Why are we here?

1. To communicate success Legal Metrology had with the quantity control scheme
Why are we here?

2. To present a way to minimize red tape and facilitate trade
Why are we here?

3. To ensure both consumers and industry are protected and that trade is conducted on the basis of fairness.
Why are we here?

4. To give some clarification and address some concerns

If a dog wore pants would he wear them like this or like this?
What is the ℮-mark?

• The estimated sign, ℮, also referred to as the ℮-mark

• Indicates that prepackages are filled accordance with European Union Directive 76/211/EEC.

• Only applied when the quantity of product in the package and its labelling meet the requirements, and

• the packer either measures the content of each package or carries out production checks in accordance with procedures recognized by the competent LMB in the member state, and

• the packer holds at the disposal of those LMB the documents containing the results of such checks and corrections and adjustments that have been shown to be necessary.
How did the e-mark originate?

- The EU single market strategy
- Common measurement practice (min fill vs average fill)
- The need for harmonization
- EU member state cooperation
What is the ℮-mark?

RSA Context

- The ℮-mark is the recognised product mark for the QCS
- Developed by Legal Metrology - SABS/NRCS
- Aims to enhance consumer and industry protection
- Joining is voluntary
- Only registered firms may participate
  - SANS 1841 vs Directive 76
- Formal certificate of registration and endorsement by LMA
the “e-mark” can thus be defined/summarised as follows:

1. A measurement mark,
2. placed immediately after the quantity statement of pre-packaged commodities,
3. is a metrological passport that assures all stakeholders throughout the supply chain of such goods,
4. that these goods have been subjected to a system of net quantity control,
5. to ensure that each batch of such goods comply with the Trade/Legal Metrology Act and Regulations.
Responsibilities of a packer/importer
Responsibilities of a packer/ importer

• Shall have in place a management system, however called – guidance is given
• Shall ensure that all prepackages comply with all prepackage requirements given in the standards
• Shall measure and check the actual quantity contained in the prepackages - daily
• Shall ensure that production checks are done in accordance with procedures recognized by the LMA
• Shall not intentionally exploit the tolerances
Responsibilities of a packer/importer

- Obligation to take immediate corrective action based on process control records.
- Shall not release NC prepackages from his or her control without written permission from the LMB.
- **Annex A of SANS 1841 gives guidelines for possible rectification of non-conforming batches of prepackages.**
Benefit to Regulator

- The regulatory assessment measure “confidence” assured by the QCS of packer/importer
- This “confidence” allows the regulator to endorse procedures and prepackages produced
- Regulator can thus focus limited resources on unregistered/unknown packers/importers
If an importer or agent elects to comply with this standard, then he or she shall assume the role of the packer and shall be responsible for supplying the required records.

**Note: W.r.t. the agent/importer**

- these records could be records from the factory in the country of origin
- records of consignment checks from a 3rd party
- a certificate of recognition from the national metrology authority in the country of origin in recognition of the packers system of control.
A contract packer shall be responsible for all pre-packages he or she produces, irrespective of who owns the product or the packing material, before delivering to the client.

This implies that contract packers (or 3rd party) will need to register with the LMB in order to pack Ē-mark bearing products.

Note:

- The contract packer to treat contract goods as if they were the owner
- Will take all reasonable steps to ensure that non-compliant contract packed goods do not enter the market.
- Where a client removes his product from the premises of the contract packer, the contract packer will need to inform the regulator of such batch of non-compliant goods or risk losing their registration certificate.
Measurement practice (Packers)

• Packers may use any of the acceptable measurement methods for quantity determination purposes, for instance:
  – Mass measurement using weighing instruments
  – Volumetric measurement and related measuring instruments
  – Volumetric measurement using templates (New to South Africa)

• Or indirectly in the case of liquids by weighing and using density to convert to volume.

• In such a case, air buoyancy shall be taken into consideration as required in SANS 458.

• The error made in measuring the actual contents of a prepackage shall not exceed one fifth of the TNE for the nominal quantity of the contents in the prepackage.
Measuring instruments (Packers)

Measurement traceability

• **All instruments** used in process control shall be traceable to the National Standard

  This includes: Balances, mass pieces, measures, density determination instruments, thermometers used to determine density at 20° and any other instrument that may have an influence in the final quantity determination.

