

## GA2100 Electrospray Ionization High Performance Ion Mobility Spectrometer



- *Self-contained high performance ion mobility spectrometer*
- *Provides rapid, high resolution separation and detection in seconds*
- *Touchscreen interface and compact design for transport in a mobile lab or manufacturing facility*
- *Changeable ion sources for versatile analysis of solids, liquids, and gases*

### Simultaneous separation & detection with GA2100 – **Rapid ion mobility analysis**

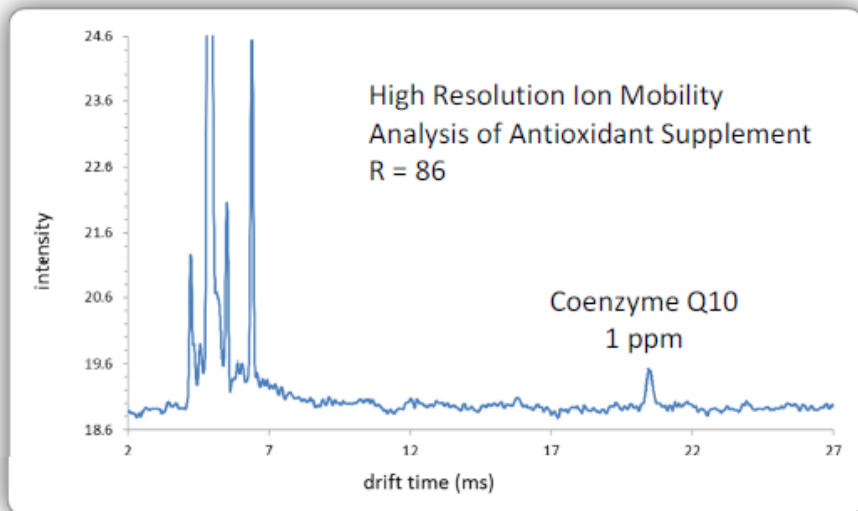
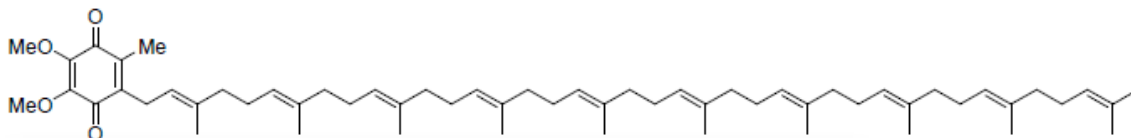
GA2100 is the world's first commercially available HPIMS system. Combining electrospray ionization (ESI) with our patented high resolution ion mobility spectrometer (HPIMS), the GA2100 can deliver HPLC-comparable performance with faster speed and lower operational cost. HPIMS eliminates the use of organic solvents, reducing the associated cost of disposal and making it a green technology. ESI-HPIMS is capable of analyzing a wide range of compounds including isomers and those that are chromatographically sensitive or lack a UV chromophore.

Changeable ion sources add versatility to HPIMS analysis. Liquid samples are ionized by electrospray, either as a single injection or in a continuous stream from an autosampler or flow cell. A thermal desorber introduces both solid and gaseous samples into the analyzer. The GA2100 is ideal for applications that require speed, specificity, and sensitivity.

| <b>Chemicals</b>   | <b>Pharmaceuticals</b> | <b>Food &amp; Drug Safety</b> |
|--------------------|------------------------|-------------------------------|
| Surfactants        | Cleaning Verification  | Contamination                 |
| Explosives         | Dissolution            | Pesticides                    |
| Isomeric Compounds | Reaction Monitoring    | Dyes, Flavors, Fragrances     |

## High resolution separation and detection

60+ resolution allows baseline separation of compounds with similar structures



GA2100 measurement of dissolved Coenzyme Q10 antioxidant supplement with molecular weight of 863 Da; the ion mobility spectrum illustrates an ion mobility resolving power of  $R = t_d / t_{1/2} = 86$ ; the world's highest resolution standalone IMS.

## Changeable ion sources for versatile sample analysis

Solid, liquid, and gaseous samples can be easily introduced into the GA2100 HPIMS



### Electrospray ion sources

Liquid samples are ionized either individually by the Directspray™ ESI source or continuously by the infusion ESI source. Directspray is ideal for quick walk-up analyses, while infusion connects to an autosampler or flow cell.



### Thermal desorber ion source

A thermal desorber with corona discharge ion source allows for HPIMS analysis of solid samples collected from a solvent-soaked swab. The thermal desorber also includes a gas port for analysis of gaseous samples.