority is taken to be issued by the Chief Metrologist under these Regulations, subject to any condition stated in the certificate.

(6) A certificate of verification issued under these Regulations before 1 July 2004 by the Commission or the Organisation acting in the capacity of a verifying authority is taken to be issued by the Chief Metrologist under these Regulations, for the period, if any, for which the certificate is given.

(7) Subject to regulations 68 and 69, the cancellation, variation or withdrawal of an instrument by the Commission under Part 6 or 8 before 1 July 2004 is taken to be a cancellation, variation or withdrawal of the instrument by the Chief Metrologist under that Part.

(8) An appointment made by the Commission under these Regulations before 1 July 2004 is taken to be an appointment by the Chief Metrologist under these Regulations.

Schedule 1 Australian legal units of measurement

(regulation 5)

Part 1 SI base units of measurement

Item	Quantity	Name	Symbol	Definition
1.1	mass	kilogram	kg	The mass of the cylinder: (a) deposited in the International Bureau of Weights and Measures; and (b) declared to be the International Prototype Kilogram by the First General Conference on Weights and Measures held in Paris in 1889.

Note Because the name for the legal unit of measurement for mass contains a prefix, the names for other units of measurement for mass are formed by combining prefixes with ***gram*** as described in Part 4 in the way mentioned in guidelines issued by the Chief Metrologist under subsection 7B (1) of the Act.

1.2	amount of substance	mole	mol	The amount of substance of a system that contains as many elementary entities as there are atoms in 0.012 kg of carbon 12. When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.
1.3	length	metre	m	The length of the path travelled by light in a vacuum during a time interval of $^{1}/_{299\,792\,458}$ of a second.

Item	Quantity	Name	Symbol	Definition
1.4	time	second	s	The duration of 9 192 631 770 periods of the radiation corresponding to the transition between the 2 hyperfine levels of the ground state of the caesium 133 atom.
1.5	luminous intensity	candela	cd	The luminous intensity, in a given direction, of a source that emits monochromatic radiation of the frequency 540 x 10^{12} hertz and has a radiant intensity in that direction of $^{1}/_{683}$ watt per steradian.
1.6	thermo-dynamic temperature	kelvin	K	The fraction $^{1}/_{273.16}$ of the thermodynamic temperature of the triple point of water.
1.7	electric current	ampere	A	The unvarying electric current that, when flowing in each of 2 parallel straight conductors of infinite length of negligible cross-section and separated by a distance of 1 metre from each other in free space, produces between those conductors a force equal to 0.2×10^{-6} newton per metre length of conductor.

Part 2 SI derived units of measurement with special names

Item	Quantity	Name	Symbol	Definition
2.1	frequency	hertz	Hz	The frequency of a regularly recurrent phenomenon that repeats itself once each second.
2.2	force	newton	N	The force that, when applied to a body having a mass of 1 kilogram, causes an acceleration of 1 metre per second squared in the direction of the application of the force.
2.3	pressure	pascal	Pa	The pressure resulting from a force of 1 newton applied uniformly over an area of 1 square metre.
2.4	energy, work	joule	J	The work done or the energy expended when a force of 1 newton moves the point of application 1 metre in the direction of that force.
2.5	power, including sound power	watt	W	The power used when work is done or energy is expended at the rate of 1 joule per second.
2.6	electric charge	coulomb	C	The quantity of electric charge that is transferred each second by an electric current of 1 ampere.
2.7	potential difference, electro-motive force	volt	V	The potential difference that exists between 2 points on a conductor carrying an unvarying electric current of 1 ampere when the power dissipated between those points is equal to 1 watt.

Item	Quantity	Name	Symbol	Definition
2.8	electric capacitance	farad	F	The electric capacitance that exists between 2 conductors when the transfer of an electric charge of 1 coulomb from one to the other changes the potential difference between them by 1 volt.
2.9	electric conductance	siemens	S	The electric conductance of a conductor that has an electric resistance of 1 ohm.
2.10	electric inductance	henry	H	The electric inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current that traverses the circuit varies uniformly at the rate of 1 ampere per second.
2.11	electric resistance	ohm	Ω	The electric resistance between 2 points on a conductor that does not contain any source of electromotive force when a constant potential difference of 1 volt maintained between those points results in a current of 1 ampere in the conductor.
2.12	magnetic flux	weber	Wb	The magnetic flux that, linking a circuit of 1 turn, produces in that circuit an electromotive force of 1 volt if the magnetic flux is reduced to zero at a uniform rate in 1 second.
2.13	magnetic flux density	tesla	T	The magnetic flux density that results if a magnetic flux of 1 weber is uniformly distributed over a plane 1 square metre in area, the direction of the magnetic flux density being perpendicular to that plane.

Item	Quantity	Name	Symbol	Definition
2.14	luminous flux	lumen	lm	The luminous flux emitted into a solid angle of 1 steradian by an isotropic point source having a luminous intensity of 1 candela.
2.15	illuminance	lux	lx	The illuminance produced at the surface of a sphere having a radius of 1 metre by a point source that: (a) is situated at its centre; and (b) has a luminous intensity of 1 candela in all directions.
2.16	activity of a radionuclide	becquerel	Bq	The activity of a radionuclide that is undergoing 1 transformation per second on average.
2.17	absorbed dose, absorbed dose index, kerma, specific energy imparted	gray	Gy	The absorbed dose, absorbed dose index, kerma or specific energy imparted when 1 joule is imparted to 1 kilogram of irradiated matter
2.18	dose equivalent	sievert	Sv	The sievert is the dose equivalent or dose equivalent index where: (a) an absorbed dose of ionising radiation equal to 1 gray is delivered to a biological material; and (b) the conditions under which the dose is delivered satisfy the formula: $Q \times N = 1$ where: ***Q*** is a factor that is the quality factor representing the effect on the detriment of the microscopic distribution of absorbed energy;

Item	Quantity	Name	Symbol	Definition
				and ***N*** is a factor that is the product of all other modifying factors specified by the International Commission on Radiological Protection as at the commencement of these regulations.
2.19	plane angle	radian	rad	The radian is the plane angle between 2 radii of a circle that cut off on the circumference an arc equal in length to the radius.
2.20	solid angle	steradian	sr	The steradian is the solid angle that has its vertex in the centre of a sphere and cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere.
2.21	catalytic activity	katal	kat	The katal is a unit of catalytic activity equal to 1 mole per second.

