



PurIon™

MASS SPECTROMETER

PurIon™

Purlon Mass Spec for Flash and Prep Labs

S Model
10 to 1,200 Da (m/z)
For small molecule purification

L Model
10 to 2,000 Da (m/z)
For large molecule purification



Purlon shown with the ACCQPrep HP150 HPLC system.

The Purlon Mass Spectrometer is designed to provide highly affordable mass-directed fractionation to labs performing flash and prep purifications on Teledyne ISCO systems. The Purlon interfaces seamlessly with the CombiFlash® NextGen, CombiFlash® EZ Prep, and ACCQPrep® to instantly verify the identity of target compounds. Our innovative PeakTrak® software provides single point of control, three predetermined ionization settings, and the ability to customize ionization parameters to maximize signal strength. Use the convenient Ion Finder utility to identify fragments and adducts of your compound and optimize detection parameters from directly injected samples prior to purification. Highly accessible and easy-to-use, Purlon is ideal for chemists wanting high-quality mass spectral data without the need for specialized training.

Single Quadrupole Mass Analyzer

The Teledyne ISCO Purlon is a compact, single-quadrupole mass analyzer with an atmospheric pressure interface optimized for chromatography purification. Purlon provides highly reliable molecular weight information about target compounds as well as other adducts during the purification run—or by direct-injection analysis prior to purification—in positive ion mode via proton attachment (M+H)⁺ and negative ion mode via proton removal (M-H)⁻.

Versatile and Reliable

Co-eluting peaks are easily isolated by mass selectivity based on mass-to-charge ratio (m/z) of the target analyte. With both electrospray ionization (ESI) and atmospheric pressure chemical ionization (APCI) capabilities, Purlon delivers rapid and reliable confirmation of compounds in normal-phase and reverse-phase applications. Detect both small and large molecules with extended mass range from 10 Da to 2000 Da.

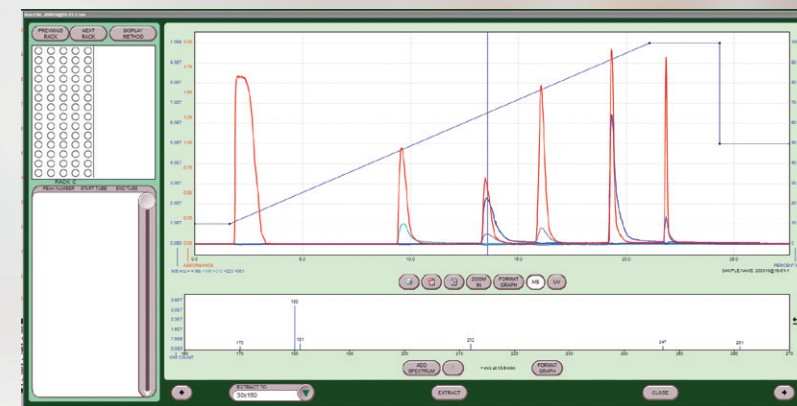


Purlon shown with the CombiFlash NextGen flash system.

ACCQPrep and CombiFlash Integration

Teledyne ISCO flash and prep chromatography systems are Purlon MS ready. With PeakTrak integration no additional software or processing is required.

- Active flow splitting for accurate, reproducible results with low sample loss, high sensitivity, while minimizing sample buildup in MS
- Combine MS with UV, UV/Vis and ELSD for complete sample characterization
- Combine detector signals for high purity collection
- Save time and solvent with built-in Flash Terminate on Target algorithm and Prep Focused Gradient Generation
- Provide full mass spectra for contents of any fraction tube to determine fraction purity
- Automatically cleans the mass spectrometer interface



ESI vs. APCI

Purlon provides both ESI (electrospray ionization) and APCI (atmospheric pressure chemical ionization) capabilities.

- ESI for compounds that are typically polar, ionizable, and either acidic or basic
- APCI for typically polar and some non-polar compounds; analyte must have sufficient proton affinity to be protonated.

Method Development and Fraction Product Verification

- Direct injection capability for method development, product verification of fractions, or quick monitoring of reaction progress.

