

# Fourier Transform Infrared (FTIR) Spectroscopy



**AIR HYGIENE, INC.**



## Why Air Hygiene FTIR Labs are the Solution for your Testing Needs!

- Five (5) FTIR labs for formaldehyde, VOC's, & HAPS by EPA Method 320, 321 & ASTM D-6348!
- Real-time data on-site for evaluation!
- On-site draft test reports & final report in 10 Days!
- Catalyst performance analysis (inlet & outlet testing) on-site with real-time data!
- Speciated VOC's on-site
- Greenhouse Gases measured real-time, on-site (N<sub>2</sub>O, CO<sub>2</sub>, CH<sub>4</sub>)!
- SCR tuning with point-by-point data, real-time for NH<sub>3</sub>, NO, & NO<sub>2</sub>!
- Portable power by on-board generator!
- 20 QSTI certified personnel!
- Tests in all 50 states, Mexico, & Canada!

Corporate Headquarters:  
1600 West Tacoma Street  
Broken Arrow, OK 74012

(918) 307-8865  
(888) 461-8778



Remote Office Locations:  
Las Vegas, NV  
Ft. Worth, TX  
Austin, TX  
Shreveport, LA  
Chicago, IL  
Pittsburgh, PA

[WWW.AIRHYGIENE.COM](http://WWW.AIRHYGIENE.COM)



Air-Hygiene-International-Stack-Testing



@Air Hygiene

# FTIR Compounds

Any gas or liquid compound that absorbs infrared light can potentially be identified and quantified using the FTIR. The gas phase infrared spectral standards are available for the compounds listed below. Reference spectra not included in this list may be already available or can be prepared.

acetaldehyde	1,4-dioxane - (1,4-diethylene oxide)	o-toluidine
acetic acid	epichlorohydrin	oxygen difluoride
acetone	1,2-epoxybutane	ozone
acetonitrile	ethane	pentafluoroethane
acetophenone	ethanol	perfluorobutane
acrolein	ethyl acrylate	perfluoroethane
acrylic acid	ethyl benzene	perfluorohexane
acrylonitrile	ethyl chloride (chloroethane)	perfluoromethane
allyl chloride	ethylbenzene	perfluoropropane
2-amino-2-methyl-1-propanol	ethylene	perfluoropropene
ammonia	ethylene dibromide - (dibromoethane)	phenol
aniline (phenylamine)	ethylene dichloride	phosphine
arsine	ethylene oxide	propane
benzene	ethylidene dichloride	1,2,3-propanetriol w/methyl oxirane
benzotrichloride	fluoroethane	propionaldehyde
benzyl chloride	fluoromethane	propylene dichloride
beta-propiolactone	formaldehyde	propylene glycol
bis (chloromethyl) ether	hexachlorobutadiene	propylene glycol methyl ether acetate
boron trichloride	hexachlorocyclopentadiene	propylene oxide
boron trifluoride	hexachloroethane	1,2-propylenimine-(2-methyl aziridine)
bromoform	hexamethylphosphoramide	quinoline
1,3-butadiene	hexane	silane
1-butanol	hexyl acetate	silicon tetrafluoride
butyl acetate	hydrazine	styrene
carbon dioxide	hydrogen bromide	styrene oxide
carbon disulfide	hydrogen chloride	sulfur dioxide
carbon monoxide	hydrogen fluoride	sulfur hexafluoride
carbon tetrachloride	isophorone	sulfuryl fluoride
carbonyl fluoride	isopropanol	1,1,2,2-tetrachloroethane
carbonyl sulfide	maleic anhydride	tetrachloroethylene (perchloroethylene)
chloroacetic acid	methane	tetraethoxy silane (TEOS)
2-chloroacetophenone	methanol	1,1,1,2-tetrafluoroethane
chlorobenzene	methyl bromide - (bromomethane)	1,1,2,2-tetrafluoroethane
chloroform	methyl chloride - (chloromethane)	thionyl fluoride
chloromethyl methyl ether	methyl chloroform - (1,1,1-trichloroethane)	toluene
chloroprene (2-chloro-1,3-butadiene)	methyl ethyl ketone - (2-butanone)	2,4-toluene diisocyanate
m-cresol	methyl hydrazine	1,2,4-trichlorobenzene
o-cresol	methyl iodide - (iodomethane)	1,1,2-trichloroethane
p-cresol	methyl isoamyl ketone	trichloroethylene
cumene	methyl isobutyl ketone - (hexone)	2,4,5-trichlorophenol
cyclohexanone	methyl methacrylate	triethylamine
1,2-dibromo-3-chloropropane	methyl tert butyl ether	1,1,1-trifluoroethane
1,4-dichlorobenzene	methylene chloride-(dichloromethane)	1,1,2-trifluoroethane
dichloroethyl ether	n,n-diethyl aniline	trifluoromethane
1,3-dichloropropene	nitric oxide	tungsten hexafluoride
dichlorvos	nitrogen dioxide	2,2,4-trimethylpentane
difluoroethane	n-nitrosodimethylamine	vinyl acetate
difluoromethane	n-nitrosomorpholine	vinyl bromide
dimethyl carbamyl chloride	naphthalene	vinyl chloride
dimethyl formamide	nicotine	vinylidene chloride
1,1-dimethyl hydrazine	nitrobenzene	m-xylene
dimethyl phthalate	2-nitropropane	o-xylene



# Testing Solutions for a Better World

**Air Hygiene's** core philosophy of "Second-to-None (2-2-0)", demands extra mile customer service anchored on dignified character and family-oriented principles to deliver unmatched quality stack testing, worth paying for every time. We utilize revolutionary technology and **Air Hygiene University** to create the best educated work force to define the future of stack testing.

Providing air emission testing since 1997 and headquartered in Broken Arrow, Oklahoma, **Air Hygiene** provides testing services throughout the continental United States as well as internationally. Its client base includes various industries from oil and gas companies to utilities, manufacturers, and other similar industries.

**Air Hygiene** has experienced testing teams led by project managers with significant testing experience and a broad understanding of the federal and state regulations. **Air Hygiene** has thirty (30) combustion emission testing systems.

Our pricing and flexibility are second to none. **Air Hygiene** prides itself on testing efficiency and has experience with complex testing; including formaldehyde by FTIR (EPA Method 320 or ASTM D-6348) to meet RICE MACT, non-methane/ethane VOCs on-site with field GC or FTIR for JJJJ (40 CFR Part 60 Subpart JJJJ), PM, PM-10, & PM-2.5 testing (EPA Methods 1-5, 201a, 202).

**Air Hygiene** can complete numerous engines in a single day and has experience with testing large engine fleets within short duration or on a repeated schedule to meet periodic monitoring requirements. **Air Hygiene** has five (5) FTIR labs!

Below are some of AHI's satisfied customers. Please contact us for more information!



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