IR - Sadtler Steroids, Androgens, Progestins, & Estrogens - Wiley

Spectra - 305

Wiley is the leading producer of IR and Raman spectral databases with their Sadtler Spectral Databases, known for their high-quality.

Description

This Sadtler database contains infrared spectra compiled specifically to present compounds containing this class of compounds that reflect the latest products available on the market and show the diversity of the market place.

This collection can be used by forensic labs as well as testing labs who are interested in the identification of steroids by infrared spectroscopy.

Additional Information

Each compound is identified by its chemical name and the method of analysis as well as structural formula, molecular formula, and molecular weight. Synonyms, melting point, boiling point, references, and comments are also included if available.

Technique

All spectra were measured on a Bio-Rad FTS-175C Fourier Transform Infrared Spectrometer equipped with KBr beam splitter and a peltier cooled DTGS detector.

The majority of samples were prepared as quantitative KBr wafers providing that their melting points were above 120°C and there was a sufficient quantity to analyze. Stainless Steel Grind Capsules with a single ball were used in a WIG-L-BUG. All pellets were pressed at 20 tons using a Carver Lab Press and an Evacuable Die yielding 13mm pellets. This method will yield spectra of the highest quality with the sharpest bands resulting from the crystallinity of high melting point compounds. The most reliable and reproducible KBr sample preparation methods ever developed are from Sadtler Research Laboratories and these spectra were analyzed following these methods. All specimens were prepared according to these guidelines using their designation of KBR_1 for quantitative KBr wafers and KBr0 for non-quantitative pellets (which were mostly used for low quantity or thermally degradable specimens). Generally, samples with melting points below 120°C were run as films in various solvents plated on 25mm KBr plates. If it was impossible to obtain a transparent pellet or film, the split mull technique was used by merging both halves of a (sample intensity matched) Nujol and Fluorolube mull.

For the quantitative KBr_1 pellets, the following modifications from Sadtler instructions are:

- Replace the P_2O_5 drying agent in vacuum oven with Drierite.
- Grind sample for 30 seconds with WIG-L-BUG, dry in oven at 85-90°C in vacuum oven for 1.5-2 hours.
- Mix sample with KBr for 15 seconds with WIG-L-BUG, add bearing and grind for 15 seconds.
- The pressed pellet is dried in vacuum oven for 1.5-2 hours at 85-90°C.

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.