IR - Sadtler Inorganics (Subset) - Wiley

Spectra - 1,105

Description

This database contains 1,105 infrared spectra of inorganic compounds. The spectra are representative of many anions and polyatomic ions common to inorganic materials and are classified according to anion or polyatomic ion following groups in the periodic chart. This collection contains the spectra of inorganic compounds such as ammonium sulfate, ammonium nitrate, zirconium sulfate, and coordination compounds of various metals with inorganic and organic ligands. Chemical classes represented include inorganic compounds, inorganic coordination compounds, organic coordination compounds, metal carbonyl compounds, and boranes.

The database contains the infrared absorption spectra, physical constants, and other supporting information for the compounds. It can be used by researchers to facilitate structural determination and identification of these substances.

Additional Information

Each compound is listed by its Chemical Abstracts name or the name by which it is most commonly cited in the literature. Other information accompanying each spectrum includes the molecular formula, molecular weight, source of the material, and method used in sample preparation. Frequently used synonyms, density, melting point, solubility, color and/or crystalline structure, CAS Registry number, chemical composition, and RTECS Number are also presented when available.

Classifications

Group IA
Lithium - 34
Sodium - 80
Potassium - 70
Rubidium - 6
Cesium - 15

Group IIA
Beryllium - 6
Magnesium - 26
Calcium - 26
Strontium - 18
Barium - 29

Group IIIA
Boron - 48
Aluminum - 34
Gallium - 4
Indium - 5
Thallium - 3

Group IVA
Carbon - 390
Silicon - 23
Germanium - 4
Tin - 19
Lead - 14

Group VA
Nitrogen - 390
Phosphorus - 103
Arsenic - 30
Antimony - 13
Bismuth - 11

Group VIA
Oxygen - 788
Sulfur - 153
Selenium - 11
Tellurium - 4

Group VIIA
Fluorine - 73
Chlorine - 171
Bromine - 50
Iodine - 46

Group IIB
Zinc - 25
Cadmium - 18
Mercury - 15

Transition Elements
Titanium - 22
Vanadium - 29
Chromium - 38
Manganese - 26
Iron - 58
Cobalt - 87
Nickel - 82
Copper - 49

2nd & 3rd Transition Series
Zirconium - 30
Hafnium - 1
Niobium - 3
Tantalum - 3
Molybdenum - 33
Tungsten - 25
Rhenium - 4
Ruthenium - 6
Osmium - 5
Rhodium - 1
Palladium - 14
Platinum - 17
Silver - 12

Rare Earths
Lanthanum - 8
Cerium - 17
Praseodymium - 3
Neodymium - 4
Samarium - 5
Europium - 8
Gadolinium - 1
Terbium - 2
Dysprosium - 2
Holmium - 3
Erbium - 3
Thulium - 1
Ytterbium - 2
Scandium - 5
Yttrium - 3

Actinide Elements
Thorium - 13
Uranium - 12

Technique

Traces of impurities were found in some of the samples used to prepare this collection. Rather than remove these spectra from the compilation and present no information for these compounds, we have elected to include them. In addition, mineral oil bands are present when samples were prepared as mulls.

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.