



Solutions for Chocolate

Wet Chemistry Analyses for Producers of Chocolate and Cacao products

Crude Protein

OP SIS LiquidLINE has solutions for determination of Kjeldahl (TKN) protein following standard methods.

The samples are digested with sulphuric acid to convert nitrogen into ammonium sulphate. The samples are further distilled by steam distillation followed by titration. The nitrogen content is multiplied by a standard factor to obtain the protein content.

Examples: Protein in chocolate, milk chocolate and cacao products

Our Solution

- The KjelROC Digestor Advanced motor lift makes the digestion efficient and saves valuable operator time.
- OP SIS LiquidLINE Kjeldahl catalyst tablets and glass tubes ensure stable and reliable results.
- KjelROC Analyzer with integrated Titration offers titration with low relative standard deviation and wireless communication save time and costs.

Standards
AOAC 939.02
AOAC 970.22

Application Notes
LA1000 Application Guide Kjeldahl
Further Notes on request

Total Fat

OP SIS LiquidLINE provides instruments to determine Total Fat according to standard methods.

The sample is hydrolysed and thereafter extracted in hot solvents. Calculation of total fat content follows after the extract has been dried to a constant weight.

Examples: Fat in cacao products with or without milk ingredients. Fat in products prepared by cooking with sugar and H₂O, chocolate, chocolate liquor etc.

Our Solution

- The HydROC hydrolysis unit offers a unique filter technology that saves time and reduces the risk of errors when moving samples between hydrolysis and extraction.
- The SoxROC extraction unit with batch handling and full automation facilitates the extraction.

Standards
AOAC 963.15

Application Notes
LA1002, Appl. Guide Solvent Extraction
LA1008, Ext. of total fat in Chocolate
Further Notes on request

Crude Fat

OP SIS LiquidLINE provides instruments to determine Crude Fat with Hot Solvent extraction.

The sample is prepared and thereafter extracted in hot solvents. Calculation of fat content follows after the extract has been dried to a constant weight.

Examples: Fat in cacao products with or without milk ingredients. Fat in products prepared by cooking with sugar and H₂O, chocolate, chocolate liquor etc.

Our Solution

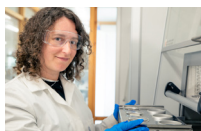
- The SoxROC extraction unit with batch handling and full automation facilitates the extraction.
- The instrument provides significant time savings versus cold extraction and a recovery of over 90% of used solvents.

Standards
AOAC 963.15

Application Notes
LA1002, Appl. Guide Solvent Extraction
LA1007, Ext. of fat in Chocolate
Further Notes on request

OPSIS LIQUIDLINE - INNOVATIVE WET CHEMISTRY

OPSIS AB, founded in 1985 in Sweden, took the concept of measuring gases with light and developed it into a commercially viable product. In 2013, we took another step and moved our innovative technology into Wet Chemistry and Liquids.



APPLICATION LABORATORY READY TO ASSIST

We have our own Wet Chemistry laboratory in Sweden, ready to assist you in any challenges you might have. We do not only test your instrument prior to shipment but we can also develop applications and provide assistance to optimise your methods.



CUSTOMISED TRAINING AND SUPPORT FROM SWEDEN

A combination of young engineers and very senior advisors, most of them with over forty years of experience in wet chemistry instruments, is a powerful combination. We can offer dedicated and skilful technical and application support on-site as well as dedicated customer sessions on internet. You are never alone when selecting OPSIS LiquidLINE.



LATEST IN MAINTENANCE

Our products include maintenance recommendations as well as hands-on guides on how to perform analyses. To raise the standard we have implemented the concept of QR-codes on components for tracking component failures, advanced service menus with service tracking and capabilities for remote login and support.

A COMPLETE PORTFOLIO



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2023 07