Part 3 Non-SI units of measurement used with SI units of measurement

Item	Quantity	Name	Symbol	Definition
3.1	sound power level	decibel	dB	In measuring sound power level in decibels, the number of decibels is the number equal to 10 times the logarithm to the base 10 of the ratio of the sound power in the particular case expressed in watts to a reference sound power of 10^{-12} watts.
3.2	sound pressure level	decibel	dB	In measuring sound pressure level in decibels, the number of decibels is the number equal to 20 times the logarithm to the base 10 of the

Item	Quantity	Name	Symbol	Definition
				ratio of the root-mean-square sound pressure in the particular case expressed in pascals to a reference sound pressure of 2×10^{-5} pascals.
3.3	sound intensity level	decibel	dB	In measuring sound intensity level in decibels, the number of decibels is the number equal to 10 times the logarithm to the base 10 of the ratio of the sound intensity in the particular case expressed in watts per square metre to a reference sound intensity of 10^{-12} watts per square metre.
3.4	area	hectare	ha	10^4 m^2
3.5	energy	electron-volt	eV	The kinetic energy acquired by an electron in passing through a potential difference of 1 volt in vacuum.
				1 eV = 1.602 177 33 $\times 10^{-19}$ J
3.6	kinematic viscosity	stokes	St	10^{-4} m^2/s
3.7	length	nautical mile	n mile	1852 m
3.8	mass	tonne	t	10^3 kg
3.9	mass	metric carat	CM or ct	0.2×10^{-3} kg
3.10	plane angle	degree	°	$\pi/180$ rad
3.11	plane angle	minute	′	$1/60 \times \pi/180$ rad
3.12	plane angle	second	″	$1/3\,600 \times \pi/180$ rad
3.13	time	day	d	86 400 s
3.14	time	hour	h	3 600 s
3.15	time	minute	min	60 s

Item	Quantity	Name	Symbol	Definition
3.16	temperature	degree Celsius	°C	A degree Celsius is equal in magnitude to a kelvin. t(°C) = T(K) – 273.15 where: ***t(°C)*** is the numerical value of temperature in degrees Celsius. ***T(K)*** is the numerical value of temperature in kelvins.
3.17	velocity	knot	kn	$^{1852}/_{3600}$ m/s
3.18	viscosity	poise	P	10^{-1} Pa.s
3.19	volume	litre	L or l	10^{-3} m^3

Part 4 Additional derived units of measurement

Item	Quantity	Name	Symbol	Definition
4.1	mass	gram	g	10^{-3} kg
4.2	length	micron	µm	10^{-6} m
4.3	area	square metre	m^2	base unit
4.4	area	square kilometre	km^2	10^6 m^2
4.5		square decimetre	dm^2	10^{-2} m^2
4.6		square centimetre	cm^2	10^{-4} m^2
4.7		square millimetre	mm^2	10^{-6} m^2
4.8		square micrometre	$µm^2$	10^{-12} m^2
4.9	volume	cubic kilometre	km^3	10^9 m^3
4.10		cubic metre	m^3	base unit
4.11		cubic decimetre	dm^3	10^{-3} m^3
4.12		cubic centimetre	cm^3	10^{-6} m^3
4.13		cubic millimetre	mm^3	10^{-9} m^3
4.14		hectolitre	hL or hl	10^{-1} m^3
4.15		millilitre	mL or ml	10^{-6} m^3

Item	Quantity	Name	Symbol	Definition
4.16	density	kilogram per cubic metre	kg/m^3	base unit
4.17	velocity and speed	metre per second	m/s	base unit
4.18	acceleration	metre per second squared	m/s^2	base unit
4.19	luminance	candela per square metre	cd/m^2	base unit
4.20	absorbed dose, absorbed dose index, kerma, specific energy imparted	rad	rad	10^{-2} Gy
4.21	activity of a radionuclide	curie	Ci	3.7×10^{10} Bq
4.22	dose equivalent	rem	rem	10^{-2} Sv
4.23	exposure	roentgen	R	0.258×10^{-3} C/kg
4.24	frequency	revolutions per minute	r/min	60 Hz
4.25		revolutions per second	r/s	1 Hz
4.26	apparent power	volt ampere	VA	$V_{rms}A_{rms}$
4.27	reactive power	volt ampere reactive	var	$V_{rms}A_{rms}\sin\phi$ where ϕ radians is the phase angle between the electro-motive force (emf) and the current
4.28	apparent energy	volt ampere hour	Vah	$V_{rms}A_{rms}$ h

Item	Quantity	Name	Symbol	Definition
4.29	reactive energy	volt ampere hour reactive	varh	$V_{rms}A_{rms}$ hsinϕ where ϕ radians is the phase angle between the electro-motive force (emf) and the current

Schedule 2 Additional legal units of measurement

(regulation 6)

