

SciAps

INSTANT IDENTIFICATION OF PLASTICS, POLYMERS AND RESINS FOR QUALITY CONTROL AND RECYCLING

SciAps Raman is an easy to use, entirely nondestructive technique for verifying polymers. And with SciAps, we have an analyzer that can meet any user's price/performance requirements.

How does it work? Each system can store 1000's of molecular signatures (for new materials, and proprietary materials) or "fingerprints" for identification, and we get you started with a library of common plastics. Laser light is shined on an unknown polymer which yields a fingerprint that is characteristic of a particular plastic. The analyzer searches it's on-board library to find the matching fingerprint, and displays the correct polymer type for the sample.

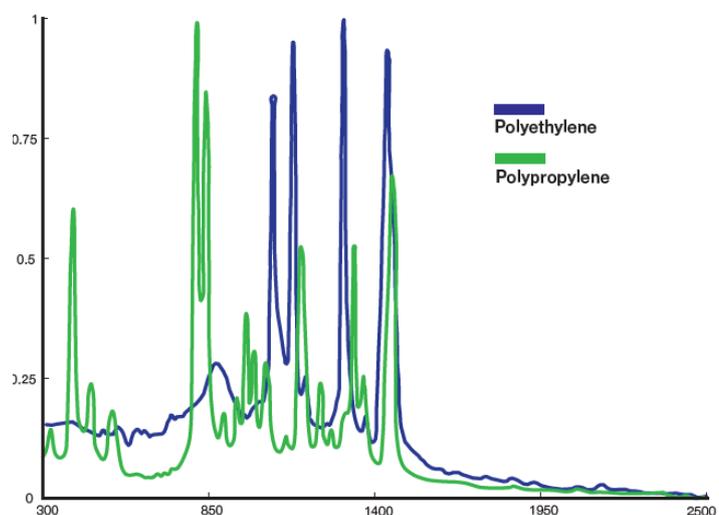


Quality Control, Process Plastics

Different formulations of plastic materials have proliferated, as have the regulatory requirements for verification. The SciAps Raman family of analyzers let you avoid placing all your faith on material certs, while removing the time and on-going expense of laboratory testing. The units can be easily carried anywhere, even as carry-on luggage. Companies can routinely deploy inspectors to verify polymer material at the supplier site, before it's shipped.

Polymer Verification for Quality and Regulatory Compliance

Quality applications abound. Reduce the possibility of using wrong or incompatible materials in your production line and then incurring the time and expense of re-running product, and purging the WIP. One plastics components manufacturer tests bales of incoming recycled material right on the delivery truck to ensure that the plastic they order is what they get. Identifying the right plastic is fast, easy and reliable. Pharmaceutical



suppliers, for example, often must ship product in a specific type of polymer vial or container. A common

mix-up is polyethylene (PE) and polypropylene (PP). The two are indistinguishable by touch or feel. However, the Raman fingerprint spectrum for each is shown at right and is clearly quite unique for the two common polymers, allowing for fast, certain verification. Another major benefit with Raman is the analyzer can be used effectively by a non-technical operator. The units can be used by incoming or outgoing inspection personnel for rapid material verification.

Plastics Recycling

There are often significant price differences between different grades of plastic and mixed material must be separated into specific grades for order fulfillment.

Imagine testing a delivery truckload on-the-spot, to verify the type of plastic. You can test pieces from all locations in the truck – bottom of the load, top, not just a few “representative” samples. The SciAps analyzers put the power of instant material sorting in the hands of virtually any level of operator regardless of technical background.

Safety is paramount. SciAps Raman units feature a patented right angle test adaptor for small or bagged samples. This setup assures the laser strikes the sample when energized, and avoids the two-handed “point and shoot into the air” approach of competitive analyzers. The laser interrogates a 20 um region of the sample, making even the smallest samples suitable for Raman analysis.



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