• Measurement/ checks on prepackages shall be carried out using a **suitable measuring instrument**

• **Suitable measuring instrument**: In the case of a digital instruments, an instrument that has a resolution of at least one tenth of the TNE, in the case of a analogue instrument that allows for interpolation between discrete divisions, an instrument that has a division size equal to at least one fifth of the TNE
Packer rules must be clear, no contradictions!

THINGS I HATE

1. VANDALISM

2. IRONY

3. LISTS
Packers Rules for product compliance

• Standard (SANS 1841)
  – Rule 1: the actual content of the prepackages shall not be less, on average, than the nominal quantity.
  – Rule 2: the proportion of prepackages that have a negative error greater than TNE shall not be greater than 2.5% of the batch.
  – Rule 3: no prepackages that has a negative error greater than 2 x TNE shall be offered for sale.
Example: 750 ml Beer prepackage

- Test Results
- Declared Volume = 750 ml
- Tolerance allowed (T1) = 15ml
- Each point on graph represents an actual volume reading
SANS 458: 3 Rules (Tolerances)

Example: 750 ml Beer prepackage

- **Rule 1**

  **Average must be** 750 ml **or greater**
SANS 458: 3 Rules (Tolerances)

Example: 750 ml Beer prepackage

Rule 2:
The proportion of prepackages that have a negative error greater than TNE shall not be greater than 2.5% of the batch.
Example: 750 ml Beer prepackage

Rule 3:
No error greater than 2 x TNE allowed (T2 error)
Batch sizes for sampling

• If samples are taken from the end of the packing line, the batch shall be equal to the maximum hourly output.

• In other cases the number in a batch shall be equal to 10,000 units.
Sampling and Testing

• Sample size
  – Non destructive testing
    • < 100 all samples will be tested.
    • > 100 tested according to sampling plan
  – Destructive testing
    • Always 20 samples.
Benefits to industry

- Facilitation of trade to and from RSA, SADC region to follow suit
- Less disruption (Audits vs Ad-hoc Inspection)
- Mitigation of risk relating to NC (Legal action, recall)
- The improved process and production controls with independent audits, resulting in savings
- Reduction of overfilling resulting in savings
- Marketing tool - can offer contract/ 3rd party packing
- A move toward self regulation (Risk based)
How do I register to use the e-mark?

- Application Forms
- Product list
- Payment of Annual Registration Fee
- Submission of Quality Manual for pre-assessment
- Initial assessment and reference test
- Recommendation by audit team to Approvals Committee
- Formally issued registration certificate endorsing the packaging facility/importer by the LMB
- Biannual assessments with the possibility of reducing the number of visits dependant on compliance history
Benefits to consumer

• Assurance of getting the declared quantity.
• Value for money
• Peace of mind
• Ability to buy with confidence
• Consumer need to be made aware: Road Shows

"Protecting health, Safety, the Environment and ensuring Fair Trade"
Conclusion

In the successful implementation of the quantity control system (e-mark) we show our major trading partners that we are a serious and ethical nation. This will open more and more export opportunities for South African markets.
Where can this e-mark be found?

• The sign has been added to the Unicode list of characters at position U+212E.

• Logo Artwork specifications:
Usefull Definitions

- **Actual quantity**: The difference between the gross quantity and the mass of the packaging material of product in a pre-package (net Mass)
- **Contract packer**: packer who prepacks the product under the name of, or specifically for, a client, irrespective of who owns the product or packing material before delivering the product to the client
- **Measurement standards**: physical standards used to validate measuring instruments
- **LMB – Legal Metrology Body**: The body responsible for administration and market surveillance of legal metrology requirements/legislation.
- **National responsible body**: body appointed as the LMB
- **Negative error**: quantity by which actual quantity is less than the nominal quantity of the contents
- **Nominal quantity**: quantity indicated on the pre-package
- **Pre-package**: prepacked package
- **Production control records**: records of measurement of the contents of pre-packages carried out by the packer after completion of the packing process
- **Standard mass pieces**: physical standards of mass used to validate weighing instruments
- **Tolerable negative error TNE**: negative error permitted by law, the tolerable deficiency or \( T \) (also referred to as “\( T1 \)”)
- **Inadequate package**: A package with a negative error greater than twice the TNE.