# REFERENCE METHODS

#### CALIDUS™ 101 UltraFast GC

Ethanol analysis in wine and distilled spirits

GC analysis for Ethanol concentration in the laboratory in less than 60 seconds

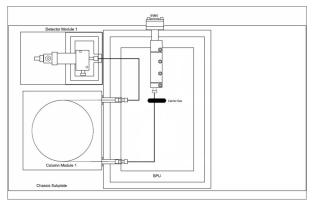
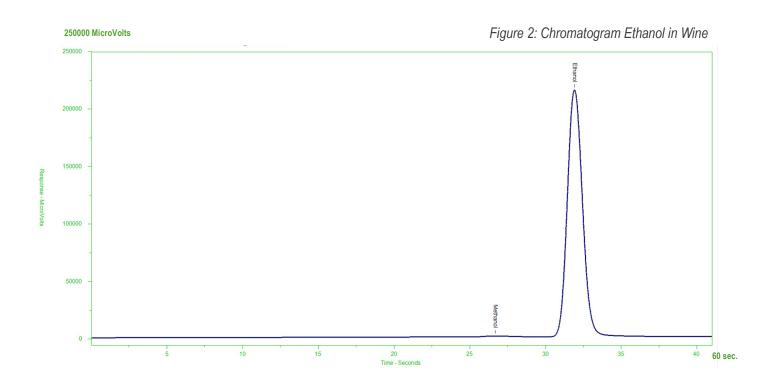


Figure 1: CALIDUS 101 Functional Diagram

#### **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).



# ETHANOL CONCENTRATION IN WINE AND DISTILLED SPIRITS

### **Implications**

Determining ethanol concentration is one of the important analyses conducted by a modern winery or distillery. Fast, accurate and frequent results are needed to control the quality of the product at every stage of production. In addition, state and federal taxes depend on an accurate ethanol concentration measurement.

### **Major Analytical Advantages**

Fastest analysis time in the industry for Ethanol concentration, 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 Ethanol Analysis (43 cm L X 21.5 cm D X 27.9 cm W, wt. 9.07 kg).