Part 1 Additional Australian legal units of measurement

Item	Quantity	Name	Symbol	Definition
1.1	length	inch	in	$0.9144/36$ m
1.2	length	foot	ft	$0.9144/3$ m
1.3	mass	troy ounce	oz tr	$480 \times 0.453\ 592\ 37/7000$ kg
1.4	power	horsepower	hp	745.7 W
1.5	pressure	millibar	mb or mbar	100 Pa
1.6	pressure	millimetre of mercury	mmHg	133.322 19 Pa
1.7	velocity	foot per minute	ft/min	$0.3048/60$ m/s
1.8	work and energy	kilocalorie	kcal	4.1868×10^3 J
1.9	concentration	Degrees Brix	°Bx	concentration in grams of solute per 100g of an aqueous solution of pure sucrose, having the same density as a sugar solution at the same temperature
1.10	concentration	Degrees Z	°Z	concentration equivalent to 0.26g of sucrose per 100g of an aqueous solution of pure sucrose

Item	Quantity	Name	Symbol	Definition
1.11	concentration	Pol	Pol	concentration in grams of solute per 100g of an aqueous solution of pure sucrose having the same optical rotation as a sugar solution at the same temperature
1.12	mass concentration			grams of alcohol per 210 litres of exhaled breath

Part 2 Purposes for which additional legal units of measurement may be used

Item	Name	Purpose
2.1	inch	(a) automotive tyres or rims; or (b) equipment used, or intended for use, in the manufacture or repair of automotive tyres or rims; or (c) precision pipes, precision tubes, precision fittings or precision screw threads; or (d) spare parts for equipment constructed using measurements other than metric measurements; or (e) equipment used, or intended for use, in the manufacture of equipment referred to in paragraph (c) or (d); or (f) defence equipment; or (g) equipment used, or intended for use, in aviation; or (h) equipment used, or intended for use, in the computer industry; or (i) equipment used, or intended for use, in the electronics industry; or (j) components of equipment referred to in subparagraphs (a) to (i) inclusive
2.2	foot	(a) altitude in aviation; or (b) vertical separation in aviation; or (c) submarine depth

Item	Name	Purpose
2.3	troy ounce	the mass of precious metals
2.4	horsepower	engine ratings: (a) in the aviation industry; or (b) in defence equipment
2.5	millibar	air pressure in the aviation industry
2.6	millimetre of mercury	blood pressure
2.7	foot per minute	vehicular vertical speed
2.8	kilocalorie	food energy values
2.9	Degrees Brix	measurements of sugar concentration
2.10	Degrees Z	measurements of sugar concentration
2.11	Pol	measurements of sugar concentration
2.12		measurement of the mass concentration of alcohol in exhaled breath

Schedule 3 SI prefixes

(regulation 7)

Item	Numerical Value	Name	Symbol
1	10^{24}	yotta	Y
2	10^{21}	zetta	Z
3	10^{18}	exa	E
4	10^{15}	peta	P
5	10^{12}	tera	T
6	10^{9}	giga	G
7	10^{6}	mega	M
8	10^{3}	kilo	k
9	10^{2}	hecto	h
10	10^{1}	deka	da
11	10^{-1}	deci	d
12	10^{-2}	centi	c
13	10^{-3}	milli	m
14	10^{-6}	micro	µ
15	10^{-9}	nano	n
16	10^{-12}	pico	p
17	10^{-15}	femto	f
18	10^{-18}	atto	a
19	10^{-21}	zepto	z
20	10^{-24}	yocto	y

Schedule 4 Maximum permissible uncertainty — length (State primary and secondary standards)

(paragraphs 18 (5) (a) and 25 (a))

Column 1	Column 2	Column 3
Denomination	**Maximum permissible uncertainty (at 95% level of confidence): State primary standard**	**Maximum permissible uncertainty (at 95% level of confidence): State secondary standard**
Part 1 Flexible standards		
≤ 10 m	0.08 mm	0.15 mm
> 10 m	0.001%	0.002%
Part 2 Rigid standards		
≤ 1 m	0.008 mm	0.015 mm

Schedule 5 Maximum permissible uncertainty — mass (State primary, secondary and tertiary standards)

(paragraphs 18 (5) (b) and (c), 25 (b) and 26 (a) and subparagraphs 25 (d) (i) and 26 (c) (i))

Column 1 Denomination	Column 2 Maximum permissible uncertainty (at 95% level of confidence): State primary standard (in mg)	Column 3 Maximum permissible uncertainty (at 95% level of confidence): State secondary standard (in mg)	Column 4 Maximum permissible uncertainty (at 95% level of confidence): State tertiary standard (in mg)
50 kg		84.000	267.00
25 kg		42.000	127.00
20 kg	10.000	33.000	100.00
10 kg	5.000	17.000	53.00
5 kg	3.000	8.000	27.00
2 kg	1.000	3.000	10.00
1 kg	0.500	2.000	6.00
500 g	0.300	0.800	2.70
200 g	0.100	0.300	1.00
100 g	0.050	0.200	0.60
50 g	0.030	0.100	0.40
20 g	0.030	0.080	0.30
10 g	0.020	0.070	0.20
5 g	0.020	0.050	0.17
2 g	0.010	0.040	0.14
1 g	0.010	0.030	0.10

Column 1 Denomination	Column 2 Maximum permissible uncertainty (at 95% level of confidence): State primary standard (in mg)	Column 3 Maximum permissible uncertainty (at 95% level of confidence): State secondary standard (in mg)	Column 4 Maximum permissible uncertainty (at 95% level of confidence): State tertiary standard (in mg)
500 mg	0.008	0.030	0.09
200 mg	0.007	0.020	0.07
100 mg	0.005	0.020	0.06
50 mg	0.004	0.010	0.04
20 mg	0.003	0.010	0.04
10 mg	0.003	0.008	0.03
5 mg	0.002	0.007	0.02
2 mg	0.002	0.007	0.02
1 mg	0.002	0.007	0.02

Note The maximum permissible uncertainties in this table are based on OIML R 111.

