



# Solutions for Beverages

Wet Chemistry Analyses for Soda, Juice, Tea, Coffee and Spirits producers

## Crude Protein

OPSIS 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.

Examples: Nitrogen in Sugar and Syrups and Protein in Tea

#### Our Solution

- The KjelROC Digestor Advanced motor lift makes the digestion efficient and saves valuable operator time.
- KjelROC Analyzer with integrated Titration offers titration with low relative standard deviation and wireless communication saving time and costs.

### Standards

ISO 1871 ISO 5983-2 AOAC 920.103, 920.176 AOAC 2001.11 SSD:TM:506 SSD:TM:507

Application Notes LA1000 Application Guide Kjeldahl Further Notes on request

## Total SO<sub>2</sub>

OPSIS LiquidLINE has solutions for determination of Total SO<sub>2</sub> with steam distillation, following standard methods. Total sulphur dioxide is liberated by acidic steamz distillation and is fixed and oxidized by hydrogen peroxide. The sulphuric acid formed is determined by separate titration, using third party instruments.

Examples: Total SO<sub>2</sub> in Fruit Juices

#### Our Solution

- OPSIS LiquidLINE glass tubes ensure stable and reliable results.
- KjelROC Distillation unit with programming capabilities makes distillation easy. A special adaption kit for SO<sub>2</sub> determination can be ordered.

Standards AOAC 962.16

Application Notes LA1000 Application Guide Kjeldahl Further Notes on request

## Alcohol in Spirits

OPSIS LiquidLINE has solutions to help when determining Alcohol in Spirits. After steam distillation the Alcohol is determined by measuring the density of the distillate.

Examples: Alcohol in Cognac, Gin, Vodka and other spirits

#### Our Solution

 KjelROC Auto or Manual Distillation unit with programming capabilities make distillation easy.

Standards SSD:TM:506 SSD:TM:507 EEC 2870

Application Notes LA1000 Application Guide Kjeldahl 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.





## 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 handson 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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