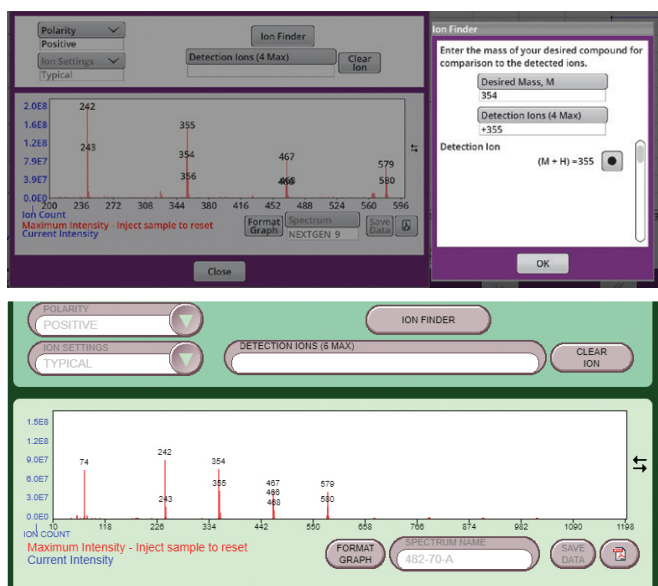


PurIon: for Open Access

With PurIon MS, any chemist can obtain high quality mass spectral data without the need for specialized training or expertise. There is no need to wait for results from contract labs. PurIon is ideal for chemists unfamiliar with mass detection, or where the primary focus is on compound synthesis rather than analysis.

Ion Finder Utility

- Use the Ion Finder to locate potential adducts and fragments for the compound of interest. Ion Finder quickly identifies the mass of the ten most intense ions and compares them to the desired compound's molecular weight.
- The difference in mass is compared to a table of common adducts or fragments to determine if any of them correspond to the mass of interest and therefore could be used as the detection ion.
- Identify alternative adducts or fragments usable for detection when positive $[M+H]^+$ or negative $[M-H]^-$ ions are absent.
- Ion Finder also recognizes adducts of sodium, potassium, and solvents (such as methanol and acetonitrile when used).



Ion Finder (CombiFlash NextGen above, ACCQPrep below) makes it easy to always verify before you purify!

Programming Capabilities

Use the PeakTrak MS Method Development window and the Ion Finder window to confirm your compounds will ionize properly.

- Three ionization settings—"Robust" for compounds that do not easily ionize; "Typical" for most compounds; and "Fragile" for compounds that are delicate or easily fragmented.
- Load options: control the amount of eluate sent to the MS with high, medium, and low settings.
- Set mass-directed peak detection for up to six masses, or four masses and one range, to trigger fraction collection on the ACCQPrep. CombiFlash peak detection can be set up for four masses, or three masses and one range.
- Full spectral display—touch any peak to see the full mass spectrum and confirm compound identification.
- Automated probe wash and cone cleaning prevents sample buildup and reduces maintenance frequency.
- Active monitoring of temperatures, vacuum levels, splitter valve seal lifetime, and pressures to identify problems early, before samples are put at risk.
- Additional menus let advanced users create custom parameters to improve ionization of a particular compound, and save methods for various compound classes and projects.

PurIon Mass Spectrometer Specifications

Mass Spectrometry Detection

S Model: 10–1,200 Dalton, 1 Dalton Resolution
L Model: 10–2,000 Dalton, 1 Dalton Resolution
Electrospray Ionization (ESI) or Atmospheric Pressure Chemical Ionization (APCI)
Positive or Negative Ionization Mode

SIM Sensitivity

10 pg Reserpine, 100:1 S/N (RMS) with SIM of m/z

Dimensions (H x W x D)

Mass Spectrometer: 26 x 11 x 22 in (66 x 28 x 56 cm)
Roughing Pump: 10 x 9 x 18 in (26 x 23 x 46 cm)

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Teledyne ISCO is continually improving its products and reserves the right to change product specifications, replacement parts, schematics, and instructions without notice.



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