



Anaely J. Perez

Thesis Defense
College of Science & Engineering
Technology
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MS Chemistry

**PROBING THE HEMOGLOBIN TO
METHEMOGLOBIN CONVERSION IN THE
PRESENCE OF DIMETHYL TRISULFIDE**

Hemoglobin (Hb) has three major forms: methemoglobin (metHb), oxyhemoglobin (oxyHb), and deoxyhemoglobin (deoxyHb). MetHb has four ferric irons (Fe^{III}), while oxyHb and deoxyHb have four ferrous irons (Fe^{II}). It has been known that dimethyl trisulfide (DMTS), a cyanide antidote, increases the rate at which oxyHb is oxidized to metHb. However, the kinetics of this reaction have not been characterized. These experiments explored spectroscopic methods for studying the kinetics of the conversion of oxyHb to metHb at 37 °C, And NMR methods for searching for products of the Hb:DMTS reaction.

Event Information

Date: Nov. 4, 2024
Time: 2:00-3:00 pm
Location: FAR 217

Committee Members

Dr. David Thompson
Dr. Donovan Haines
Dr. Tarek Trad



Sam Houston State University

PUBLIC DEFENSE ANNOUNCEMENT