



Australian Government
Department of Industry, Science,
Energy and Resources

National
Measurement
Institute

Trade Measurement Compliance in 2018–19

Legal Metrology Branch

March 2020

www.measurement.gov.au

Contents

What is Trade Measurement?	3
Regulation of Trade Measurement	3
Concentrated National Audits.....	4
Major Supermarkets.....	4
Retail Fuel	4
Summary of Compliance Activity and Outcomes	5
Trader Audits	5
Measuring Instruments.....	6
Packaged Goods	6
Enforcement Actions	8
Prosecutions	9
Compliance and Enforcement by Trader Type.....	10
Fruit and Vegetables Retail	10
Supermarkets*	10
Meat Retail	11
Importer	11
Seafood Retail	12
Small Business (Food)	12
Compliance by Instrument Type.....	13
Compliance of Retail Fuel Dispensers	15
Compliance of Packaged Goods.....	16

What is Trade Measurement?

Trade measurement refers to buying and selling of goods and services where the value is determined by measurement.

Studies in Australia, the USA and Canada have estimated that the total value of trade transactions involving measurement (including packaged goods and utility metering) accounts for at least 50% of Gross National Income¹. Of this amount, around a quarter is accounted for by retail transactions with the remaining three quarters being business to business transactions. Based on these estimates, the total value of trade transactions involving measurement in Australia is currently more than \$750 billion a year.

Consistency and certainty in measurement supports fair and open competition. It provides a level playing field for business by ensuring that all market participants, irrespective of their size or financial strength, follow the same rules and have equal opportunity to compete.

Reliable representations of measurements help consumers and businesses make informed purchasing decisions. More broadly, they support the efficient operation of the market.

Regulation of Trade Measurement

The National Measurement Institute (NMI), a division of the Australian Government Department of Industry, Science, Energy and Resources administers the [National Measurement Act 1960](#) and associated regulations to ensure that, for trade purposes:

- measuring instruments are fit for purpose
- measurements are made correctly
- representations about measurements are accurate.

To help businesses comply with their legal obligations, NMI's trade measurement inspectors:

- test measuring instruments, inspect packaged goods and review business practices
- provide advice on meeting compliance obligations
- take enforcement action when necessary.

Inspectors usually wear branded clothing and show an ID card to the business owner/operator at the commencement of an audit. However, inspectors can also make incognito 'trial purchases' to assess whether businesses are, for example, correctly operating scales and allowing for the weight of packaging during over-the-counter transactions.

NMI takes a risk-based approach when targeting compliance activities and determining the appropriate and proportionate regulatory response where non-compliance is identified.

We measure risk in terms of the harm and likelihood of regulatory non-compliance. Some of the factors used to determine harm include:

- impact on confidence in the measurement system
- extent of financial detriment to consumers or industry
- impact on maintaining a level playing field for business competition
- ability of consumers to make informed purchasing decisions.

¹ Birch, J (2003) 'Benefit of Legal Metrology for the Economy and Society', International Committee of Legal Metrology.

Concentrated National Audits

2018–19 saw the first introduction of concentrated national audits as part of NMI's compliance and enforcement strategy. Under this program methodology, all trade measurement inspection activity is focused on a single industry sector over a specific time period.

Two major factors determining which traders are targeted in these national audits are:

- previously identified non-compliance
- relative market shares of industry participants.

Two concentrated national audit programs were undertaken in 2018–19:

- major supermarkets
- retail fuel.

NB: The enforcement actions resulting from the major supermarkets and retail fuel concentrated national audits were implemented in 2019–20, and are not included in the statistics provided elsewhere in this report.

Major Supermarkets

Over the two-week period from 12–23 November 2018, NMI audited the effectiveness of the quality management systems of Australia's five major supermarket chains through inspections focusing on trading practices, pre-packed products and accuracy of measuring equipment.

Over a thousand major supermarkets and grocery stores located in metropolitan and regional areas of Australia were audited for compliance with trade measurement laws, including:

- 5180 measuring instruments tested, of which 1044 (20%) were non-compliant
- 29,133 lines of pre-packed articles inspected, of which 430 (1.5%) were non-compliant
- 588 trial purchases undertaken, of which 66 (11.2%) failed.

Of the 1062 business premises visited:

- 595 (56%) were found to be non-compliant with one or more aspects of trade measurement legislation
- 24 (2%) were non-compliant due to weighing equipment being inaccurate to the detriment of the customer
- 306 (29%) were non-compliant due to weighing equipment being inaccurate to the advantage of the customer
- 108 (10%) were using unverified measuring instruments
- 30 (3%) were non-compliant due to incorrect labelling or marking of pre-packed articles
- 199 (19%) were non-compliant due to short measure in pre-packed articles.

