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NO. 211 A NEW COLUMN FOR RAPID ANALYSIS OF GRAPE AND OTHER FRUIT JUICES

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Most U.S. wines are produced in California and are derived from grapes grown in the cooler coastal region of the Napa Valley or the hotter, dryer San Joaquin Valley. The majority of these grapes are clean and free of defects; however, a portion are infected with different types of mold or rot depending on their geographic origin, temperature, environment, and conditions of handling and transportation. Consequently, a 7.8mm X 15cm, sulfonated polymer based column was developed for the California Wine Inspection Service for the analysis of grape defect due to these molds and other microorganisms.

The capability of this column for monitoring grape defect is illustrated by the separation of a standard mixture containing 10% glucose, 10% fructose, 500 ppm glycerol, 500 ppm acetic acid, and 1000 ppm ethanol. The resolution of this separation may be superior to any other column currently available.

In addition, this column exhibits excellent chemical and mechanical stability which results in the following advantages:

- o Flow rates up to 2.0 cc/min can be used to reduce analysis times. This is at significantly lower than expected pressures, even at room temperature.
- o Any column temperature from ambient to $90\,^{\circ}\text{C}$ may be used to achieve optimum separation on specific applications.
- Column can be easily regenerated using simple acid solutions.
- O Column is significantly less sensitive to miscible organic solvents allowing convenient removal of any adsorbed organic materials.

Other fruit juices are also susceptible to rot, mold, or other contamination before processing. Applications for analysis of fruit juices will also be presented.