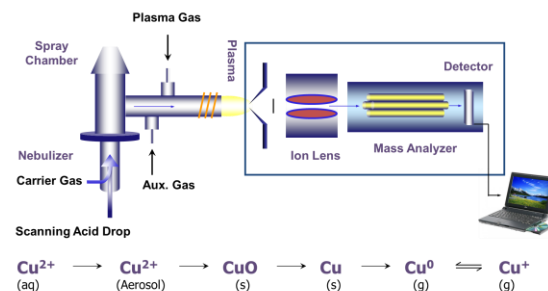


Deposition Analysis by Direct Film Stripping Inductively Coupled Plasma – Mass Spectrometry for In-Film Trace Metals

Film Stripping & Collection



ICP-MS Analysis



Method Detection Limits, E10 atoms/cm²

ELEMENTS		Al, Ni, Co, Cu, Mg Based Films	Hf / HfOx / HfSiOx	La / LaOx	Ti / TiOx / TiN	W / WOx	Zr / ZrOx
Aluminum	(Al)	1	1	1	1	10	1
Calcium	(Ca)	1	1	1	1	10	1
Chromium	(Cr)	0.3	0.3	0.3	0.3	3	0.3
Cobalt	(Co)	0.3	0.3	0.3	0.3	3	0.3
Copper	(Cu)	0.2	0.2	0.2	3	2	0.1
Gallium	(Ga)	0.02	0.02	0.02	0.02	0.2	0.02
Germanium	(Ge)	0.05	0.05	0.05	0.05	0.5	0.05
Iron	(Fe)	0.5	0.5	0.5	0.5	5	0.5
Lead	(Pb)	0.02	0.02	0.02	0.02	0.2	0.02
Lithium	(Li)	0.3	0.3	0.3	0.3	3	0.3
Magnesium	(Mg)	0.5	0.5	0.5	3	5	0.5
Manganese	(Mn)	0.1	0.1	0.1	0.1	1	0.1
Molybdenum	(Mo)	0.05	0.05	0.05	0.01	0.5	0.01
Nickel	(Ni)	0.3	0.3	0.3	0.3	3	0.3
Potassium	(K)	1	1	1	1	10	1
Sodium	(Na)	1	1	1	1	10	1
Strontium	(Sr)	0.05	0.05	0.05	0.05	0.5	0.05
Tin	(Sn)	0.1	0.1	0.1	0.1	1	0.1
Titanium	(Ti)	0.5	0.5	0.5	–	5	0.3
Zinc	(Zn)	0.3	0.3	0.3	5	3	0.3

ADVANTAGES

- Advanced wet chemistry technique allowing etching of full thickness of deposition across a larger surface area
- Entire bevel edge analysis
- Fully quantitative
- High sensitivities
- 40 plus elements survey from Li to U
- Major metal composition