702 non-compliance notices were issued covering 775 breaches. Some stores were issued with more than one notice or a notice covering more than one breach.

In response to non-compliance detected during the audit, NMI has entered into agreements with the major supermarket chains that include improvements to staff training programs on measurement accuracy, improvements to weighing instrument checking, and regular reporting to NMI on progress.

NMI will also be undertaking a follow-up campaign in 2020 to check that actions undertaken as a result of these agreements have been effective in reducing the level of non-compliance.

Retail Fuel

The 2017–18 trade measurement compliance report identified an upward trend over recent years in the proportion of retail fuel dispensers found to be inaccurate to consumer disadvantage by more than the maximum permissible error (MPE) of 0.3%. That proportion doubled between 2015–16 and 2017–18, from 2.4 per cent to 4.8 per cent.

In response to this trend, a concentrated national audit of retail fuel premises was undertaken over the week of 1–5 April 2019.

As part of the audit, NMI's trade measurement inspectors visited 328 retail fuel sites and tested 1,340 dispensers. Confirming the trend identified in earlier years, 97 (7.2%) dispensers were found to be inaccurate outside the 0.3% MPE, including:

- 65 (4.9 %) dispensers outside MPE to consumer disadvantage
- 32 (2.4 %) dispensers outside MPE to consumer advantage.

At the time of publishing this report, nine fuel retailers have been fined a total of \$15,750 for non-compliance identified during the national audit program, and a number of other enforcement actions are still under consideration.

Summary of Compliance Activity and Outcomes

Trader Audits

In 2018–19, NMI's trade measurement inspectors:

- audited just over 7500 business premises (includes initial and follow-up audits)
- tested almost 16,000 measuring instruments
- inspected over 600 weighbridges
- inspected over 70,000 lines of packaged goods (over 250,000 individual packages) for correct measure and measurement labelling.

Year	Trader audits	Measuring instruments	Weighbridges	Packaged lines	Individual packages
2015–16	10,123	15,240	960	80,163	319,616
2016–17	10,218	17,037	1154	87,812	355,294
2017–18	9633	14,918	965	71,799	271,375
2018–19	7586	15,887	614	70,183	256,507

Non-compliance can take many forms, from inappropriate measurement practices (for example, not adjusting shop scales to account for the weight of packaging in over the counter transactions) and measurement labels that do not meet regulatory requirements, to short measure in packaged goods and using measuring instruments that are unapproved or inaccurate.

Not all instances of non-compliance necessarily affect the integrity of measurement-based transactions. Where measurement errors are found they are usually relatively minor and large errors are quite rare. However, even minor measurement errors can have a significant impact on competition and consumer detriment when considered in aggregate.

66 per cent of the 7283 traders audited were found to be fully compliant in an initial audit in 2018–19, a similar proportion to that recorded over the past four years.

Trade measurement inspectors make follow-up visits where non-compliance has been identified in an initial audit. Reflecting that most businesses are keen to do the right thing and promptly rectify trade measurement breaches once they are made aware of them, 81 per cent of 1229 traders were found to be fully compliant in follow-up audits. This equates to around 96 per cent of all businesses inspected found to be complying with the law after follow-up audits undertaken.

Year	Initial audits	Initial non-compliance	Follow-up audits	Follow-up non-compliance	Estimated final non-compliance
2015–16	7634	2558 (33.5%)	2489	380 (15.3%)	5.0%
2016–17	7761	2732 (35.2%)	2257	382 (16.9%)	4.9%
2017–18	7282	2545 (34.9%)	2351	422 (17.9%)	5.8%
2018–19	6357	2127 (33.5%)	1229	237 (19.3%)	3.7%

While much non-compliance is relatively minor and usually quickly addressed when identified by trade measurement inspectors, trader types with the greatest proportion of non-compliant businesses in 2018–19 included:

- fruit and vegetables retail
- seafood retail
- meat retail
- importer
- supermarket
- small business (food).

Measuring Instruments

Australia's trade measurement laws require that measuring instruments used for trade are of an approved type, have been verified by a licensed technician before use, and are accurate at all times while in use. NMI authorises servicing licensees to undertake verifications.

Although 9.6 per cent of almost 16,000 measuring instruments tested were found to be measuring inaccurately, 7.2 per cent of instruments were actually inaccurate in consumers' favour, three times more than the 2.4 per cent that were inaccurate to consumer disadvantage.

