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Waters' Acquity APC System gathers attention

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The all-in-one system gives research scientists greater analytical versatility and speed when conducting research on next-generation polymers.



Waters Corporation has announced that its ACQUITY™ Advanced Polymer Chromatography™ (APC™) System is the first fully solvent-compatible UltraPerformance Liquid Chromatography (UPLC)/ultra-high performance size exclusion chromatography (UHPSEC) system to perform size exclusion, gradient polymer elution and solvent compatible reversed-phase liquid chromatographic separations on a single platform.

The all-in-one system gives research scientists greater analytical versatility and speed when conducting research on next-generation polymers.

“With the addition of a quaternary solvent manager (p-QSM), the Waters APC System allows polymer chemists to develop analytical methods and perform analyses on a single system that otherwise requires multiple instruments and retrofitting,” said Damian Morrison, Director – Materials Science Market at Waters Corporation. “With its out-of-the box solvent compatibility, our APC system allows our customers to determine molecular weight distributions, separate polymers with similar hydrodynamic volumes, and separate additives all on the same analytical platform.”

Waters APC System enables scientists to generate polymer molecular weight data to within a 1% standard deviation, obtain results five to twenty times faster than size exclusion chromatography (SEC) that is performed on traditional high performance liquid chromatography (HPLC) systems and reduce solvent consumption by up to 30% for certain applications.

When paired with refractive index, photodiode array, light scattering and differential viscometry detectors, the Waters APC system significantly increases the information obtainable from a single separation.

Helping Manufacturers Achieve Sustainability Goals and Materials Performance Requirements

To help meet their sustainability goals and the demands of their customers for higher-performing materials, materials manufacturers require more and better chemical and properties measurement.

The global attention to sustainability has led plastics manufacturers to commit to new design, reuse and recycling initiatives such as the New Plastics Economy initiative. These initiatives are leading to a resurgence in materials research toward more biodegradable and reusable products.

Also driving research programs at materials manufacturers is the ever-increasing demand for higher-performing materials to meet challenging applications across industries, including aerospace, food packaging, medical device, consumer electronics and building products. These research imperatives require that analytical laboratories put a premium on measurement accuracy, reproducibility and speed.

The ACQUITY APC System with p-QSM technology is currently available for customer shipments worldwide.