APPLICATION NOTE

CAS DATALOGGERS

Temperature Verification in Wine Cellars Using a Data Logger

Cost-Effective Environmental Monitoring for Homeowner

CAS DataLoggers provided the standalone monitoring solution for a homeowner who wanted to check the climate control system installed in his 2-room wine cellar. Maintaining a stable temperature is crucial to wine storage. Improper storage of kegs and wine bottles can have a negative impact; for example white wine should be kept at temperatures of 50°-53.6°F (10°-12°C), and red wine at 53.6°-59°F (12°-15°C). The owner also needs to regulate humidity in the cellar or the corks will become too wet or dry, potentially spoiling the wine. The homeowner had been using typical glass thermometers for temperature verification, but these proved to be too error-prone, so he wanted to try data loggers to view conditions in each of the cellar's rooms and provide better temperature measurement accuracy. What the owner needed was an affordable temperature and humidity monitoring solution to record and save enough readings to get a realistic environmental profile to find the coolest and driest areas.

Installation

The winery purchased a few dozen I-Plug USB Temperature and Humidity Data Loggers from CAS DataLoggers and placed 4 around the wine cellar. After setting their sample rates to take readings once every 30 minutes, the owner placed the data loggers in the cellar rooms using the provided adhesive pouches. Their compact size made them easy to place anywhere. He then activated each using the pushbutton start.

The data loggers began monitoring temperatures in the -40°C to +85°C (-40°F to 185°F) range while simultaneously recording humidity at an accuracy of 3% RH using their internal sensor. Measurements are accurate to a 0.01ºC resolution, and each datalogger's memory stores up to 28,800 samples for extended data collection.

Usage

Meanwhile, the data loggers in the cellar closely monitor temperature and relative humidity in the rooms to help prevent the corks from getting overly dry or wet and keeping the wine aging as desired. When the I-Plugs' memories are full, the owner uses each logger's built-in USB interface to connect to his PC and look at the environmental data without needing a separate USB driver. With the free logger software, he can organize the data in graph and chart form and view it in several common spreadsheet programs including Excel.

Benefits

The owner is now using the data from the i-Plug temperature data loggers to verify that his climate control system has good coverage. In this way, the cellar's temperature and humidity stays constant and ensures the wine's high quality. Easy to configure and use, the I-Plugs are more precise than thermometers and perform standalone logging so he doesn't have to keep an eye on them.

For further information on I-Plug USB Temperature and Humidity Data Loggers, temperature verification, or to find the ideal solution for your application-specific needs, contact a CAS Data Logger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.