In 2018–19, instrument categories with the greatest proportion of instruments tested found to be inaccurate to consumer disadvantage included:

- weighbridges – more than 600 weighbridges were tested, with almost 7 per cent inaccurate to consumer disadvantage
- bulk flow meters for petroleum products – almost 60 tested, with more than 5 per cent measuring to consumer disadvantage
- retail fuel dispensers (petrol and diesel) – over 4000 tested, with 5 per cent measuring to consumer disadvantage
- weighing instruments (30 kg to 3 tonnes) – almost 300 tested and over 4 per cent inaccurate to consumer disadvantage
- beverage dispensers – just over 400 were tested, with 4 per cent measuring to consumer disadvantage.

Packaged Goods

As with other aspects of trade measurement, most packaged goods give the right measure. Of the 70,183 lines of packaged goods tested in 2018–19, 2.3 per cent were found to contain less product than stated on the label, with most discrepancies usually relatively small. Packaged goods product types with the greatest proportion of incorrect measure in 2018–19 included:

- chemicals (industrial) – 20.3 per cent of 64 packaged lines
- chemicals (household) – 17.7 per cent of 79 packaged lines
- farm supplies – 9.5 per cent of 137 packaged lines
- seafood (frozen) – 7.6 per cent of 982 packaged lines

- herbs/spices/seasoning – 7 per cent of 1646 packaged lines
- meat (processed) – 6.8 per cent of 2266 packaged lines
- meat (fresh) – 3.3 per cent of 13,957 packaged lines
- seafood (fresh) – 3 per cent of 575 packaged lines

Further details on compliance and enforcement activity and outcomes in 2018–19 are provided below.

The results outlined in this report were used in developing NMI's inspection priorities for trade measurement compliance activity in 2019–20. A copy of the [2019-20 National Compliance Plan](#)² is available on the NMI website.

² <https://www.industry.gov.au/data-and-publications/national-measurement-institute-national-compliance-plan>

Enforcement Actions

NMI inspectors issue non-compliance notices whenever any breaches of trade measurement law are identified during trader audits.

Enforcement action of a more serious nature is taken when:

- continued non-compliance is detected after a notice has been previously issued
- a breach detected in an initial audit is particularly severe
- contraventions are of high public interest.

Potential enforcement actions include:

- warning letters
- infringement notices with associated fines
- enforceable undertakings
- referral to the Commonwealth Director of Public Prosecutions (CDPP) for injunction or prosecution.

Any enforcement action, such as a warning letter or infringement notice, may cover more than one breach of trade measurement law.

The value of fines associated with infringement notices is currently \$1,050 per offence.

If a matter is dealt with in a Court, the maximum penalty is \$210,000 per offence for a company and \$42,000 per offence for an individual.

In 2018–19, NMI issued 37 infringement notices with \$43,050 in associated fines and secured one conviction.

Year	Non-compliance notice	Warning letter	Infringement notice	Referral to CDPP	Conviction
2015–16	2938	207	87 (\$85,100)	7	1
2016–17	3687	306	74 (\$69,300)	3	3
2017–18	3614	239	58 (\$65,250)	1	0
2018–19	2753	74	37 (\$43,050)	3	1

As shown in the table below, the most common breach subject to an enforcement action in 2018-19 was short measure in packaged goods. Trading practices breaches include not correctly operating scales and not allowing for the weight of packaging during over-the-counter transactions. As noted above, an enforcement action may cover more than one breach.

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	8	101	9	24
Infringement notice	1	28	1	9

Prosecutions

Ysun Pty Ltd, trading as Orion Fruit Market, was fined \$2000 in Brisbane Magistrates Court on Friday 21 June 2019 after pleading guilty to seven breaches of section 18JD(2) of the *National Measurement Act 1960*. The prosecution was initiated after persistent non-compliance. Ysun Pty Ltd was found to be not properly labelling products with a required measurement statement after repeated warnings over a period of ten months.

Another matter was referred during the year for consideration by the Commonwealth Director of Public Prosecutions (CDPP).

Compliance and Enforcement by Trader Type

As in previous years, certain trader types continued to have relatively higher rates of non-compliance identified during targeted NMI inspections in 2018–19. These trader types also incurred relatively more infringement notices and warning letters.

