

Whats
in your
Fab Air?

Comprehensive Online AMC Monitoring

All compounds. All-in-One. Fast.

Molecular Contamination in Semiconductor Processes

The demands of higher yields and advanced process nodes requires the monitoring and control of **all chemical impurities** in the cleanroom environment and process inputs to parts-per-trillion levels. Only Syft Technologies product has the ability to measure organic and inorganic AMCs to parts-per-trillion with one analyzer and this gives you a unique view of the AMCs in your fab.

**One Analyzer.
Many contaminants.
Fast.**

The **Voice200infinity** analyzer covers the range of key contaminants to pptv-levels in a single, flexible, online monitoring tool. Monitor your photo area for PGMEA and Acetic acid with the same analyzer you use to monitor the copper process for H₂S.

- **Refractories**
TMS,
- **Condensables**
PGMEA, Toluene, IPA
- **Molecular Acids**
HF, HCl, Acetic acid....
- **Molecular Bases**
NH₃,
- **Dopants**

Make decisions fast.

- Simultaneous understanding of AMC trends allows you to investigate the full causes of chemical contamination and make better decisions.
- Measuring organics and inorganics in a single tool makes intercomparison viable and valid across the data stream.
- Cycle time - 3 minutes per point for 20 organics.
- Examples where the impact can be felt are: wafer degradation, filter effectiveness, optical problems etc.



KEY FEATURES

- A single analytical tool for chemically diverse compounds – both organic and inorganic
- Low-pptv detection limits for most organic compounds with measurement time of <10s/compound
- <500pptv detection limits for most inorganic compounds
- Automated validation to ensure measurement stability
- Available for integration into a variety of sample delivery systems

Voice200infinity

	TMS	TEOS	PGMEA	NH3	HF
LOD (pptv)	30	90	40	150	750
MDL (SEMI C10, pptv)	400	1000	600	700	1400
Measurement time (s)	1	8	1	30	300
Precision	<1 % (@ 25 ppbv)				
Concentration range	30pptv - 1 ppm				
Analyzer	Voice200infinity				
Linearity	6 orders of magnitude				
Selectivity	Real-time speciation using ion-molecule reactivity (including isomers and isobars)				

Analysis Expandability

- 1500+ compounds in analysis library
- Analysis scope can be updated in minutes in software
- Integrates with a wide range of sample delivery systems

Inputs

- Power: 220-240 VAC, 50-60Hz, 1.6kVa
- Gas:
 - High-purity N2: up to 500sccm
 - CDA: up to 500sccm
- Reagent ion source:
 - DI water (500ml/6 months)
 - Room air
- Daily validation standard
 - 8-compound VOC mix in N2
 - 1 bottle/6 months

Size and Weight

- Height: 900mm (35.4in)
- Width: 725mm (28.5in)
- Depth: 875mm (34.5in)
- Weight: 160kg (350lb)

Service and Support

- Local field service staff in all wafer fabrication regions
- Online remote support