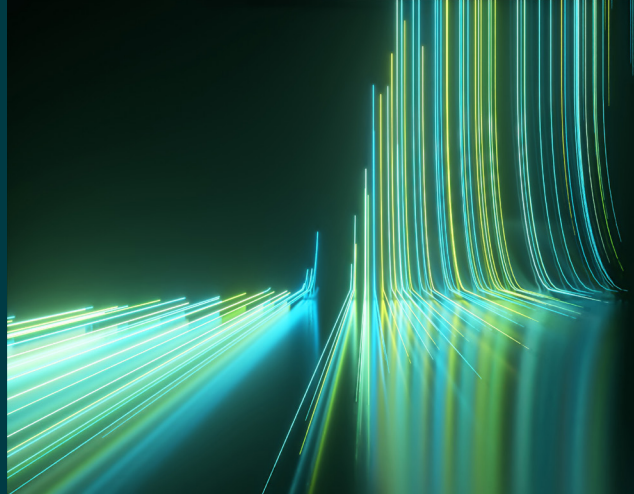


WILEY

Spectral Databases

From the leader in spectral data



ATR-IR - Polymers - Wiley

Spectra – 21

This database is only available as part of the KnowItAll IR Spectral Library subscription.



Description

Polymers are integral in modern society, with applications spanning packaging, textiles, construction, biomedical devices, and environmental materials. The chemical structure and composition of polymers directly influence performance and durability of the materials manufactured from these polymers. In addition to manufacturing, identification of polymers, specifically microplastics, is useful for environmental scientists and clinical researchers.

Attenuated total reflectance-infrared (ATR-IR) spectroscopy provides a rapid, non-destructive method for polymer identification by capturing characteristic vibrational fingerprints with minimal sample preparation. This database features ATR-IR spectra of polylactic acid and microplastics from commercial and household goods.



Applications

- Polymer characterization
- Quality control
- Materials science
- Environmental science
- Microplastics research
- Contaminant identification



Additional information

When it comes to spectral analysis, the more data you have the better. Wiley spectral databases provide much more information than simply the spectrum. Database records include the following valuable details when available:

- Chemical structure
- Chemical name
- Instrument name
- Accessory
- ATR crystal
- Sample type



Compound coverage

This database covers the following polymers:

- High- and low-density polyethylene (HDPE, LDPE)
- Polyethylene terephthalate (PET)
- Polylactic acid (PLA)
- Polypropylene (PP)
- Polystyrene (PS)
- Polyurethane (PU)



Compatibility

- Subscription includes KnowItAll ID Expert software for one-click basic spectral searches
- Optional: KnowItAll Analytical Edition (recommended for advanced analysis)
- Import spectra from most IR instruments for direct comparison to reference spectra. For instrument compatibility, visit sciencesolutions.wiley.com/compatibility.



Trusted data from a trusted source

Wiley is the authoritative source for spectral data. Our renowned databases are processed according to rigorous protocols to ensure they are of the highest quality. Qualification procedures start at data acquisition and continue throughout the database development process. Any data acquired from trusted partners is thoroughly vetted before inclusion in our collections.