

## END POINT FOR A VARIETY OF DRY-CLEAN PROCESSES

Due the frequency of dry cleans in etch and deposition processes, a dry-clean, end point system can significantly increase wafer throughput, reduce equipment cost of ownership and improve particle performance. Example processes that benefit are:

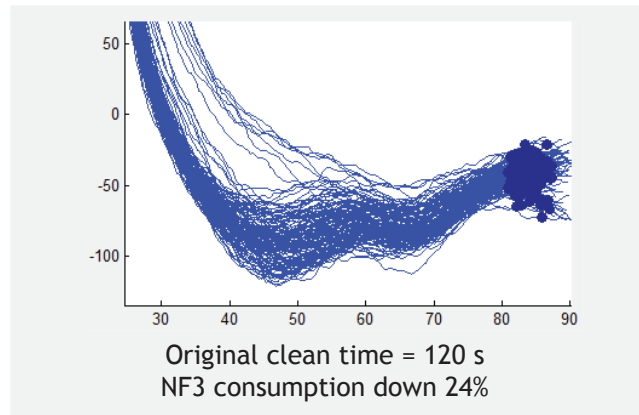
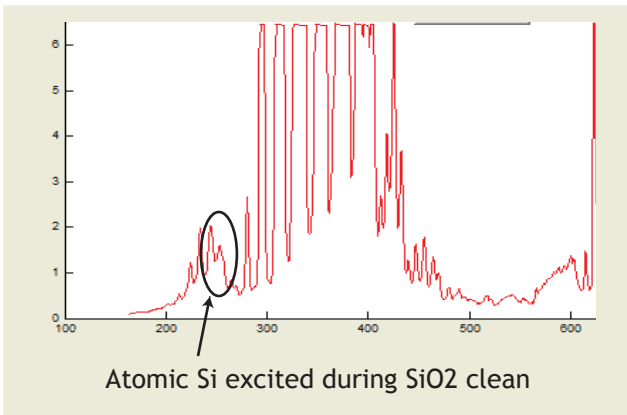
- ▶ HDP and PE CVD
- ▶ ALD
- ▶ Furnace deposition
- ▶ Poly and dielectric etch

Pivotal's Sensor X Clean End Point system tracks the atomic species of the material being cleaned (for example, Si, O, C, N and Ti), resulting in highly accurate end points. This results in increased throughput, minimized operating costs and improved particle performance.

## PROVEN PRODUCTION RESULTS (HDP CVD EXAMPLE)

Spectrum During NF3 Dry Clean of SiO2 Material

24% Reduction in Dry-Clean Time



59% Reduction in Defect Density

