

Laboratory testing in South Africa



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Presentation overview

1. Testing requirements
2. Accredited laboratories
3. Compliance monitoring
4. Sodium case study



Testing requirements

- Food and beverage manufacturing companies are required to conduct nutrition- and food safety-related testing of their product **to ensure compliance** to regulations
- **SANAS-accredited laboratories** should be used to conduct this testing as per regulations (R.146, HPL)
- Tests conducted for the purpose of nutrition labelling need to be conducted **every 3 years**
- Guidelines to the labelling legislation exist for **sampling** to ensure that this is representative



Accredited laboratories & methods

- Legislation refers to reputable laboratories and prescribed methods

“50. 12(a) the nutritional information as required by these regulations shall be the real, typical values as determined by a reputable laboratory through chemical or microbiological analysis in accordance with the methods recommended in these regulations, Guidelines or Codex, and where no specific methods are recommended, a method which has been accredited by SANAS or ILAC”



www.sanas.co.za



www.ilac.org



Compliance monitoring

- Environmental Health Practitioners (EHPs) are responsible for ensuring compliance at a municipal level
- A sodium monitoring plan is not in place at this stage



Sodium Case Study



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Two-pronged approach to reduce salt intake

Mandatory sodium reduction regulations were published in March 2013



This aims to reduce salt in processed foods.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Decreased national salt consumption

Consumer education through salt reduction awareness campaign, led by the HSFA



This aims to reduce discretionary sodium intake.



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Progress made to date

- Industry have been reducing sodium gradually over the past few years and have shared updates on progress made with the Department of Health at regular checkpoints
- Technical challenges were raised and were warranted, changes were reflected in the amendment that was published in 2017
- This process is still underway, as the 2019 target date approaches
- Technical challenges can still be raised

