

## Information Bulletin: Introduction of the Average Quantity System

Under new trade measurement regulations introduced nationally on 1 July 2010 wineries have two options for declaring bottle quantity when filling – the existing **Minimum Quantity System (MQS)** and a new **Average Quantity System (AQS)**. They can use either the MQS or the AQS but not a combination of the two.

There are two main advantages to the AQS.

The first is that a larger sample is used when testing for trade measurement purposes than under the MQS, which potentially reduces the risk of accidental non-compliance and the perceived need to overfill bottles as a precaution.

The second is that the AQS system (which can be used for any goods sold by weight, volume, number or length) is internationally recognised and based on standards developed by the International Organisation for Standardisation.

As such, goods carrying the compulsory AQS “E-Mark” are deemed to comply with their home country’s trade measurement standards and requirements. The “E-Mark” essentially serves as a trust mark.

However, when using AQS there are greater expectations that wineries will have in place, and be able to demonstrate, appropriate quantity control methods.

### The differences between AQS and MQS

Under the **MQS**, trade measurement inspectors randomly choose 12 packages of the same type and size for testing (or as few as six if no more are available). To comply, the average net content of those packages must not be less than the declared quantity and no one package can be deficient by more than 5%.

Under the **AQS**, the average net content of the sample packages also must not be less than the declared quantity. However, the sample size tested and the allowable tolerances vary according to the size of the production run and the stated volume of the package. There are three stages to understanding this process

#### 1. Size of sample

The size of the production run determines the number of packages to be sampled: 100-500 = 50 samples; 501-3200 = 80 samples; >3200 = 125 samples.

#### 2. Prescribed tolerable deficiency

The stated quantity (in millilitres for wine) of the package determines the tolerable deficiency allowed for any individual package. In the case of a standard 750ml bottle this is 2% (15 grams); for a 375ml bottle it is 3%. [A table showing details for other size ranges is included at the end of this document]

#### 3. Exceeding prescribed tolerance

The AQS also provides for a small number of each sample to have up to twice the normal prescribed tolerable deficiency, and this is determined by the size of the production run: 100-500 = 3 samples; 501-3200 = 5 samples; >3200 = 7 samples.

Thus if a Trade Measurement Officer is assigned to test a production run of 5000 750ml bottles of Shiraz he/she will randomly select 125 bottles and declare the full run to comply if:

1. The average volume of the 125 samples is not less than 750ml
2. A maximum of seven are deficient by more than 2% and none is deficient by more than 4%.

### Packers’ Rules

There are three accepted “Packers” Rules” when using the AQS system

1. The average net content in a sample from the production run of pre-packed articles must not be less than the stated quantity marked on the packages.
2. Allowance is made for a small number of pre-packages to exceed a prescribed tolerable deficiency.
3. None of the pre-packages in the sample can have more than twice the prescribed tolerable deficiency.

## Quantity control methods

Packers may use whatever quantity control methods they find convenient, as long as these are sufficiently rigorous to ensure compliance with the "Packers' Rules". Trade Measurement Officers may carry out measurement checks to ensure compliance.

In the design of the packing system attention to the following is recommended:

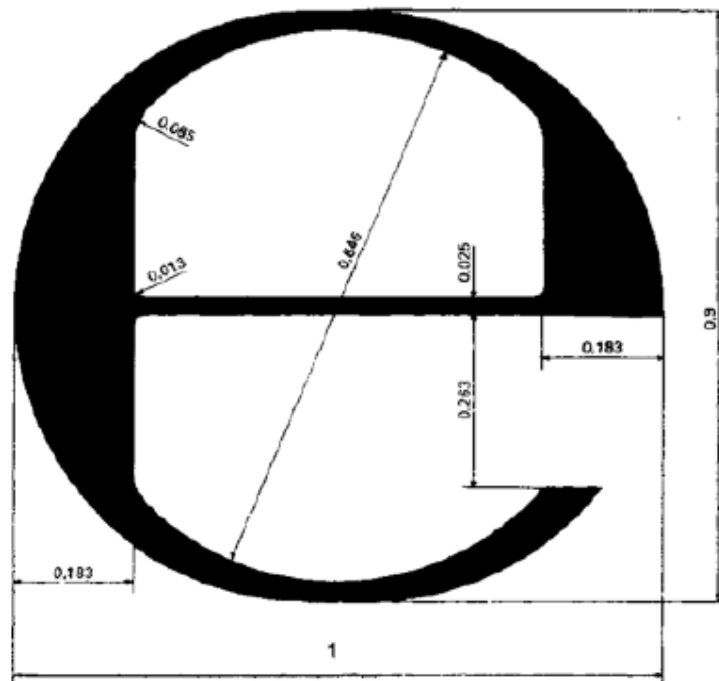
1. Sampling plans are specified and suitable target quantities and control limits set,
2. Packing lines controlled by check weighers that are appropriately set,
3. Checking or measuring equipment is properly maintained and checked,
4. System is reviewed and recorded (including corrective actions),
5. Staff training is formalised and recorded to ensure the system is adequately implemented.

## The AQS E-Mark

There are no changes for measurement marking or the packer identification on pre-packaged articles when using the AQS rather than the MQS. However, there is a requirement to identify the package with the AQS *E-Mark*, except where packages exceed 10 litres in volume.

There is no phase-in period, so if the AQS is chosen, the *E-Mark* **must** be displayed on the packaging. If there is no *E-Mark*, goods **must** meet the requirements of the Minimum Quantity System.

The diagram below shows the relative dimensions of the mark as a proportion of its width.



**Further information**

For further information about the AQS contact the National Measurement Institute

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Web: [www.measurement.gov.au](http://www.measurement.gov.au)

The NMI is a division of the Department of Innovation, Industry, Science and Research in the Australian Government.

It is responsible for maintaining primary standards of measurement and providing the legal and technical framework for the dissemination of measurement standards.

**Appendix: Tolerable deficiency levels based on stated quantity of package**

| Stated Quantity Grams/Millilitres        | % Error | Grams/Millilitres |
|--|---------|-------------------|
| More than 0 to not more than 50          | 9       | -                 |
| More than 50 to not more than 100        | -       | 4.5               |
| More than 100 to not more than 200       | 4.5     | -                 |
| More than 200 to not more than 300       | -       | 9                 |
| More than 300 to not more than 500       | 3       | -                 |
| More than 500 to not more than 1,000     | -       | 15                |
| More than 1,000 to not more than 10,000  | 1.5     | -                 |
| More than 10,000 to not more than 15,000 | -       | 150               |
| More than 15,000                         | 1       | -                 |