



Saint Louis Section
American Chemical Society

The St. Louis Chromatography Discussion Group is pleased to welcome

John R. Stuff, PhD

GERSTEL, Inc

“Thermal Desorption Techniques for Gas Chromatography”

Thermal desorption is an injection technique for gas chromatography wherein the sample is heated to release analytes into the GC carrier gas stream. Different thermal desorption modes and devices can be utilized with a thermal desorber, in order to handle gas, liquid and solid samples.

Direct thermal extraction (DTE) is a thermal desorption technique in which a small amount of sample, typically 10-50 mg, is placed in an empty thermal desorption tube. The sample is heated in the thermal desorption unit under a flow of inert gas, in order to release volatile and semi-volatile compounds from the sample. The analytes are trapped and then analyzed by GC/MS.

The Gerstel Twister is a PDMS coated stir bar which can be used in headspace or immersion mode to extract analytes from either solid or liquid samples. Thin Film SPME (TF-SPME) devices are a 20 mm x 4.8 mm sheet of carbon mesh coated with DVB/PDMS or CAR/PDMS. They also can be used in headspace or immersion mode. Both Twisters and TF-SPME are analyzed by thermal desorption.

Air samples are handled by using thermal desorption tubes packed with a solid sorbent material. Air can be actively pumped through the tube or the sorbent tubes can be used for passive diffusive sampling. The sorbent tubes are analyzed by thermal desorption.

This talk will focus on these techniques and show examples of each.

When: Thursday, November 14, 2019

Food from 6 to 7 PM

Seminar from 7 to 8 PM

Where: Webster University

**Browning Hall (Interdisciplinary Science Building)
Auditorium 160**