Schedule 6 Maximum permissible uncertainty — volume (State secondary and tertiary standards)

(paragraph 25 (c), subparagraph 25 (d) (ii), paragraph 26 (b) and subparagraph 26 (c) (ii))

Column 1	Column 2	Column 3
Denomination	**Maximum permissible uncertainty (at 95% level of confidence): State secondary standard (in mL)**	**Maximum permissible uncertainty (at 95% level of confidence): State tertiary standard (in mL)**
10 000 L	750.000	1 500.000
5 000 L	400.000	750.000
2 000 L	150.000	300.000
1 000 L	75.000	150.000
500 L	40.000	75.000
200 L	15.000	30.000
100 L	8.000	15.000
50 L	4.000	7.000
20 L	1.500	4.000
15 L	1.100	3.000
10 L	0.800	2.000
5 L	0.400	2.000
2 L	0.200	1.000
1 L	0.100	0.500
500 mL	0.040	0.300
250 mL	0.020	0.200
200 mL	0.020	0.170
100 mL	0.010	0.110
50 mL	0.004	0.070

Column 1 Denomination	Column 2 Maximum permissible uncertainty (at 95% level of confidence): State secondary standard (in mL)	Column 3 Maximum permissible uncertainty (at 95% level of confidence): State tertiary standard (in mL)
25 mL	0.004	0.050
20 mL	0.004	0.040
10 mL	0.004	0.020
5 mL	0.004	0.020
2 mL	0.004	0.010
1 mL	0.002	0.003
0.5 mL	0.001	0.002
0.2 mL	0.001	0.002
0.1 mL	0.001	0.002

Schedule 7 Maximum permissible uncertainty and maximum permissible variation — length (Inspectors' Class 1 and Class 2 standards)

(paragraphs 27 (a), 28 (a), 32 (a) and 33 (a))

Column 1	Column 2	Column 3	Column 4	Column 5
Denomination	**Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 1 standard**	**Maximum permissible variation: Inspectors' Class 1 standard**	**Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 2 standard**	**Maximum permissible variation: Inspectors' Class 2 standard**
Part 1 Flexible standards				
≤ 10 m	0.4 mm	1.5 mm	1.1 mm	5.0 mm
> 10 m	0.004%	0.015%	0.011%	0.05%
Part 2 Rigid standards				
≤ 500 mm	0.04 mm	0.15 mm		
> 500 mm but ≤ 1 m	0.04 mm	0.20 mm		
> 1 m but ≤ 2 m	0.05 mm	0.20 mm		

Schedule 8 Maximum permissible uncertainty and maximum permissible variation — area (Inspectors' Class 1 standards)

(paragraph 27 (b), subparagraph 27 (e) (i) and regulation 32)

Column 1 Denomination not exceeding (in dm^2)	Column 2 Maximum permissible uncertainty (at 95% level of confidence) (in dm^2)	Column 3 Maximum permissible variation (in dm^2)
≤35	0.05	0.18
40	0.05	0.20
50	0.06	0.25
60	0.08	0.30
70	0.09	0.35
80	0.10	0.40
90	0.11	0.45
100	0.13	0.50
150	0.15	0.75

Schedule 9 Maximum permissible uncertainty and maximum permissible variation — mass (Inspectors' Class 1, Class 2 and Class 3 standards)

(paragraph 27 (c), subparagraph 27 (e) (ii), paragraphs 28 (b) and (c) and regulations 29, 32, 33 and 34)

Column 1 Denomination	Column 2 Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 1 standard (in mg)	Column 3 Maximum permissible variation: Inspectors' Class 1 standard (in mg)	Column 4 Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 2 standard (in mg)	Column 5 Maximum permissible variation: Inspectors' Class 2 standard (in mg)	Column 6 Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 3 standard (in mg)	Column 7 Maximum permissible variation: Inspectors' Class 3 standard (in mg)
10 000 kg					533 333	1 066 667
5 000 kg					266 667	533 333
2 000 kg					100 000	200 000
1 000 kg					53 333	106 667
500 kg					26 667	53 333
200 kg					10 000	20 000
100 kg					5 333	10 667
50 kg	267.000	533.000	833.000	1 667.00	2 667	5 333
25 kg	127.000	253.000	417.000	833.00	1 267	2 533
20 kg	100.000	200.000	333.000	667.00	1 000	2 000
10 kg	53.000	107.000	167.000	333.00	533	1 067
5 kg	27.000	53.000	83.000	167.00	267	533
2 kg	10.000	20.000	33.000	67.00	100	200

Column 1 Denomination	Column 2 Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 1 standard (in mg)	Column 3 Maximum permissible variation: Inspectors' Class 1 standard (in mg)	Column 4 Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 2 standard (in mg)	Column 5 Maximum permissible variation: Inspectors' Class 2 standard (in mg)	Column 6 Maximum permissible uncertainty (at 95% level of confidence): Inspectors' Class 3 standard (in mg)	Column 7 Maximum permissible variation: Inspectors' Class 3 standard (in mg)
1 kg	6.000	11.000	17.000	33.00	53	107
500 g	2.700	5.300	8.500	16.70	27	53
200 g	1.000	2.000	3.500	6.70	10	20
100 g	0.600	1.070	1.700	3.30	5	11
50 g	0.400	0.670	1.000	2.00		
20 g	0.300	0.530	0.800	1.70		
10 g	0.200	0.400	0.700	1.30		
5 g	0.170	0.330	0.550	1.10		
2 g	0.140	0.270	0.400	0.80		
1 g	0.100	0.200	0.350	0.67		
500 mg	0.085	0.170	0.270	0.53		
200 mg	0.070	0.130	0.200	0.40		
100 mg	0.055	0.110	0.170	0.33		
50 mg	0.040	0.080	0.130	0.27		
20 mg	0.035	0.070	0.100	0.20		
10 mg	0.030	0.050	0.080	0.17		
5 mg	0.020	0.040	0.070	0.13		
2 mg	0.020	0.040	0.070	0.13		
1 mg	0.020	0.040	0.070	0.13		

Note The maximum permissible uncertainties in this table are based on OIML R 111.

