

## About Polymer Char

For 30 years, Polymer Char has been the only company in the world completely dedicated to developing innovative instrumentation for polyolefin analysis. The company offers 15 instruments that suit different analytical needs (including GPC/SEC), a line of accessories to use in the laboratory, four detectors, and a comprehensive software platform, all developed in-house, making it the most complete portfolio for polyolefin characterization available worldwide.

As of today, the company has clients in over 25 countries and provides analytical services to more than 35. All the leading petrochemical companies and polyolefin producers in the world own a Polymer Char instrument.

Now, the company is beginning to transfer its expertise in polyolefins to the analysis of other polymers. Polymer Char current progress is focusing more on developing technology that will play a key role in the advancement of the production and study of sustainable materials and ease of plastic recycling.



## Intrinsic Viscosity Analyzers for All Polymers

Polymer Char developed an automated process for viscosity measurements of polymers in solution without manual intervention in the whole process, including sample preparation. The IVA automated technology complies with the ASTM D5225 and is currently in the process of being included in the ISO 1628-1, as an alternative to the current method based on Ubbelohde glass capillaries.

IVA has been developed with different configurations to fulfill different types of sample needs so that a wide range of polymers, even the most complex ones, can be analyzed with convenience and safety.

The IVA technology has two main models that mainly differ in the analytical temperature the polymer demands. IVA for Polyolefins is available for Polyethylene and Polypropylene, which require dissolution and analysis at high temperature. IVA Versa is the alternative for polymers that can be analyzed at ambient or room temperature.




IVA for Polyolefins analyzed at  
high temperature



IVA Versa for polymers analyzed at  
ambient temperature

OPERATION: both IVA models require only 3 simple steps for a complete analysis.

**1**  Weigh the samples in the vials or bottle

**2**  Put the samples in the instrument\*

**3**  Start the software

\*In an autosampler or single-dissolution station depending on the instrument's configuration

## **IVA FOR POLYOLEFINS** POLYETHYLENE and POLYPROPYLENE

Fully-automated instrument for the intrinsic viscosity analysis of polyolefins at **high temperature**.

This reliable viscosity meter integrates a dual-capillary relative viscometer that can analyze a wide range of polymers with IV values ranging from 0.1dL/g to over 40dL/g, even UHMWPE, without plugging issues thanks to its careful design that avoids cold spots.

The complete process, including sample dissolution, is fully-automated. The viscometer's capillaries and tubing do not require manual washing or rinsing, which is also done by the instrument.



### **High-Capacity Autosampler**

- Capacity: 42 samples
- Vials of 20mL
- Analysis temperature: Up to 180°C
- Solvents: TCB, oDCB, Decaline, Tetraline, and others

## **IVA VERSA** for PET, PS, PVA, PVC, PC, PMMA and others

Fully-automated instrument for the intrinsic viscosity analysis of polymers at **ambient temperature**.

This instrument's versatility is achieved by a combination of different capillaries and pressure transducers, allowing for the analysis of a wide range of resin types within the same hardware. Additionally, IVA Versa offers various sample preparation systems, accommodating the specific requirements of each laboratory.

Three configurations are available for IVA Versa that suit different Sample Preparation Options:



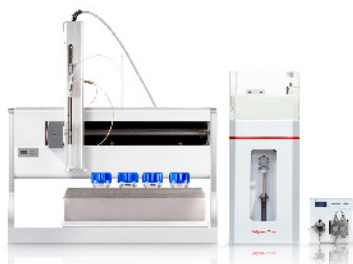
### **Single Dissolution Station**

- Capacity: 1 sample
- Bottles of 60mL or 120mL
- Recommended for heterogeneous samples, like recycled PET (rPET), in all forms



### **High-capacity Autosampler**

- Capacity: 42 samples
- Vials of 20mL
- Recommended for homogeneous samples and polymers with lower density than the solvent used



### **High-speed Autosampler**

- Capacity: 15 samples
- Bottles of 60mL or 120mL
- Recommended for heterogeneous samples, like recycled PET (rPET), in all forms