Fruit and Vegetables Retail

Year	Initial audits	Non-compliant	Follow-up audits	Non-compliant	Warning letters	Infringement notices
2016–17	648	348 (54%)	273	69 (25%)	55	9 (\$8100)
2017–18	337	176 (52%)	245	63 (26%)	33	14 (\$13,350)
2018–19	151	87 (58%)	88	29 (33%)	5	4 (\$5250)

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	2	8	3	2
Infringement notice	0	4	0	1

Supermarkets*

Year	Initial audits	Non-compliant	Follow-up audits	Non-compliant	Warning letters	Infringement notices
2016–17	1432	529 (37%)	489	84 (17%)	82	24 (\$24,300)
2017–18	1547	593 (38%)	545	101 (19%)	54	13 (\$17,550)
2018–19	2062	881 (43%)	298	59 (20%)	16	11 (\$12,600)

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	0	14	1	7
Infringement notice	0	11	1	0

*NB: These figures do not include enforcement actions from the concentrated national audit program of major supermarkets in 2018–19.

Meat Retail

Year	Initial audits	Non-compliant	Follow-up audits	Non-compliant	Warning letters	Infringement notices
2016–17	827	351 (42%)	342	40 (12%)	35	5 (\$4500)
2017–18	856	418 (49%)	414	61 (15%)	41	4 (\$3900)
2018–19	467	176 (38%)	161	28 (17%)	8	6 (\$7350)

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	0	5	1	4
Infringement notice	0	3	0	4

Importer

Year	Initial audits	Non-compliant	Follow-up audits	Non-compliant	Warning letters	Infringement notices
2016–17	56	24 (43%)	22	5 (23%)	8	5 (\$4500)
2017–18	70	33 (47%)	20	5 (25%)	3	3 (\$2850)
2018–19	164	55 (34%)	32	7 (22%)	12	4 (\$4200)

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	0	41	1	0
Infringement notice	0	4	0	0

Seafood Retail

Year	Initial audits	Non-compliant	Follow-up audits	Non-compliant	Warning letters	Infringement notices
2016–17	185	72 (39%)	69	15 (22%)	12	1 (\$900)
2017–18	191	101 (53%)	92	20 (22%)	5	0
2018–19	116	53 (46%)	48	6 (13%)	5	1 (\$1050)

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	0	4	0	3
Infringement notice	0	0	0	1

Small Business (Food)

Year	Initial audits	Non-compliant	Follow-up audits	Non-compliant	Warning letters	Infringement notices
2016–17	556	206 (37%)	204	38 (19%)	33	5 (\$4500)
2017–18	666	292 (44%)	255	50 (20%)	37	2 (\$1800)
2018–19	286	88 (31%)	109	20 (18%)	6	3 (\$3150)

Breaches by enforcement action 2018–19

Enforcement action	Inaccurate measuring instrument	Packaged goods (short measure)	Packaged goods (labelling)	Trading Practices
Warning letter	0	5	1	2
Infringement notice	1	0	0	2

Compliance by Instrument Type

As in previous years, in 2018–19 more than 80 per cent of instruments tested were found to be fully compliant with legislative requirements and only a relatively small proportion (2.4 per cent) were found to be inaccurate to consumer disadvantage.

An instrument was deemed non-compliant if one or more of the following was found:

- not verified by an authorised servicing licensee
- failed to measure accurately
- did not meet other standards necessary to comply with legislation, such as display issues; eccentricity; inadequate sealing; and data plate irregularities.

Year	Instruments tested	Compliant	Not verified	Inaccurate (consumer advantage)	Inaccurate (consumer disadvantage)	Other non-compliance
2015–16	15,240	12,623 (82.8%)	587 (3.9%)	563 (3.7%)	261 (1.7%)	1206 (8.0%)
2016–17	17,093	14,664 (85.8%)	829 (4.8%)	571 (3.3%)	309 (1.8%)	720 (4.3%)
2017–18	14,906	12,605 (84.6%)	872 (5.9%)	557 (3.7%)	339 (2.3%)	533 (3.5%)
2018–19	15,887	13,184 (83.0%)	611 (3.9%)	1144 (7.2%)	385 (2.4%)	750 (4.7%)

The instrument types with an above average proportion found to be inaccurate to consumer disadvantage has also been relatively consistent over recent years.

