



# Solutions for Wine

Wet Chemistry Analyses for Wine and Vinegars producers

## 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.

Examples: Protein in Wine

### 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

OIV-MA-AS323-02B  
SSD:TM:504  
SSD:TM:505

### Application Notes

LA1000 Application Guide Kjeldahl  
Further Notes on request

## Volatile Acids

Acetic acid in wine, sometimes referred to as volatile acidity, is created by spoiling yeasts and bacteria and is monitored in wine production. OP SIS LiquidLINE has solutions to help when determining Volatile Acids. After steam distillation the test sample is analyzed by titration.

Examples: Determination of Volatile Acids in Wine and Vinegars.

### Our Solution

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

### Standards

OIV-MA-AS313-02  
EEC 2676

### Application Notes

LA1000 Application Guide Kjeldahl  
Further Notes on request

## Alcohol in Wine

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

Examples: Alcohol in Wine

### Our Solution

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

### Standards

OIV-MA-AS312-01A  
EEC 2676  
EEC 2870

### Application Notes

LA1000 Application Guide Kjeldahl  
Further Notes on request

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

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 steam 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 Wine and Vinegars

### 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

OIV-MA-AS323-04A  
AOAC 962.16

### 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. We can offer:

- AN APPLICATION LABORATORY READY TO ASSIST
- CUSTOMISED TRAINING AND SUPPORT FROM SWEDEN
- THE LATEST IN MAINTENANCE
- A COMPLETE PORTFOLIO

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