



Contamination Control



At MiPlaza, our Materials Analysis expertise draws on decades of experience built up within the world-renowned Philips Research Laboratories. MiPlaza gives you direct access to this expertise, applied to your own requirements, delivering solutions to your demands.

Building on Philips Electronics' fifty years of experience in semiconductor development and manufacturing, MiPlaza Materials Analysis offers a wide range of contamination control services. Through the application of a large number of analytical technologies, we help our customers with contamination control issues as diverse as analysis of supply gases at the ppq levels to sub-monolayer analysis of wafer surfaces. Our services include research and development of new techniques, solving contamination problems at-site and providing routine analyses for existing products and processes.

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Clean room	Application	Technique
Clean room air	Particle count and size	Counter
	Airborne molecular contamination (AMC)	GC-FID/MS
	Sweeps and wipes: leaching / digestion: anions and cations	IC and ICP-MS
Supplies: gases	Total organic contamination (TOC)	TD-GC-FID
	Moisture	NIR-TDL/QCM
	Acids/bases	Trapping-IC
	CO/CO ₂	NDIR
	Hydrogen/oxygen	Gas-MS
	Particle count and size	Counter
Supplies: ultrapure water	Total organic carbon (TOC)	TOC-analyser
	Anions and cations	IC and ICP-MS

Equipment		
Cleanliness validation of parts & products	Total organic contamination (TOC)	TD-GC-FID/MS
	Anions and cations	IC and ICP-MS
	Refractory compounds (S, Si, P, B containing)	GC-AED
	Organics	FT-IR, Raman
Trouble shooting	Particles, stains	SEM
	Organics	FT-IR, Raman
Equipment qualification	Bulk impurities	(TOF-)SIMS, LA-ICP-MS
	Surface contaminants	XPS, TOF-SIMS, RBS

Wafers & Devices		
Wafers	Particles, stains	SEM, Auger, TEM, AFM
	Organics	FT-IR, Raman, XPS, TOF-SIMS
	Surface contaminants	TOF-SIMS, TXRF, VPD-AAS
Devices	Particles, etch residue	SEM, XPS, Auger, TEM, AFM
	Organics	FT-IR, Raman, XPS, TOF-SIMS
	Gas effusion	TGA/TPR-MS



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