Schedule 10 Maximum permissible uncertainty and maximum permissible variation — volume (Inspectors' Class 1 standards)

(paragraph 27 (d), subparagraph 27 (e) (iii) and regulation 32)

Column 1	Column 2	Column 3
Denomination	**Maximum permissible uncertainty (at 95% level of confidence) (in mL)**	**Maximum permissible variation (in mL)**
10 000 L	1 500.000	6 000.00
5 000 L	750.000	3 000.00
2 000 L	300.000	1 200.00
1 000 L	150.000	600.00
500 L	75.000	300.00
200 L	30.000	120.00
100 L	15.000	60.00
50 L	7.000	27.00
20 L	4.000	15.00
15 L	3.000	12.00
10 L	2.000	9.00
5 L	2.000	6.00
2 L	1.000	3.00
1 L	0.500	2.00
500 mL	0.300	1.20
250 mL	0.200	0.80
200 mL	0.170	0.70
100 mL	0.110	0.40

Column 1 Denomination	Column 2 Maximum permissible uncertainty (at 95% level of confidence) (in mL)	Column 3 Maximum permissible variation (in mL)
50 mL	0.070	0.27
25 mL	0.050	0.17
20 mL	0.040	0.15
10 mL	0.020	0.09
5 mL	0.020	0.06
2 mL	0.010	0.03
1 mL	0.003	0.02
0.5 mL	0.002	0.01
0.2 mL	0.002	0.01
0.1 mL	0.002	0.01

Schedule 11 Conversion factors

(regulation 88)

Column 1 Item	Column 2 Unit of measurement	Column 3 Unit of measurement	Column 4 Conversion Factor
Length			
1	mile	metre	1 609.344
2	chain	metre	$22 \times 0.914\ 4$
3	yard	metre	0.914 4
4	link	metre	$22 \times {}^{0.914\ 4}/_{100}$
5	foot	metre	${}^{0.914\ 4}/_{3}$
6	inch	metre	${}^{0.914\ 4}/_{36}$
Area			
7	square yard	square metre	$(0.914\ 4)^2$
8	square foot	square metre	${}^{(0.914\ 4)^2}/_{9}$
9	square inch	square metre	${}^{(0.914\ 4)^2}/_{(9 \times 144)}$
10	acre	square metre	$4\ 840 \times (0.914\ 4)^2$
11	rood	square metre	$1\ 210 \times (0.914\ 4)^2$
12	perch	square metre	$30.25 \times (0.914\ 4)^2$
Mass			
13	ton	kilogram	$2\ 240 \times 0.453\ 592\ 37$
14	short ton (sh tn)	kilogram	$2\ 000 \times 0.453\ 592\ 37$
15	hundredweight (cwt)	kilogram	$112 \times 0.453\ 592\ 37$
16	quarter (qr)	kilogram	$28 \times 0.453\ 592\ 37$
17	stone	kilogram	$14 \times 0.453\ 592\ 37$
18	pound (lb)	kilogram	0.453 592 37
19	ounce (oz)	kilogram	${}^{0.453\ 592\ 37}/_{16}$

Column 1 Item	Column 2 Unit of measurement	Column 3 Unit of measurement	Column 4 Conversion Factor
20	dram (dr)	kilogram	$0.453\ 592\ 37/256$
21	grain (gr)	kilogram	$0.453\ 592\ 37/7\ 000$
22	slug	kilogram	$32.174 \times 0.453\ 592\ 37$
23	troy ounce (oz tr)	kilogram	$480 \times 0.453\ 592\ 37/7\ 000$
24	pennyweight (dwt)	kilogram	$24 \times 0.453\ 592\ 37/7\ 000$
Volume			
25	cubic yard (cu yd or yd^3)	cubic metre	$(0.914\ 4)^3$
26	cubic foot (cu ft or ft^3)	cubic metre	$(0.914\ 4)^3/27$
27	cubic inch (cu in or in^3)	cubic metre	$(0.914\ 4)^3/466\ 56$
28	gallon (gal)	cubic metre	$4.546\ 09 \times 10^{-3}$
29	quart (qt)	cubic metre	$4.546\ 09 \times 10^{-3}/4$
30	pint (pt)	cubic metre	$4.546\ 09 \times 10^{-3}/8$
31	gill	cubic metre	$4.546\ 09 \times 10^{-3}/32$
32	fluid ounce (fl oz)	cubic metre	$4.546\ 09 \times 10^{-3}/160$
33	fluid drachm (fl dr)	cubic metre	$4.546\ 09 \times 10^{-3}/1\ 280$
34	minim (min)	cubic metre	$4.546\ 09 \times 10^{-3}/76\ 800$
Velocity and speed			
35	mile per hour (mile/h or mph)	metre per second	$1\ 609.344/3\ 600$
36	mile per hour (mile/h or mph)	kilometre per hour	1.609 344
37	foot per minute (ft/min)	metre per second	$0.304\ 8/60$

Column 1 Item	Column 2 Unit of measurement	Column 3 Unit of measurement	Column 4 Conversion Factor
Work and energy			
38	kilocalorie (kcal)	joule	$4.186\ 8 \times 10^3$
39	calorie (cal)	joule	4.186 8
40	British thermal unit (Btu)	joule	1 055. 056
Power			
41	horsepower (hp)	watt	745.7
Pressure			
42	millimetre of mercury (mm Hg)	pascal	133.322 19
43	millibar (mb or mbar)	pascal	100

Schedule 12 Maximum permissible error — legal measuring instruments

(regulation 3, definition of ***maximum permissible error***)

When comparing the error of an evidential breath analyser with the corresponding maximum permissible error, the maximum permissible error must be rounded to the value of the verification scale interval. The error of a reading indicated by an evidential breath analyser may be greater than the maximum permissible error by one least significant digit.

