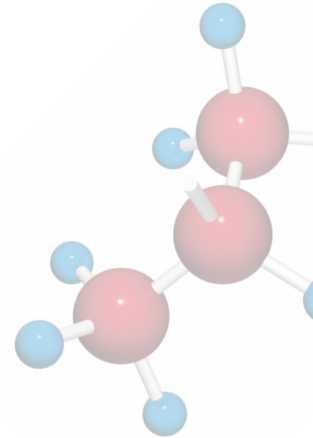


# Fast, affordable solutions for polymers and plastics analysis

Thermo Scientific™ FTIR Polymer Analysis Kits provide a rapid, inexpensive way to monitor chemical and physical parameters of polymers critical to your process or product quality. Whether you need to verify the correct co-polymer blend ratio or quantify the amount of release agent, UV stabilizer, or other additives in your materials, we have a polymer analysis configuration that's right for you. The Polymer Analysis Kits can help ensure your raw materials, intermediates or finished products comply with your quality standards.

These kits include either a single-bounce ATR accessory or a Heated Mini-Film Maker plus our unique Thermo Scientific™ OMNIC™ Specta™ Software with a large spectral database of polymers and general chemical compounds. ATR allows you to quickly analyze polymer samples directly for identification or verification of bulk properties such as blend ratios. The Mini-Film Maker can be used to prepare constant thickness films from most thermoplastics for rapid and accurate quantitative analysis of polymer constituents and additives. The kits contain all of the components necessary to analyze your materials in your Thermo Scientific FTIR spectrometer.



- Co-polymer Blend Ratios
- Additive Quantification
- Incoming, In-process, or Finished Products
- Product Formulation
- Reverse Engineering

Thermo Scientific™ Nicolet™ iD1 Transmission Accessory

Thermo Scientific™ Nicolet™ iS5 FTIR Spectrometer with iD5 ATR accessory



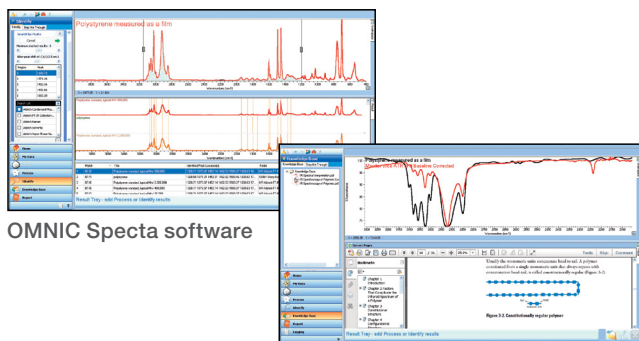
Mini-Film Maker kit

OMNIC Specta software polymer package including Infrared Spectroscopy of Polymers documentation

# The polymer analysis kit components

## OMNIC Spectra Polymer Package

Unique software for material identification of master batches, co-polymers and compounded materials featuring patented\* multi-component search for mixture analysis, a library collection of over 13,000 spectra of polymers, additives, plasticizers and many other ingredients typically used in the polymer industry. Includes the Infrared Spectroscopy of Polymers Knowledge Base covering polymer characteristics, infrared absorption frequencies and much, much more.



## ATR Accessory

High quality single-bounce ATR accessory for use in your Thermo Scientific FTIR spectrometer. ATR allows identification of unknown samples in seconds and creation of quantitative analysis methods for co-polymer ratios, high concentration additives or other properties of your materials. Choose the ZnSe ATR for polyethylene, EVA or other soft polymers. Select the diamond ATR to expand your capabilities from soft to hard materials, such as nylon or glass-filled polyesters. For carbon-black filled materials, you can add the germanium ATR crystal.



## Mini-Film Maker

An affordable and compact unit suitable for small volume, light duty applications. Includes heated platens, press and everything needed to melt polymer samples into reproducible films and analyze them with your Thermo Scientific FTIR spectrometer. Allows quantitative analysis of additives and other polymer characteristics, including crystallinity and monomer ratios in copolymers. Compact size allows use on virtually any desk top or lab bench and is capable of heating up to 250 °C. Films can be pressed to 50, 100, 250 and 500 microns thicknesses and mounted in the included 10 mm aperture sampling cards for transmission analysis archiving.



We offer Polymer Analysis kits for use with Thermo Scientific™ Nicolet™ Series FTIR Spectrometers.\*\* See the charts below for the package that best suits your needs.

| Package                     | Materials      |                |                               | Tasks                 |                                 |                                 |                                      |
|-----------------------------|----------------|----------------|-------------------------------|-----------------------|---------------------------------|---------------------------------|--------------------------------------|
|                             | Soft Materials | Hard Materials | Carbon-black Filled Materials | Material Verification | Unknown Material Identification | Quantitative – Bulk Ingredients | Quantitative – Low Level Ingredients |
| Basic ATR Polymer Kit       | Good           |                |                               | Good                  | Good                            | Good                            |                                      |
| Advanced ATR Polymer Kit    | Best           | Best           |                               | Best                  | Best                            | Good                            |                                      |
| Basic Combo Polymer Kit     | Good           |                |                               | Good                  | Good                            | Best                            | Best                                 |
| Advanced Combo Polymer Kit  | Best           | Best           |                               | Best                  | Best                            | Best                            | Best                                 |
| Mini-Film Maker Polymer Kit |                |                |                               |                       | Good                            | Best                            | Best                                 |
| Add-on Germanium ATR Plate  |                | Good           | Best                          |                       |                                 |                                 |                                      |

## Ordering Information

| Description                 | OMNIC Spectra Polymer | ZnSe ATR | Diamond ATR | Mini-Film Maker | For Nicolet iS5 Part Number | For Nicolet iS20/iS50 Part Number*** |
|-----------------------------|-----------------------|----------|-------------|-----------------|-----------------------------|--------------------------------------|
| Basic ATR Polymer Kit       | ✓                     | ✓        |             |                 | 840-226400                  | 840-226900                           |
| Advanced ATR Polymer Kit    | ✓                     |          | ✓           |                 | 840-226500                  | 840-227000                           |
| Basic Combo Polymer Kit     | ✓                     | ✓        |             | ✓               | 840-226700                  | 840-227200                           |
| Advanced Combo Polymer Kit  | ✓                     |          | ✓           | ✓               | 840-226800                  | 840-227300                           |
| Mini-Film Maker Polymer Kit | ✓                     |          |             | ✓               | 840-226600                  | 840-226600                           |
| Add-on Germanium ATR Plate  |                       |          |             |                 | 869-129100                  | 869-129100                           |

\* 7,698,098

\*\* Nicolet FTIR spectrometer sold separately

\*\*\* Part numbers for any Thermo Scientific FTIR spectrometer models that accept Thermo Scientific™ Smart™ Accessories

Find out more at [thermofisher.com/polymers](http://thermofisher.com/polymers)

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