



Food & Beverage Series

J. LOHR WINERY UTILIZES YSI INSTRUMENTS IN MANAGING DISSOLVED OXYGEN

Application Note 202LS
YSI Life Sciences



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INTRODUCTION

Although oxygen is a necessary component in the wine aging process, it can also be detrimental to overall wine quality. Too much oxygen can cause browning in white wines and induce flavor degradation in both red and white wines. The J. Lohr Winery in San Jose, California, consistently strives to minimize and control oxygen exposure to their premium wines throughout their winemaking process.

DISSOLVED OXYGEN (DO) DETERMINATION

Using the YSI 550A handheld DO and temperature instrument, the laboratory staff at J. Lohr Winery can quickly and simply check DO levels of wine stored in stainless steel tanks and oak barrels. Obtaining DO concentrations in these vessels provides a baseline measurement to determine the amount of oxygen introduction of the bottling process when the wine is moved from one location to another through pumps and hoses. Fittings on tank valves, hoses, and pumps can be checked as potential sources of the oxygen introduction. Preventative measures, such as nitrogen gas sparging can greatly diminish the amount of oxygen introduction during wine transfer.

Oxygen monitoring after bottling ensures minimal oxygen introduction from the bottling tank to a 54-valve filler. The YSI 5100 Dissolved Oxygen Instrument is used to determine the dissolved oxygen levels and temperature of the wine once it is bottled. These measurements are achieved using the YSI 5010-W, Wine Bottle BOD Probe, which is specifically designed to fit directly into the neck of a wine bottle. The 5010-W probe has a tapered fit, which allows a best fit and seal atop the bottle. The probe also has a self-powered stirrer attached to its submersible end, which ensures an optimal.

WINE PROCESS MONITORING

DO levels can be checked at various points in the wine bottling process, such as filler bowl seals and filler spouts. DO baseline values are determined from the bottling tank using the 550A handheld DO instrument.

Bottles are then pulled from the bottling line after the corker and checked immediately in the laboratory using the 5100 and 5010-W wine bottle BOD probe. The results are used for wine Quality Assurance/Quality Control. If it is determined that too much oxygen has been introduced into the wine, corrective measures can be quickly implemented to rectify the problem. This type of careful inspection allows J. Lohr Winery to consistently produce high-quality wines.

Today the J. Lohr products are available throughout the United States and in more than 25 countries worldwide. The goal of J. Lohr Winery is to produce the finest varietals in the world, using a style that focuses on flavor and complexity through vineyard selection, technology and innovation.

This goal has led Jerry Lohr, President and Owner, and his team to develop three tiers of wines produced from estate vineyards: J. Lohr Cuvée Series, J. Lohr Vineyard Series, and J. Lohr Estates. In addition, J. Lohr Winery produces three tiers of wines to meet the needs of everyday and entry-level wine consumption: Crosspoint Vineyards, Cypress, and Painter Bridge.



**YSI 550A Dissolved
Oxygen instrument**

For additional information regarding the J. Lohr Winery, please visit: www.jlohr.com

For additional information regarding the measurement of DO at the J. Lohr Winery, please contact:

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YSI Life Sciences develops and manufactures scientific instruments, sensors and systems that serve a variety of scientific and industrial markets worldwide. YSI has a long history in the life sciences and bioanalytical markets, most notably with our introduction of the world's first commercial whole blood glucose analyzer in 1975. Today there are over 10,000 YSI instruments installed around the world, trusted in critical situations to provide the most accurate data in the shortest time.

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**YSI 5100 and 5100-W
measure dissolved oxygen
directly in the wine bottle.**

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