Table 1 Evidential breath analysers

Item	Mass concentration	Maximum permissible error for certification	Maximum permissible error for recertification
1	Not more than 0.08 g/210 litres	±0.004 g/210 litres	±0.006 g/210 litres
2	More than 0.08 g/210 litres but not more than 0.4 g/210 litres inclusive	±5% of measured concentration	±8% of measured concentration
3	More than 0.4 g/210 litres	±20% of measured concentration	±30% of measured concentration

Schedule 13 Fees

(regulation 90B)

Part 1 Examination and certification of volume measuring instruments

Table 1 Examination and certification of volume measuring instruments

Item	Activity code	Activity	Level 1 fee	Level 2 fee	Level 3 fee
3	AP	Application processing	$300	$300	$300
2	AA	Application assessment	$204/hour	$204/hour	$204/hour
3	IP	Instrument performance	$204/hour	$204/hour	$204/hour
4	TT	Temperature test	$1 220	$1 955	$2 120
5	HU	Humidity test	$1 410	$1 550	$1 640
6	VT	Voltage test	$610	$830	$920
7	LB	Line-borne interference test	$1 500	$1 500	$1 510
8	SD	Static discharge test	$950	$1 780	$1 970
9	EMS	Electromagnetic susceptibility test	$3 300	$3 600	$3 900
10	ESS	Endurance	$600	$1 220	$1 500
11	EXT	Extra or miscellaneous test	$195	$580	$820
12	CHK	Checklist	$204/hour	$204/hour	$204/hour
13	SR	Summary report	$204/hour	$204/hour	$204/hour
14	CP	Certificate preparation	$204/hour	$204/hour	$204/hour
15	HRS	Consultations, performance and other tests	$204/hour	$204/hour	$204/hour

Note Table 1 sets out 3 levels of fees that apply to the instruments described, respectively, by subparagraphs 90B (2) (a) (i), (3) (a) (i) and (4) (a) (i).

Part 2 Examination and certification of weighing and dimensional measuring instruments

Table 2 Examination and certification of weighing and dimensional measuring instruments

Item	Activity code	Activity	Level 1 fee	Level 2 fee	Level 3 fee
1	AP	Application processing	$300	$300	$300
2	AA	Application assessment	$204/hour	$204/hour	$204/hour
3	IP	Instrument performance	$204/hour	$204/hour	$204/hour
4	TT	Temperature test	$1 800	$2 350	$2 440
5	HU	Humidity test	$970	$1 200	$1 550
6	VT	Voltage test	$740	$850	$920
7	LB	Line-borne interference test	$680	$800	$980
8	SD	Static discharge test	$720	$780	$880
9	EMS	Electromagnetic susceptibility test	$3 320	$3 870	$4 350
10	EMHF	Electromagnetic Susceptibility Test High Frequency	$1 632	$2 040	$2 448
11	ESS	Endurance	$770	$980	$1 210
12	EXT	Extra or miscellaneous test	$280	$600	$740
13	CHK	Checklist	$204/hour	$204/hour	$204/hour
14	SR	Summary report	$204/hour	$204/hour	$204/hour
15	CP	Certificate preparation	$204/hour	$204/hour	$204/hour
16	HRS	Consultations, performance and other tests	$204/hour	$204/hour	$204/hour

Note Table 2 sets out 3 levels of fees that apply to the instruments described, respectively, by subparagraphs 90B (2) (a) (ii), (3) (a) (ii) and (4) (a) (ii).

Part 3 Examination and certification of patterns of measuring instruments (including under mutual recognition agreements)

Table 3 Examination and certification of patterns of measuring instruments

Item	Activity code	Activity	Level 1 fee	Level 2 fee	Level 3 fee
1	AP	Application processing	$300	$300	$300
2	AA	Application assessment	$204/hour	$204/hour	$204/hour
3	SR	Summary report	$204/hour	$204/hour	$204/hour
4	EXT	Extra or miscellaneous test	$465	$564	$740
5	CP	Certificate preparation	$204/hour	$204/hour	$204/hour
6	HRS	Consultations, performance and other tests	$204/hour	$204/hour	$204/hour

Note Table 3 sets out 3 levels of fees that apply to the instruments described, respectively, by:

(a) paragraph 90B (2) (b) — the level 1 fee; and

(b) paragraph 90B (3) (b) — the level 2 fee; and

(c) paragraphs 90B (4) (b) and (c) and subregulation 90B (5) — the level 3 fee.