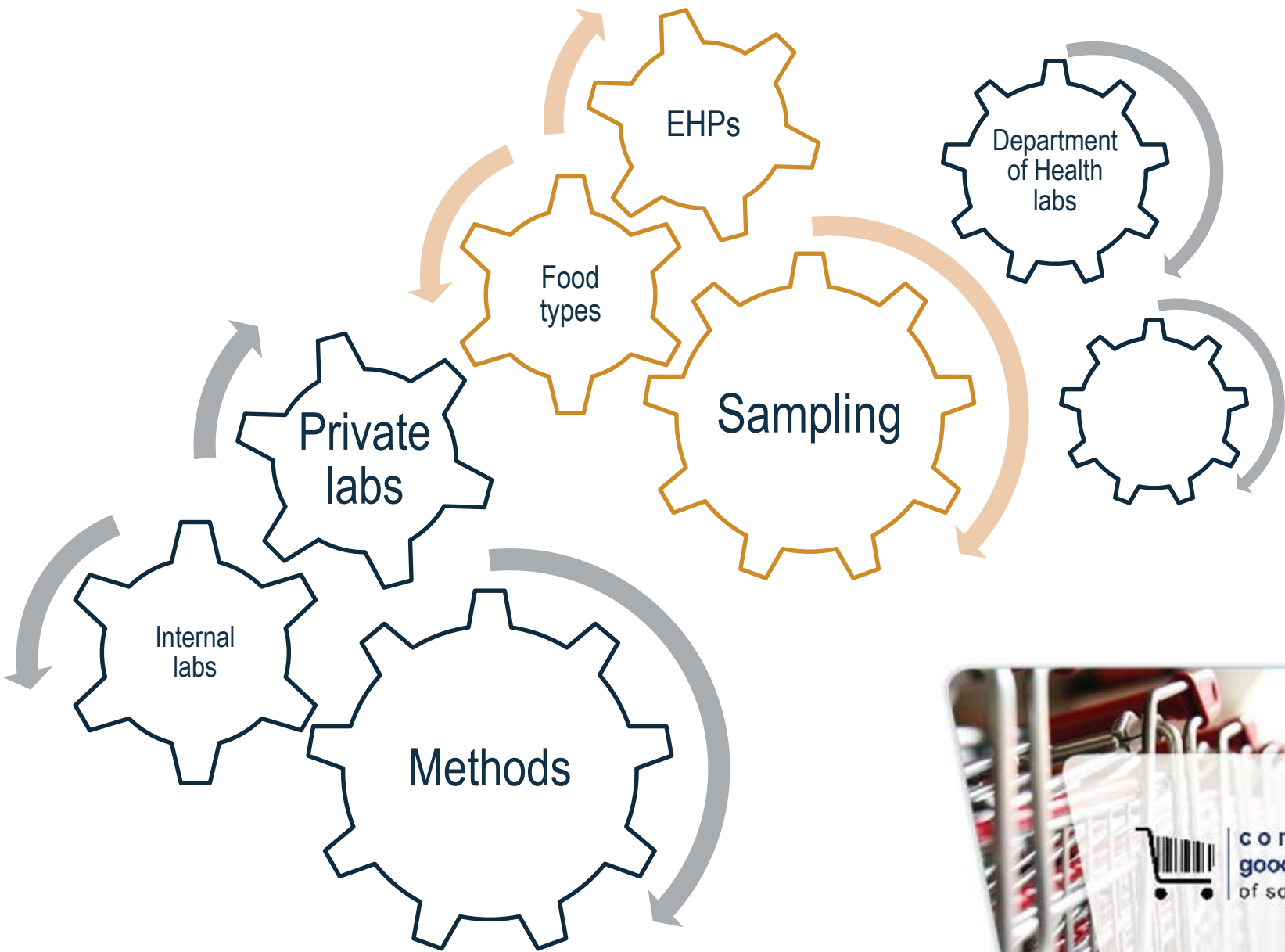


Discrepancies b/w sodium test results

- Department of Health shared sodium test results with CGCSA after 2016 target date and many were found to be higher than target
- Work between CGCSA and NMISA to **understand whether discrepancies are as a result of different test methods, sampling, laboratory differences**
- Further engagement with the Department required to ensure that discrepancies are addressed, awaiting date for a meeting



Multiple factors need to be considered



NMISA Technical Note: Sodium analysis



Technical Note: Sodium analysis in Food

4. Conclusions

When selecting a suitable analytical method for the analysis of sodium in food samples, there are a number of things to consider. From a purely cost perspective, a potentiometric measurement will be significantly cheaper than a measurement performed by AAS, ICP-OES and ICPMS. Analysis by AAS and ICP instruments will however generally be more robust and are typically associated with better accuracy and precision. Depending on the skill of the analyst and assuming that all methods have been properly validated, fit-for-purpose results can however be achieved with any of the methods proposed in the regulation. Once validated, regular quality control measures should be put in place to ensure that the method's performance doesn't deteriorate over time. This could include the routine analyses of quality control samples with known concentrations and/or regular participation in interlaboratory exercises. All the proposed analytical methods do however require a skilled analyst who knows the method's limitations, while all the methods will also require calibration with SI traceable calibration standards (e.g. from ISO 17034 accredited manufacturers).

NMISA Technical Note: Sampling

- R.146 has a sampling guideline
- A technical note is being developed, using this guideline as a basis, to ensure that any sampling-driven factors are addressed



Laboratory differences

- NMISA to identify the foods in each group (carbohydrate, fat and protein-based) that present the most challenges for testing to use as control samples
- Department of Health (if they agree) to identify the foods that are most widely consumed to help identify which foods should be focused on to rectify / identify testing issues
- Department of Health (if they agree) to assist by insisting encouraging that laboratories to participate in this work



Laboratory differences

- Once the sampling protocol and method guidance documents are being used, NMISA can assist by providing control samples to identified laboratories to **'test' whether the laboratories are getting the required results and help with the necessary steps to ensure that any issues are rectified**



Way forward

Should the focus be on method alignment or ensuring that laboratories are accredited or other, in light of conflicting test results found during inspections recently?





THANK YOU

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