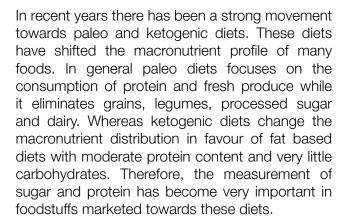
1st Protein; Sugar and Moisture Measurement Summer School

Supporting the consumers right to choose through accurate measurement.



In paleo diets natural sugars such as honey, maple syrup and other plant-based sugars are allowed, while refined sugars are prohibited. To ensure that the products have the correct sugar profiles, authentic product, sugar analysis where clear differentiation between various sugars becomes crucial. For ketogenic diets the quantity of protein is critical as this is the main macronutrient after fats. Therefore, it is important that all essential proteins are consumed.

The aim of this summer school is to look at both theoretical and practical considerations in the accurate measurement of protein, sugar and moisture measurement in food.

Limited space available, maximum of twenty participants - register now!

JOIN OUR FOOD ANALYSIS JOURNEY

The consumers right to choose – how measurement ensures what you purchase is what you get.

3 - 14 July 2023

An informative workshop aimed at anyone interested in the analysis of proteins, sugars and moisture in food.

Schedule and contents subject to change; minimum of ten participants required.







The AFRIMETS initiative is supported by







Friendly, Knowledgeable **Facilitators**

- The course will be presented by facilitators that strongly encourage interactive training, with a willingness to share.
- The first day of the course will be combined with a virtual workshop to encourage the sharing of information from suppliers to users throughout the continent.
- Facilitators will include:
- o Dr Nontete Nhlapo (NMISA)
- Thabang Chiloane (NMISA)
- Desiree Prevoo-Franzsen (NMISA)
- o Deirdre Claasen (NMISA)
- Technical applications featuring the following manufactures/ suppliers: Agilent; Elementar; Leco Africa; Metrohm; Mettler Toledo: Perkin Elmer and Waters

WEEK 1 - MOISTURE AND PROTEINS

DAY 1:
High protein, low sugar
- new dietary trends and
its effect on analysis

- **DAY 2:** Moisture determination

food products

determination

through oven drying

Moisture

- **DAY 3:** Instrumental moisture determination
- **DAY 4: Protein** measurements
- **DAY 5:** Method specific workflows

- Welcome and Remarks
- Recent movement towards alternative diets, changes in macronutrient distributions
- Sugar analysis kilojoules to authenticity
- Break
- Methods commonly used in protein analysis
- Advances in protein analysis
- Discussions
- Dietary essentials amino acid analysis
- Why is moisture in food important?
- Techniques in moisture determination
- New advances in macronutrient measurements
- Questions
- Closing remarks

- Moisture analysis in Introduction to instrumental moisture determination
 - Karl Fischer
 - Moisture analysers
- Introduction to protein measurements
- Dumas
- Elemental analysis





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Measurement and calibration expertise

The NMISA offers calibration and measurements in a wide field of scientific disciplines including, but not limited to:

- Acoustics, Ultrasound and Vibration
- DC Low Frequency and Radio Frequency
- Fibre Optics
- Gas Analysis
- Mass Calibration Services
- Temperature and Humidity Calibration Services
- Photometry and Radiometry
- Essential oils
- Environmental contaminants
- Toxic and nutritional content
- Food contaminants and nutritional content

WEEK 2 - LET'S GET PRACTICAL SAMPLING TO REPORTING

DAY 1: Amino acid analysis	DAY 2: Sugar analysis	DAY 3: Sugar analysis	DAY 4: Sugar analysis	DAY 5: Method validation and quality
Introduction to amino-acid analysis	 Introduction to sugar analysis 	Preparing standardsPrepare samplesSetting up the LC-RI	Data interpretationQuantification	Method validationUse of QC materials

We are with you every step of the way

To support your measurement quality control and quality assurance objectives, the NMISA has released several reference materials and certified reference materials. These materials where possible originate from within the African Continent, to ensure compatibility with the samples routinely measured in your laboratory. Reference materials currently available include mycotoxins (analytical standards as well as naturally incurred materials such as maize flour and peanut slurry), forensic blood alcohol analysis analytical standards, matrix materials for nutritional content, nutritional and toxic elements as well as pesticides. Please visit our on-line store for available products and pricing www.store.nmisa.org

- The NMISA provides an extensive suit of products and services to meet your laboratories needs. This includes but is not limited to consultation services that spans the entire lifetime of your laboratory from design to implementation.
- Training in method development; validation and uncertainty.
- Providing calibration, proficiency testing and reference materials to assist your laboratory in meeting quality control and assurance objectives.

Finding a course that is right for you

The NMISA Training Centre is committed to building measurement capacity in Africa. The centre has a number of courses that may meet your training needs, from personnel at the beginning of their careers to those wanting to develop advanced skills. Please visit our website www.nmisa.org for more information or contact us at training@nmisa.org or call +27 12 947 2461.

Finding Proficiency Tests that suit your needs

The NMISA is an ISO/IEC 17043 accredited proficiency testing service provider with accreditation in the following fields: Food Testing (chemical additives, residues, and nutritional content); Water Testing (Chemical contaminants and residues) and Forensic Testing (forensic level alcohol, forensic preservatives and breath alcohol).

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