Southwest Research Institute® (SwRI®) performs smoke density and toxicity tests to a variety of standard procedures. Standard tests are supplemented for customized procedures to meet client-specific needs. Qualification and verification testing can be provided in support of third-party quality assurance programs.

**Capabilities**

- Smoke density (specific optical density, Ds) and mass loss measurements
- Time evolution toxic gas production
- Gas yield determinations (amount of gas produced per gram of sample consumed)
- LC$_{50}$ and LA$_{50}$ determination
- Collection of gas samples for a variety of chemical analyses

**Related Services**

- Fourier transform infrared (FTIR) quantitative and qualitative gas analysis
- FTIR custom calibration and quantification
- Colorimetric (Dräger) tube toxicity analysis
- Listing, labeling and follow-up inspection services

Smoke density measurements are made based on the attenuation of a light beam through smoke accumulating within the chamber.

Toxicity of fire effluents is determined by introducing gas samples in an FTIR spectrometer.
WITHDRAWN

We welcome your inquiries. For more information, please contact:

Gene Horton
Principal Engineer Technologist
210.522.3457
eugene.horton@swri.org

Natasha Albracht
Engineer
210.522.3971
natasha.albracht@swri.org

Smoke and Toxicity
- ABD 0031
- IMO FTP Code Annex 1 Part 2

Smoke Density
- AITM 2.0007
- ASTM E 662
- ASTM E 1995
- BSS 7238
- ISO 5659-2
- NES 711
- NFPA 258

Toxicity
- AITM 3.0005
- ASTM E 800
- BSS 7239
- EPA TO-15
- NES 713
- SMP 800-C