

# Fourier-Transform Infrared (FTIR) Spectroscopy Analysis

Using specialized software, Envista's FTIR analysis can help identify organic and inorganic compounds in relation to a failure. This information can potentially help determine the cause of property damage, business interruption, personal injury or a fatality.

## FTIR Analysis Can Be Used on Various Materials Such As:

- » Plastics
- » Organic Acids and Salts
- » Paints
- » Petroleum Products, Like Greases and Oils
- » Fibers and Textiles
- » Pharmaceuticals

## FTIR Can Help to Determine Causes of Material Failure Such As:

- » Product Defects
- » Manufacturing Defects
- » Installation Issues
- » Causes of Stress Cracking
- » Contamination
- » Special or Missing Additives

Envista's Materials Lab has invested in a new FTIR to continue to grow our in-house materials analysis capability.

## How Does FTIR Work?

FTIR can also be used to compare a subject item to a known sample, identifying what type of material it is and possibly who manufactured it. We can determine if the subject item was manufactured incorrectly, has any defects, has or is missing any additives, and if there is any contamination, all of which can contribute to a failure of the material.

During this examination, our experts can compare samples to a database containing thousands of spectra from known materials, generating more finite answers for you and/or your clients. In addition to identifying the exact material, FTIR can also be used to determine if oxidation or decomposition has occurred.

## How to Send Samples

Follow the instructions on how to submit samples at [envistaforensics.com/services/forensic-engineering/material-failure-analysis](https://envistaforensics.com/services/forensic-engineering/material-failure-analysis).

Can't find what you need? Contact us to access our vast network of subject matter experts.

Send new assignments to:  
**[project@envistaforensics.com](mailto:project@envistaforensics.com)**

**FTIR analysis is most often used to ensure materials are performing as expected and are aptly suited for their intended application.**