

# Real-time science solutions

## DART<sup>®</sup>-ET Experiment Table

Enabling the use of direct analysis in real time (DART) for routine desorption ionization of solids is critical for applications such as thin layer chromatography, tablet analysis, and determination of compounds present on surfaces. The DART-ET has been designed to provide a means for easy sample introduction for rapid, reproducible mass spectrometry based analysis.

ET is designed to support a linear slide for easy sample positioning and has the means to adjust the angle at which the desorption gas strikes the DART target. ET mounts on your mass spectrometer system using our Vapur<sup>™</sup> interface, enabling more efficient collection of ions desorbed from the sample surface. This integrated approach to sampling also provides the means to incorporate our "Open Area" sample modules that can be customized to meet your sampling requirements.

### Desorption Angle

The conventional DART-100 source is configured for operation in line with the API inlet of most LC/MS systems. DART-ET enables desorption at angles up to 45° off-axis, while maintaining the focal point of the DART desorption gas on the targeted sample. Efficient ion collection and transfer to the mass spectrometer is enabled by the Vapur interface and samples can be positioned manually or automatically using the linear slide. The introduction of a small angle for use with TLC plates, for example, improves the desorption process using either analytical or prep plates.

### Automation

Two levels of automation are available with the DART-ET. In manual mode, a simple push plate is mounted on the slide to enable reliable analysis of objects including: TLC plates, perfume strips, and small objects. Integration of a motor drive and touchpad controller for use with the linear slide enables repeated and reliable positioning and scanning across the surface of samples. Addition of high throughput liquid sampling capability is completed by integration of our AutoDART-96, enabling more routine analysis of liquids such as consumer goods, beverages, chemicals, drugs in solution, plasma, urine and other solutions.

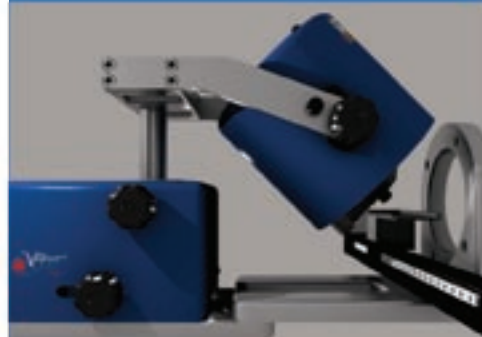
### "Open Area" DART

With the introduction of the DART-ET we have reconfigured the DART source for easier access to the ionization region. This "Open Area" allows us to introduce a series of new experiment chambers for your use.

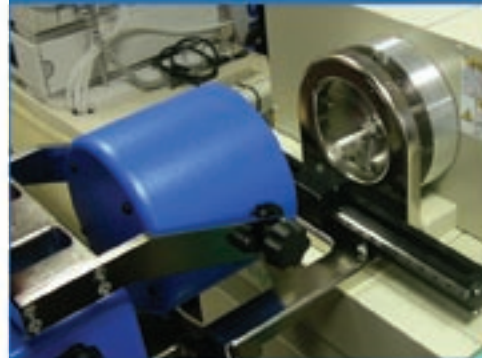
- **APCI/NCI** - introduce reagent gases into the DART ionization region to complete chemical ionization of the desorbed analyte. Integration of the closed chamber with our Vapur interface enables safe, efficient removal of the gas post-ionization.
- **LC/DART** - provides a means to connect the output of your LC to the desorption ionization region, making LC a reality.
- **Dual-DIP-it<sup>®</sup>** - Utilize two different DIP-it Samplers for easy accurate mass determinations.
- **Tablet Sampler** - Production of devices customized to position your tablet can be completed for a fee, contact us for details about this service.



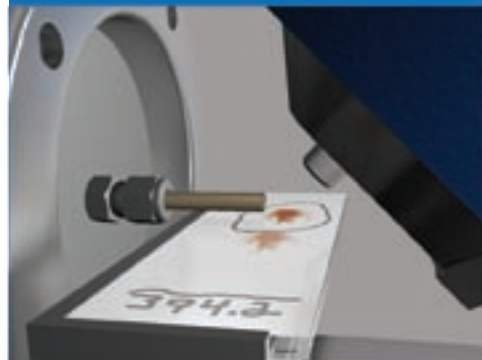
DART-ET with Manual Positioner



Selectable Desorption Angles



DART-ET on the JEOL AccuTOF



Angled to analyze TLC plate