

Real Time Online Monitoring Time of Flight ION Mass Spectrometer

ATIMS200plus

Feature:

- Carry to the car with car power supply & car shock absorber design
- Compact & Rigid & shock absorber design for field measurement
- Fast analysis speed < 400 ms for each gas
- Hundreds of gases monitor at the same time
- Detect limit up to ppb , and up to % concentration
- Many Inlet modes of thin film for gases , liquid , and capillary for direct inlet.
- Compatible with organic, inorganic gases measurement at the same time, allowing for the ionization source to ionize inorganic gases of VOC , SO₂ , and NO etc.

Application:

- Air Pollution
- Water Pollution
- Environmental Industries
- **Hazardous Materials**
- **Toxic materials**
- **Explosives**

Description:

ATIMS200plus Realtime monitor TOF-IMS employs patented UV single-photon ionization technology, our self-developed mass spectrometer has been widely applied to online monitor environmental air pollution, public safety hazardous materials or toxic substances in the water, explosives etc. It has exceptional high sensitivity of ppb and high accuracy, the instrument can be applied to daily demands and fast read out the acquired data.

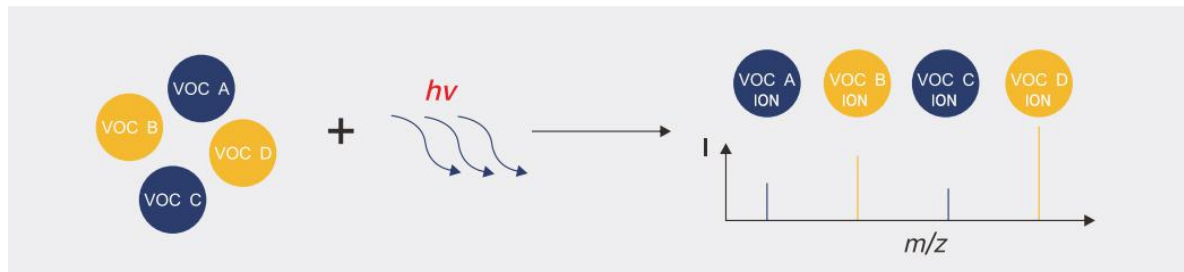


1. Technical Parameters:

Items	Parameters
Resolution	2000
Detect limit	< 1 ppbv
Inlet speed	50-500 sccm
Max time	0.1S
Response time	< 1S
Dynamic range	> 10 ⁴
Power	< 300W
Interface	TCP/IP
Power	90-250 VAC 50/60 Hz, < 2A
Dimension	680×680×520 mm

2. Patented Technology

ATIMSS200plus employed patented technology of exciting organic molecules or exciting valence electron of inorganic gases, in order to perform real-time, ionize full spectrum, online monitoring VOCs and inorganic gas to ionize, the fastest analysis time <1s, the time has shorten to realize high throughput detection. The ionize is simple to process, and easy to identify spectrum.



3. Patented Inlet Design

Patented core component self-designed of inlet technology can shorten the response time, reduce cost. It attaches to ADC acquisition technology, the resolution reach up to >2000 , the dynamic range up to >10⁴, such high resolution can be detect more peaks, it prevents potential interference between molecular and ion peaks.

5. Carry to car mode design

Built-in touch screen stand in front of the instrument for flexible operate in the car, the adjustable angle of touch screen allow for car with limit space to operate, car shock and low power supply design fit to any field measurement.



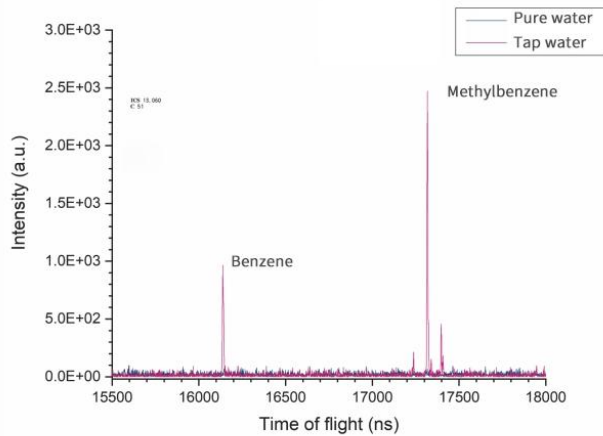
6. Visualized Software

Real Time Dynamic Data acquisition, concentration changing trend visualized on the chart, concentration value displayed in the time and space dimension at a super resolution.

