



***David Brockhausen***

Thesis Defense  
College of Science and Engineering  
Technology  
Department of Chemistry  
MS, Chemistry

## DEVELOPING METHODS FOR INVESTIGATING DIMETHYL TRISULFIDE IN AQUEOUS SOLUTIONS

Dimethyl trisulfide (DMTS) is a novel cyanide antidotal candidate that has shown significant efficacy in animal studies and excellent storage when kept in hermetically sealed containers. However, when aqueous solutions of DMTS are stored in imperfectly sealed containers, DMTS is lost more rapidly than the water in which it is dissolved, even though DMTS has a higher boiling point than water. Methods were developed to accelerate DMTS losses by evaporation and disproportionation. In this talk, NMR and HPLC data collected over the course of these experiments will be presented, along with the insights that they provide into the relative contributions of evaporation and disproportionation to DMTS losses from aqueous solution.

### Event Information

Date: April 4<sup>th</sup>, 2023  
Time: 2 PM  
Location: Farrington  
RM 213

### Committee Members

David E. Thompson, PhD  
Dustin E. Gross, PhD  
Meagan Hinze, PhD



**Sam Houston State University**

**PUBLIC DEFENSE ANNOUNCEMENT**