Raman System

PolymerIQ™

Raman Polymer Identification and Qualification

PolymerIQ™ chemometric software is a revolutionary solution for accurate, real-time, non-destructive identification and quantification of polymers. By combining B&W Tek's award winning, high resolution portable Raman spectrometer, the *i*-Raman® with Gnosys' expert chemometric software, users can now perform multivariate statistical analyses to relate all available spectral information to the chemistry, properties, and metrics of interest.

With the click of a button, PolymerIQ delivers fast and accurate measurement of polymers and additives. This rapid analysis approach reduces the need for more laborious analytical methods and enables a more intelligent approach to the re-use of material test data. When utilized with the *i*-Raman, PolymerIQ's real-time, non-destructive polymer analysis is ideal for introducing greater speed and cost efficiency into the routine inspection of masterbatches and compounds during production.

The purchase of the *i*-Raman with PolymerIQ for polymer identification and qualification includes an X-Y-Z positioning stage for accurate and repeatable measurements, a fiber optic probe, and a netbook computer preloaded with PolymerIQ software, all in a convenient and durable carrying case.

Applications:

- **Identification and Measurement of Polymers and Additives**

- **Polymer Additive Quantification as Low as 0.1% by Weight**

- **Inspection of Masterbatches and Compounds During Production**

- **Predictive Measurement of Properties**

Powered By:

gnosys

Specifications:

Spectral Performance	
785 Excitation	< 300 mW
Laser Linewidth (FWHM)	< 0.3nm
Range	175cm^{-1} - 3200cm^{-1}
Resolution (FWHM)	4.5cm^{-1} @ 912nm
Electronics	
Computer Interface	USB 2.0 / 1.1
Integration Time	5ms - 65,535ms
Power Options	
AC (Optional)	100 -240V AC, 50-60Hz
DC (Standard)	5V DC @ 8 Amps
Battery	Optional w/ DC only
Physical and Environmental	
Dimensions	6.7 x 13.4 x 9.2in (17 x 34 x 23.4cm)
Weight	~6.6 lbs (~3 kg)
Operating Temperature	10˚C - 35˚C
Storage Temperature	-10˚C - 60˚C
Humidity	10% - 85%

Software Features:

PolymerIQ Model Builder
Build your own model to predict quantitative and qualitative properties, discriminate between materials and reveal correlations between spectra and properties. PolymerIQ model builder features spectral acquisition, database mining, pre-processing, and chemometric analysis.
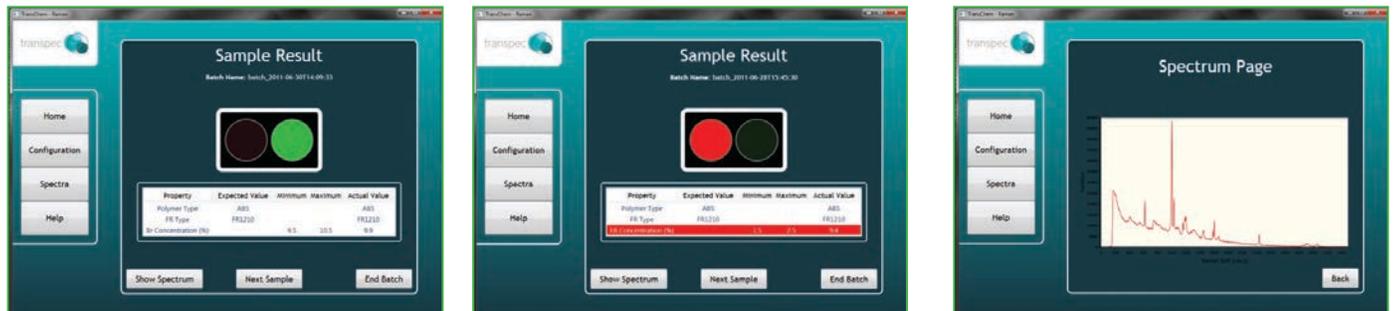
PolymerIQ Spectrum ID
Spectral matching is used to identify material by comparing new spectra to an existing library of materials. It allows you to build your own libraries and choose from a variety of pre-processing and matching algorithms.
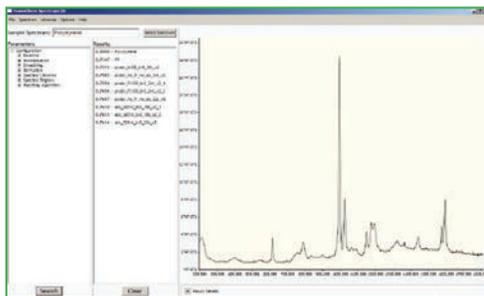
PolymerIQ Prediction
Prediction is a simple and easy-to-use software that analyzes materials using pre-built models, with interfaces for both the advanced user and the day to day operator. The software can be configured in a variety of ways to provide the highest utility for the user.
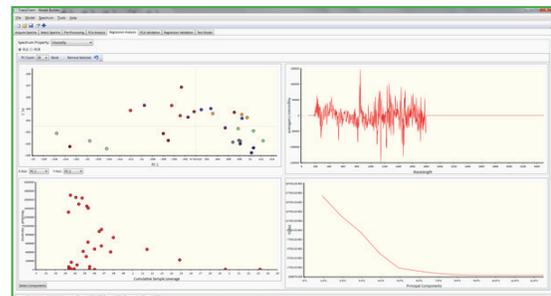
Software GUI:

PolymerIQ Prediction

PolymerIQ Spectrum ID

PolymerIQ Model Builder

To Learn More About PolymerIQ, Contact an Application Specialist or Visit

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