IR - Sadtler Gases & Vapors - Wiley

Spectra - 145

Description

This database contains 145 spectra of permanent gases and vapors of volatile liquids. This database, useful for atmospheric contaminant analysis relating to current air quality standards legislation, contains compounds subject to standards established by Federal legislation (e.g., National Ambient Air Quality Standards Act, Occupational Safety and Health Standards Act)

Representative chemical classes in this database include hydrocarbons, aldehydes, freons, nitrogen, and sulfur compounds.

Additional Information

Each compound is identified by its chemical name. The following information is also supplied when available: synonyms, molecular formula, molecular weight, boiling point, melting point, and CAS Registry number. The experimental conditions of path length and operating pressure (or pressures) are also shown on each spectrum.

Classifications

Hydrocarbons - 44
Saturated Hydrocarbons - 21
Unsaturated Hydrocarbons - 13
Aromatic Hydrocarbons - 10
Oxygen Containing Compounds (Except -C(=O)-) - 42
Alcohols (R-OH) 8
Aldehydes (R-C(=O)-H) - 4
Ketones (R-C(=O)-R) - 6
Carboxylic Acids (R-C(=O)-OH) - 12
Ethers - 6
Oxides - 3
Furans - 3
Halogenated Hydrocarbons - 35
Nitrogen Containing Compounds - 13
Amines - 5
Azines (-CH=N-N=CH-) - 1
Pyridines - 1
Nitro Compounds (-NO2)- 2
Nitriles (-C≡N) - 4
Sulfur Containing Compounds - 8
Deuterated Compounds - 3
Miscellaneous Compounds - 3

Technique

All spectra were measured at Bio-Rad Laboratories in the spectral region 4000 cm^{-1} to 450 cm^{-1} with a nominal resolution of 4 cm^{-1} across the entire spectral region. A Sadtler CIRA 102 chromatographic infrared analyzer was used as the sampling device to measure all reference spectra. The carrier gas was helium. All vapor phase reference spectra have been measured and recorded generally conforming to Coblentz specifications.

This collection has been subject to the Sadtler Data Review Protocol™ to provide you with the highest standard in spectral data today. These rigorous qualifying procedures start at data acquisition and continue throughout the database development process.