

### REFERENCE METHODS

#### CALIDUS™ 101 UltraFast GC

Fusel Oil (Fusel Alcohol) in Wine and Distilled Spirits

GC analysis for fusel oil in the laboratory in less than 5 minutes

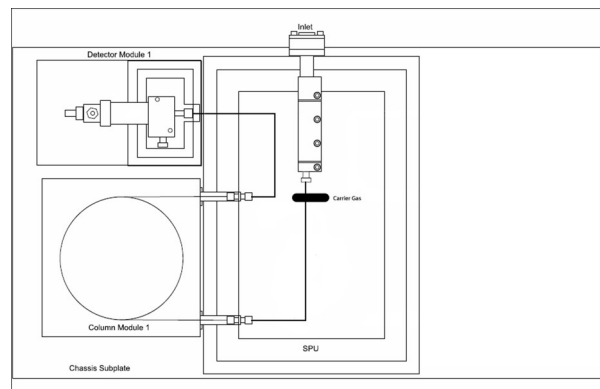


Figure 1: CALIDUS 101 Functional Diagram

### APPLICATION OVERVIEW

The Sample Processing Module with a standard split/splitless injection port, incorporating either a syringe through septum injection, or Auto Sampler delivers the sample to a Programmed Temperature Column Module (PTCM). The inlet includes septum purge to prevent bleed components from entering the system.

The PTCM is controlled by the method. It contains a 5% Carbowax 20M 80/120 Carboblack B Resistively Heated Stainless Steel Capillary Column and is operated in a temperature programmed mode. The column provides the separation of the hydrocarbons in the liquid extract. (See Figure 2).

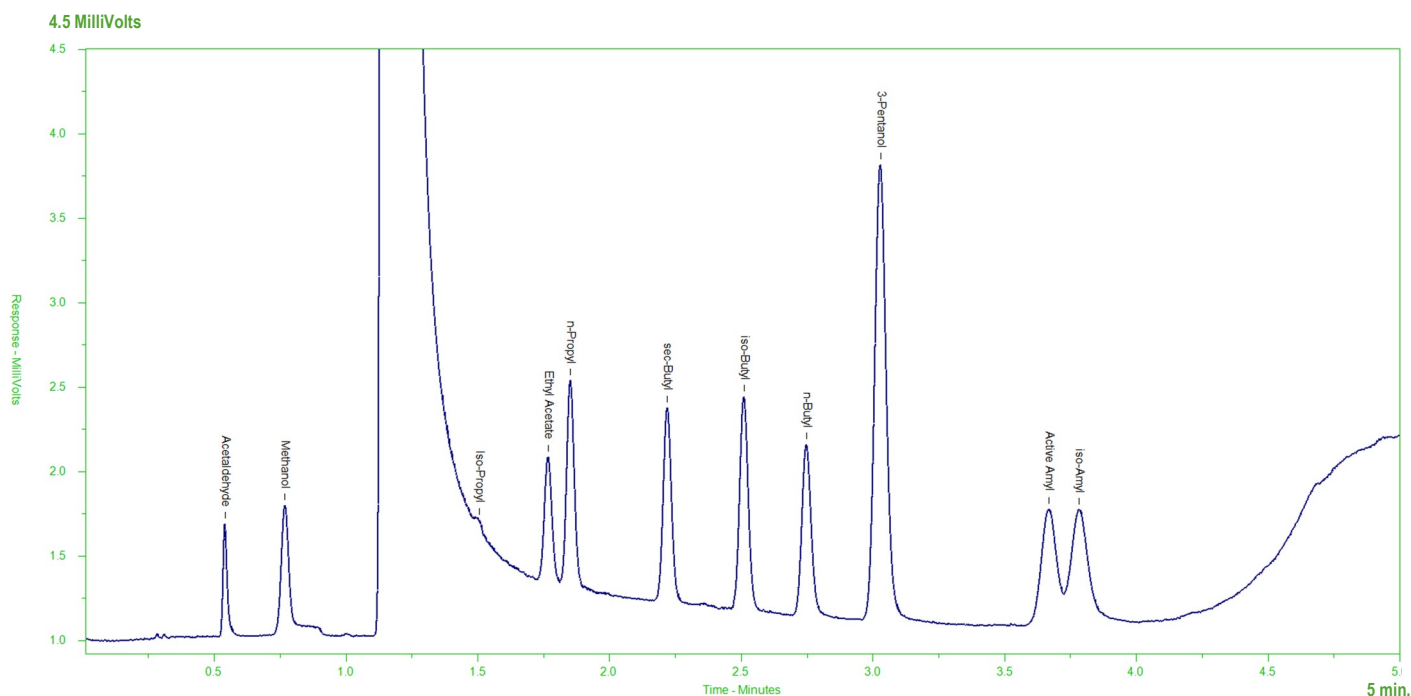


Figure 2: Fusel Oil in Wine Chromatogram

# FUSEL OIL IN WINE AND DISTILLED SPIRITS

## Implications

Fusel alcohols are higher order alcohols and typically contribute to a hot, spicy, solvent-like flavor and an alcohol “burn.” Small amounts of these components may be desirable in some wines and spirits, but they can also be offensive and unwanted. In addition to their contribution to flavor, fusel oils can cause low carbonation and poor head retention in beers.

## Major Analytical Advantages

Fastest analysis time in the industry for Fusel Oils, with excellent performance and reliability.

Incorporates patented Resistively Heated Stainless Steel Capillary Column Module and its thermal management system, resulting in a paradigm shift in GC analysis.

The most powerful, durable, compact and lightweight analytical solution for Ultra-Fast Fusel Oil Analysis (43 cm L X 21.5 cm D X 27.9 cm W, wt. 9.07 kg).

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