Part 3A Examination and certification of point of sale systems

Table 3A Examination and certification of point of sale systems

Item	Activity code	Activity	Fee
1	AP	Application processing	$300
2	AA	Application assessment	$204/hour

Part 4 Examination and certification of evidential breath analysers

Table 4 Examination and certification of evidential breath analysers

Item	Activity code	Activity	Fee
1	AP	Application processing	$300
2	AA	Application assessment	$204/hour
3	IP	Instrument performance	$204/hour
4	TT	Temperature test	$490
5	HU	Humidity test	$490
6	VT	Voltage test	$1 020
7	LB	Line-borne interference test	$2 350
8	SD	Static discharge test	$2 030
9	EMS	Electromagnetic susceptibility test	$22 200
10	MS	Mechanical shock	3rd party provider cost + $204/hour
11	ME	Magnetic effect	3rd party provider cost + $204/hour
12	HC	Hydrocarbons	3rd party provider cost + $204/hour
13	SF	Supply frequency	3rd party provider cost + $204/hour
14	HTS	High temperature storage	$300
15	DHC	Damp heat cyclic	$300
16	DCP	DC power supply	3rd party provider cost + $204/hour
17	DCR	Ripple on DC	3rd party provider cost + $204/ hour
18	VIB	Vibration	3rd party provider cost + $204/hour
19	DB	Durability	3rd party provider cost + $204/hour

Item	Activity code	Activity	Fee
20	EXT	Extra or miscellaneous test	$740
21	CHK	Checklist	$204/hour
22	SR	Summary report	$204/hour
23	CP	Certificate preparation	$204/hour
24	HRS	Consultations, performance and other tests	$204/hour

Part 5 Examination and certification of grain protein measuring instruments

Table 5 Examination and certification of grain protein measuring instruments

Item	Activity code	Activity	Fee
1	AP	Application processing	$300
2	AA	Application assessment	$204/hour
3	IP	Instrument performance	$204/hour
4	TT	Temperature test	$4 240
5	HU	Humidity test	$1 430
6	VT	Voltage test	$780
7	LB	Line-borne interference test	$710
8	SD	Static discharge test	$730
9	EMS	Electromagnetic susceptibility test	$3 470
10	EXT	Extra or miscellaneous test	$740
11	CHK	Checklist	$204/hour
12	SR	Summary report	$204/hour
13	CP	Certificate preparation	$204/hour
14	HRS	Consultations, performance and other tests	$204/hour

Part 6 Examination and certification of utility meters

Table 6 Examination and certification of utility meters

Item	Activity code	Activity	Fee
1	AP	Application processing	$300
2	AA	Application assessment	$204/hour
3	SR	Summary report	$204/hour
4	CP	Certificate preparation	$204/hour
5	HRS	Consultations, performance and other tests	$204/hour

Part 7 Verification of utility meters used for trade

Table 7 Verification of utility meters used for trade

Item	Activity code	Activity	Fee ($)
1	VUM	Verification of utility meters	1 000

Part 8 Additional fees for use of equipment in examination of instruments

Table 8 Additional fees for use of equipment in examination of instruments

Item	Activity code	Equipment used	Fee per hour ($)
1	LARLOA	Large load cell facility (capacity 600 kg to 50 000 kg)	105
2	SMALOA	Small load cell facility (capacity 50 kg to 500 kg)	85
3	LIQHYD	Liquid hydrocarbons test facility	190
4	LPG	Liquified petroleum gas test facility	190
5	CNG	Compressed natural gas test facility	190

Item	Activity code	Equipment used	Fee per hour ($)
6	TEMP	Temperature controlled chamber	85
7	HUM	Humidity test chamber	100
8	REL	Reliability testing equipment	85
9	LINBOR	Line-borne interference test equipment	85
10	EMS	Electromagnetic susceptibility testing chamber	240
11	ESD	Electrostatic discharge test equipment	85
12	HRS	Labour for operation of test facilities	204

Notes to the *National Measurement Regulations 1999*

Note 1

The *National Measurement Regulations 1999* (in force under the *National Measurement Act 1960*) as shown in this compilation comprise Statutory Rules 1999 No. 110 amended as indicated in the Tables below.

The *National Measurement Regulations 1999* were amended by the *National Measurement Amendment Act 2004* (Act No. 27, 2004). The amendment has been incorporated in this compilation.

For all relevant information pertaining to application, saving or transitional provisions *see* Table A.

Table of Instruments

Year and number	Date of notification in *Gazette* or FRLI registration	Date of commencement	Application, saving or transitional provisions
1999 No. 110	17 June 1999	1 Oct 1999	
1999 No. 185	1 Sept 1999	1 Sept 1999	—
2004 No. 132	18 June 2004	Rr. 1–3 and Schedule 1: 1 July 2004 Remainder: 1 July 2005	—
2007 No. 147	14 June 2007 (*see* F2007L01672)	1 July 2007	—
2008 No. 121	23 June 2008 (*see* F2008L02135)	1 July 2008	—
2009 No. 151	25 June 2009 (*see* F2009L02528)	1 July 2009	—
2010 No. 179	30 June 2010 (*see* F2010L01787)	Rr. 1–3, 5 and Schedule 1: 1 July 2010 R. 4 and Schedule 2: 16 Dec 2010 (*see* r. 2 (b))	R. 5
2011 No. 125	30 June 2011 (see F2011L01377)	1 July 2011	—

Table of Amendments

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
Part 1	
R. 2	rs. Act No. 27, 2004
R. 3	am. 2004 No. 132; 2007 No. 147; 2009 No. 151; 2010 No. 179; 2011 No. 125
Note to r. 3	am. 2004 No. 132
Part 2	
Note to r. 5	rs. 2004 No. 132
Note to r. 7	rs. 2004 No. 132
Part 3	
Division 1	
R. 9	am. 2004 No. 132
Division 2	
R. 12	am. 2004 No. 132
R. 13	am. 2009 No. 151; 2010 No. 179
Heading to r. 14	rs. 2010 No. 179
Division 3	
R. 16	am. 2004 No. 132; 2009 No. 151
R. 17	am. 2004 No. 132
R. 18	am. 2004 No. 132
R. 19	am. 2004 No. 132
Note to r. 19	am. 2007 No. 147
R. 20	am. 2004 No. 132
R. 21	rs. 2004 No. 132
Division 4	
R. 23	am. 2004 No. 132
Division 5	
R. 24	rep. 2004 No. 132
Heading to r. 25	rs. 2004 No. 132
R. 25	am. 2004 No. 132
Heading to r. 26	rs. 2004 No. 132
R. 26	am. 2004 No. 132
Heading to r. 27	rs. 2004 No. 132
R. 27	am. 2004 No. 132
Heading to r. 28	rs. 2004 No. 132
R. 28	am. 2004 No. 132

