

## Determination of sugars and alcohols in wine

### Description

The determination of sugars (**sucrose**, **glucose** and **fructose**) and alcohols (**glycerol**, **ethanol**) is part of daily routine in beverage analysis. The quantitative determination of these parameters is made with HPLC but the necessary sample preparation runs fully automatically and without being noticed by the user. The **Profilyzer-System** of **SunChrom** comprises all components and auxiliaries, even sample vials and standard wine, that are needed for this analysis.

### Strong point of the method

The strong point of the method is that both matrix and a.m. substances are separated and detected as single substances and detected with a refractive index detector. That is the reason why the system can be calibrated either with pure substances or with a standard wine. The eluent is only water. This makes this analysis not only safe for the environment but also inexpensive.

The analysis time for all 5 mentioned parameters is less than 6 minutes. Under certain circumstances it is even possible to reduce this time to less than 5 minutes. Below, a typical chromatogram is shown. The linearity is excellent from trace level up to must concentrations.

Fig. 1 shows a standard wine spiked with 5 g/l sucrose. You can easily and clearly see the good separation of all parameters. Even sugar as traces, as you can see in fig. 2, down to 0,1 g/l fructose can be clearly determined.

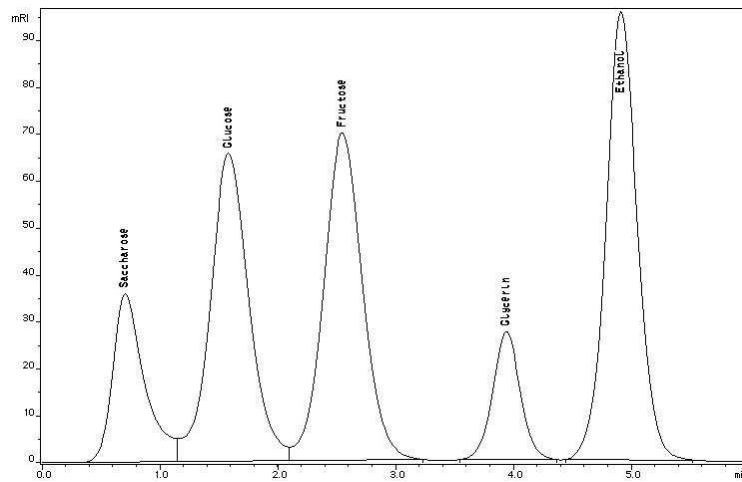


Fig. 1 – Separation of a white wine spiked with sucrose

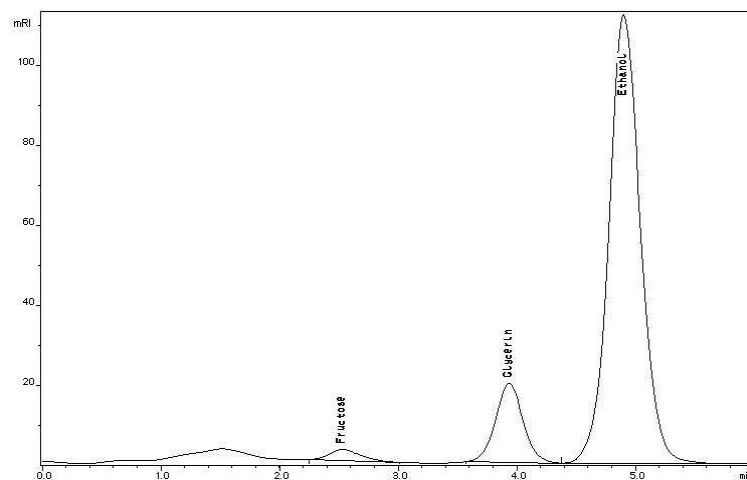


Fig. 2 – Separation of a fully fermented red wine

The **PROFILYZER** system by SunChrom is the only official authorized HPLC method for the determination of sugars and alcohols. The authorization occurred on March 5, 1991 after 3 series of tests.

The SunChrom systems have been running since autumn 1988 in the daily routine. The method is suitable for white as well as for red wines, for grape juice and after dilution even for spirits or liquors.

The systems for sugars/alcohols (**PROFILYZER**) as well as for organic acids (**SÄURE-SCREENING**) are built very compact. They only need 70 cm space. For the data acquisition and evaluation the user can choose between 4 different programs. The data of two systems can be acquired and quantitative calculation simultaneously by one computer.



## Ordering Information

Art.-No.	Short description
458-190.001	complete PROFILYZER system for determination of sugars/alcohols in wine, sparkling wine and juices
969-190.111	pre-column cartridge 4 x 10 mm
969-190.112	cartridge holder
969-190.113	cartridge holder incl. 2 capillary connecting pieces
969-190.100	pre-column 100 x 4,6 mm
969-190.200	main column 300 x 4,6 mm
969-190.320	SS sieves, 5 µm (10)
969-190.321	Teflon seals (10)
969-190.325	glass fiber filters (10)
969-190.332	SS frit 1,9 mm with PEEK ring 0,25" OD
969-190.333	SS frit 4,6 mm with PEEK ring
969-190.340	capillary connecting piece 25 cm
969-190.341	capillary connecting piece 10 cm
969-195.425	PEEK capillary 1/16" x 0,25 mm (1 m)
969-195.522	PEEK finger tight fitting
189-7410-041	stator for injection valve 7413 (new)
189-7413-013	rotor seal for injection valve 7413
189-7413-041	loop disc 0,5 - 1 - 2 µl
189-7413-043	loop disc 1 - 2 - 5 µl
458-195.041	stator for 7410/7413 (replacement part)

We reserve the right to change specifications, design or price without advance notice.