Instrument type	Year	Instruments tested	Inaccurate (consumer disadvantage)
Weighbridges	2015–16	960	52 (5.4%)
	2016–17	1147	94 (8.2%)
	2017–18	965	61 (6.3%)
	2018–19	614	42 (6.8%)
Fuel dispensers (petrol and diesel)	2015–16	2923	85 (2.9%)
	2016–17	1260	54 (4.3%)
	2017–18	1434	91 (6.3%)
	2018–19	3883	211 (5.4%)
Weighing instruments (30 kg to 3 tonnes)	2015–16	364	16 (4.4%)
	2016–17	475	23 (4.8%)
	2017–18	346	18 (5.2%)
	2018–19	298	13 (4.4%)
Beverage dispensers	2015–16	865	35 (4%)
	2016–17	945	62 (6.6%)
	2017–18	1113	34 (3.1%)
	2018–19	401	16 (4.0%)

Compliance of Retail Fuel Dispensers

The proportion of retail liquid fuel (petrol and diesel) dispensers found to be inaccurate over recent years has remained relatively steady at around 8 per cent. In 2018–19, however, this increased to just under 9.5 per cent.

This increase, however, was driven by a doubling in the proportion of dispensers inaccurate to consumer advantage, from 2.2 per cent in 2017–18 to 4.0 per cent in 2018–19. Over the same period the proportion of dispensers inaccurate to consumer disadvantage actually fell, from 6.3 per cent in 2017–18 to 5.4 per cent in 2018–19.

NMI will be undertaking another concentrated national audit of retail fuel sites as part of its [National Compliance Plan for 2019–20](#)³.

Year	Petrol and diesel dispensers tested	Inaccurate (consumer advantage)	Inaccurate (consumer disadvantage)
2015–16	2923	140 (4.8%)	85 (2.9%)
2016–17	1260	51 (4.0%)	54 (4.3%)
2017–18	1434	31 (2.2%)	91 (6.3%)
2018–19	3883	157 (4.0%)	211 (5.4%)

NB: The fuel accuracy data for 2015–16 to 2017–18, while still showing a clear doubling in the proportion of dispensers inaccurate to consumer disadvantage, has been revised from that previously reported because of:

- review of data for 2015-16, transferred when a new database was introduced mid-way through that year
- original data on total dispensers tested in each of 2016-17 and 2017-18 included compliance examinations of dispensers undertaken during trader audits where no accuracy testing occurred.

Consumer complaints

Consumer concern about this issue is reflected in complaints to NMI about potential breaches of trade measurement law, of which almost two thirds relate to short measure from fuel dispensers (liquid and gas). However, it has been a consistent trend over recent years that only a small proportion of those complaints are found to be justified when investigated. Although still small, the proportion of justified complaints doubled in 2018–19 from the previous year.

Year	Total complaints received	Fuel (liquid and gas) complaints	Fuel complaints justified (consumer disadvantage)
2015–16	724	459 (63%)	10 (2.2%)
2016–17	672	411 (61%)	18 (4.4%)
2017–18	782	511 (65%)	16 (3.1%)
2018–19	767	494 (64%)	31 (6.3%)

³ <https://www.industry.gov.au/data-and-publications/national-measurement-institute-national-compliance-plan>

Compliance of Packaged Goods

In 2018–19, trade measurement inspectors examined 70,183 lines of packaged goods (256,507 individual packages) to check whether they:

- contained the correct amount (weight, volume or units) as displayed on the label
- displayed sufficient measurement marking (e.g. weight, price per kilogram and total price for the article) in the correct format and position
- included correct packer identification (name and street address of packer if packed within Australia or name and address of importer or seller)

Most discrepancies detected in packaged goods are usually relatively small and can be corrected following advice from a trade measurement inspector.

As shown in the table below, the proportion of packaged goods lines found to have short measure or non-compliant measurement labelling fell by more than half compared with the previous year.

Year	Packaged lines inspected	Individual packages	Lines with short measure	Lines with non-compliant labelling
2015–16	80,163	319,616	2155 (2.7%)	1615 (2.0%)
2016–17	87,964	355,438	3111 (3.5%)	4589 (5.2%)
2017–18	71,733	271,243	3464 (4.8%)	3691 (5.2%)
2018–19	70,183	256,507	1621 (2.3%)	1606 (2.3%)

While meat and seafood consistently appear among the categories of packaged goods with the greatest proportion found to contain short measure, there has been considerable variation among other categories over recent years.

Packaged goods short measure 2018–19

Product type	Packaged lines inspected	Individual packages	Lines with short measure
Chemicals (industrial)	64	329	13 (20.3%)
Chemicals (household)	79	360	14 (17.7%)
Farm supplies	137	577	13 (9.5%)
Seafood (frozen)	982	4060	75 (7.6%)
Herbs/Spices/Seasoning	1646	6380	114 (7%)
Meat (processed)	2266	8941	153 (6.8%)
Meat (fresh)	13,957	48,537	459 (3.3%)
Seafood (fresh)	575	1877	17 (3.0%)