Table of Amendments

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
Heading to r. 29	rs. 2004 No. 132
R. 29	am. 2004 No. 132
Heading to r. 30	am. 2004 No. 132
R. 30	am. 2004 No. 132
Note to r. 30	am. 2004 No. 132
Heading to r. 31	am. 2004 No. 132
R. 31	am. 2004 No. 132
Heading to r. 32	am. 2004 No. 132
R. 32	am. 2004 No. 132
Heading to r. 33	am. 2004 No. 132
R. 33	am. 2004 No. 132
Heading to r. 34	am. 2004 No. 132
R 34	am. 2004 No. 132
Part 3A	
Part 3A	ad. 2010 No. 179
Division 1	
R. 34A	ad. 2010 No. 179
Division 2	
R. 34B	ad. 2010 No. 179
R. 34C	ad. 2010 No. 179
R. 34D	ad. 2010 No. 179
R. 34E	ad. 2010 No. 179
Part 4	
Division 2	
R. 36	am. 2004 No. 132
Heading to r. 38	rs. 2010 No. 179
R. 39	am. 2004 No. 132
R. 40	rs. 2004 No. 132
Division 3	
R. 42	am. 2009 No. 151
Part 5	
Division 2	
R. 46	am. 2004 No. 132
R. 47	am. 2010 No. 179
R. 48	am. 2010 No. 179
Heading to r. 50	rs. 2010 No. 179
R. 51	am. 2004 No. 132; 2010 No. 179
Heading to r. 52	am. 2004 No. 132
R. 52	am. 2004 No. 132

Table of Amendments

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
R. 53	rs. 2004 No. 132 am. 2010 No. 179
Division 3	
R. 55	am. 2004 No. 132; 2007 No. 147; 2009 No. 151
R. 57	am. 2007 No. 147; 2009 No. 151
R. 58	am. 2004 No. 132
Part 6	
Division 1	
R. 60	am. 2004 No. 132
Note to r. 60	ad. 2009 No. 151
R. 61	am. 2004 No. 132
Division 2	
Heading to r. 62	rs. 2010 No. 179
R. 64	am. 2004 No. 132
R. 65	am. 2004 No. 132
Division 3	
R. 68	rs. 2004 No. 132
Part 7	
Division 1	
R. 71	am. 2004 No. 132
Division 2	
R. 72	am. 2004 No. 132
R. 73	am. 2004 No. 132; 2010 No. 179
R. 74	am. 2010 No. 179
R. 76	am. 2004 No. 132
R. 77	am. 2004 No. 132; 2007 No. 147; 2009 No. 151
R. 78	am. 2004 No. 132
R. 79	am. 2004 No. 132
Part 8	
Division 1	
R. 80	am. 2004 No. 132
Division 2	
R. 82	am. 2004 No. 132
R. 83	am. 2004 No. 132
Part 9	
R. 84	am. 2004 No. 132
R. 85	am. 2010 No. 179

Table of Amendments

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
Part 10	
R. 87	rs. 2004 No. 132 am. 2007 No. 147; 2009 No. 151; 2010 No. 179 rep. 2011 No. 125
R. 88A	ad. 1999 No. 185 rep. 2004 No. 132
R. 89	rep. 2010 No. 179
R. 90A	ad. 2004 No. 132 rep. 2010 No. 179
R. 90AA	ad. 2009 No. 151
R. 90AB	ad. 2009 No. 151
R. 90B	ad. 2004 No. 132 rs. 2007 No. 147 am. 2011 No. 125
Part 12	
Heading to r. 93	rs. 2004 No. 132
R. 93	am. 2004 No. 132
R. 94	ad. 2004 No. 132
Schedule 1	
Schedule 1	am. 1999 No. 185; 2004 No. 132
Schedule 2	
Schedule 2	am. 2007 No. 147; 2009 No. 151
Schedule 4	
Schedule 4	rs. 2004 No. 132 am. 2007 No. 147
Schedule 5	
Schedule 5	rs. 2004 No. 132 am. 2007 No. 147
Schedule 6	
Schedule 6	rs. 2004 No. 132 am. 2007 No. 174
Schedule 7	
Schedule 7	rs. 2004 No. 132 am. 2007 No. 147
Schedule 8	
Schedule 8	rs. 2004 No. 132 am. 2007 No. 147
Schedule 9	
Schedule 9	rs. 2004 No. 132 am. 2007 No. 147

Table of Amendments

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
Schedule 10	
Schedule 10	rs. 2004 No. 132 am. 2007 No. 147
Schedule 12	
Schedule 12	am. 2004 No. 132 rs. 2007 No. 147 am. 2009 No. 151 rs. 2010 No. 179
Schedule 13	
Schedule 13	ad. 2004 No. 132 rs. 2007 No. 147; 2008 No. 121 am. 2009 No. 151 rs. 2010 No. 179 am. 2011 No. 125

Table A Application, saving or transitional provisions

Selective Legislative Instrument 2010 No. 179

5 Transitional

Despite the repeal by these Regulations of paragraph (b) of the definition of ***certification*** in regulation 3 of the *National Measurement Regulations 1999*, that paragraph continues to have effect in relation to an application for certification of a measuring instrument in use for trade made before the commencement of these Regulations.