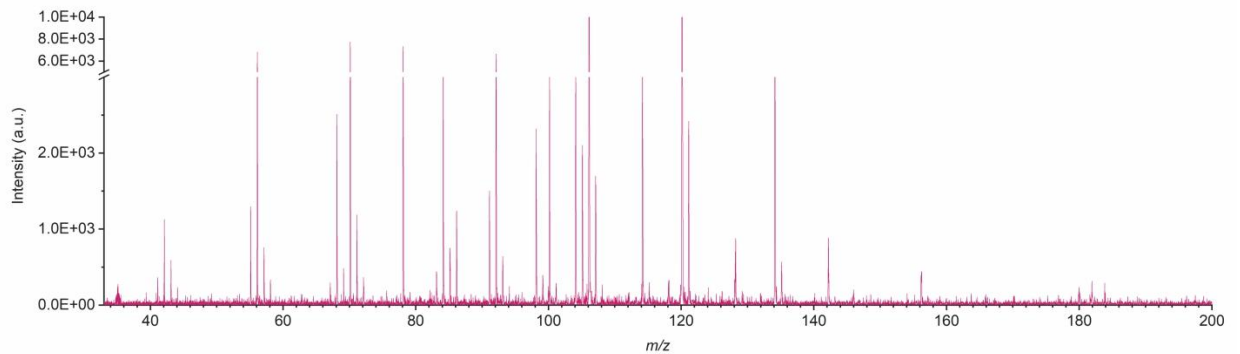


7. Patented Inlet Gases & Liquids

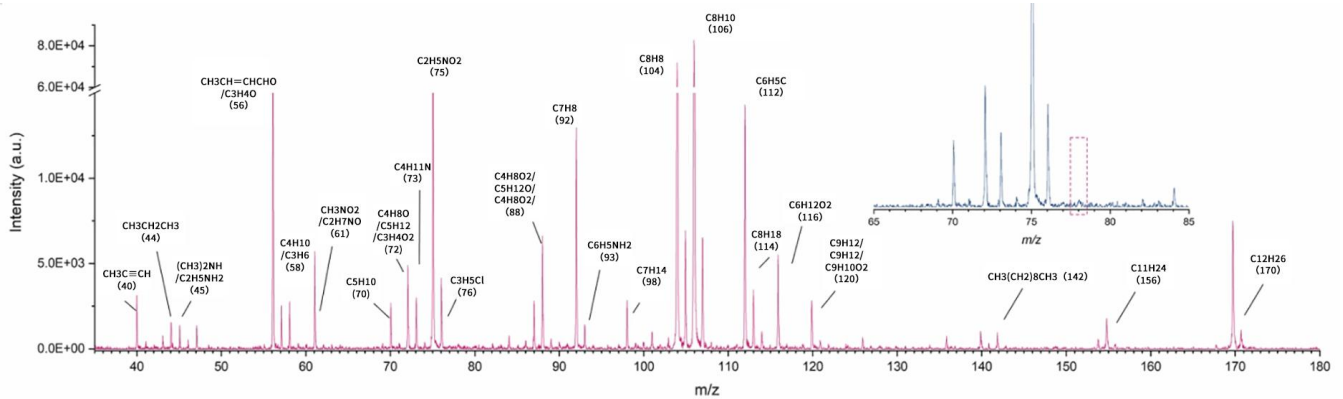
High stability and low cost VOCs in the air and water. In this experiment the pure water and tap water added a low percentage of safe limit of benzene and methylbenzene can be detected.



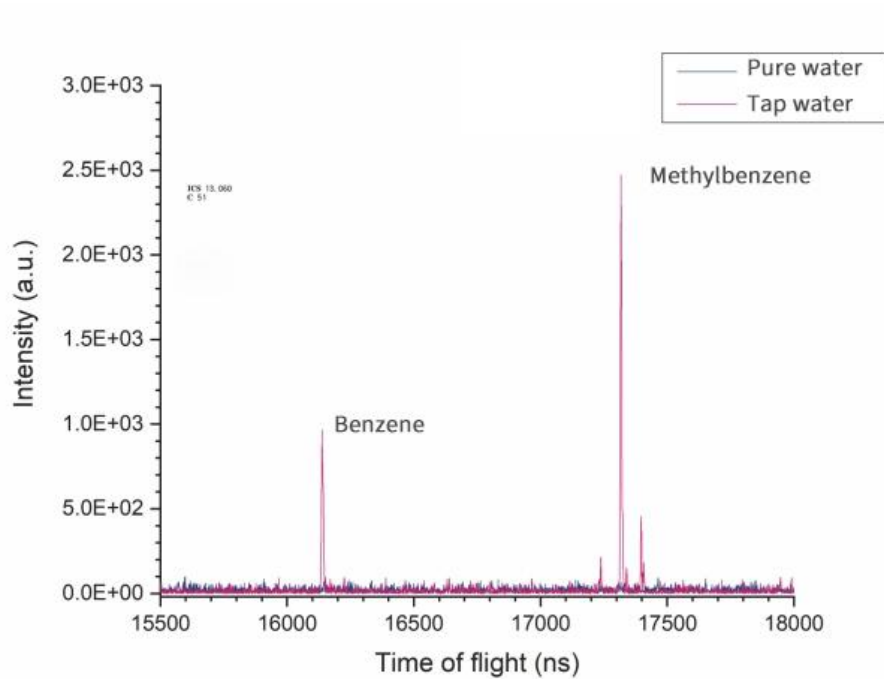
8. PAMS Gas Detection Result:



9. VOCs analysis in one furniture factory



10. Tap and pure water Detection Result:



11. Performance Parameter

ATMS200	
Mass Spectrometer Analyzer	Time Of Flight
Mass resolution	R > 2000 m/Δm (FWHM)
ION Transmission	Patented UV Photon Ionization
Vacuum degree	<2×E-4 Pa

Detection Limits	< 1ppb
Dynamic Range	> 10 ⁴
Linearity Range	Linearity Range
Ionized mode	Light ION (10.6 eV)
Response time	< 0.1s
Inlet gas flow rate	50-500 sccm
Inlet flow mode	Constant pressure inlet in direct way (50k Pa-120k Pa atmosphere pressure) Thin film inlet mode
Inlet port temperature	Room temperature-120°C
Inlet port length	1.5 m
Backing pumps	dry scroll vacuum pumps
Data and interface	Ethernet, I/O, WIFI, GPS
Operation software	Free exclusive self-developed software
Operation system	WINDOWS 10 64bit/Linux
Power supply	220 V/50 Hz AC
Others	Shock Absorber, vehicle-mounted
Dimension	680mm (L) ×680mm (W) ×520mm (H)
Reliability	
Quality axis stability	Better than ±0.01 a.m.u./24hours
Stability	Daytime stable signal RSD<5% accuracy density RSD<5%