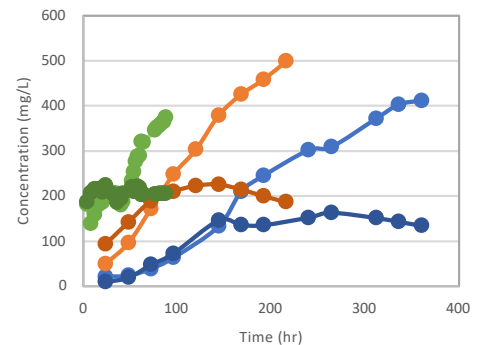
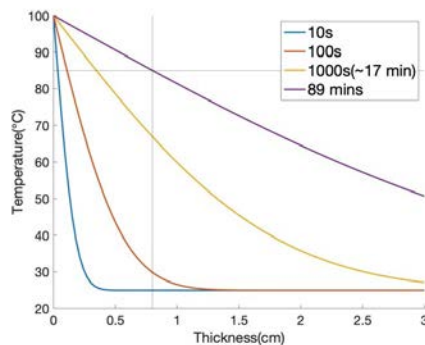


# Virtual Department Seminar Series

**UC DAVIS**  
**FOOD SCIENCE AND  
TECHNOLOGY**

## Barrel Sanitation & Solid Phase Extraction of Phenolic Compounds in Columns



### Ruiye Anna Yao

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Department of Food Science and Technology  
University of California Davis

**4:10 PM PST, Wednesday Feb 16, 2022**

Join URL: <https://ucdavis.zoom.us/j/93150248801>

**BIO:** After obtaining a bachelor's degree in chemical engineering, Anna wanted to explore her interests in food using her problem-solving skills. She joined Dr. Block's lab and started on a barrel sanitation project right away. Next, she studied a new way of winemaking. She wanted to know if this innovative way to extract phenolic compounds combined with previous work on fermentation done in her lab can help achieve process intensification of red winemaking.

**SUMMARY:** I am going to present two projects that I have done during my time at UC Davis. The first project combined the Arrhenius-type death kinetics coefficients of wine spoilage organisms and a model of a semi-infinite medium heat transfer system. This model predicted the time required to steam the barrel to reach 5-log reduction of various microorganisms. The bulk part of my master thesis is on the solid-phase extraction of grape phenolics in columns project. The effects of four different factors were analyzed: temperature, ethanol concentration of the liquid phase, flow rate, and column diameter. Using the optimized factors, the extraction could be shortened on the bench scale.