## Parameter Limits

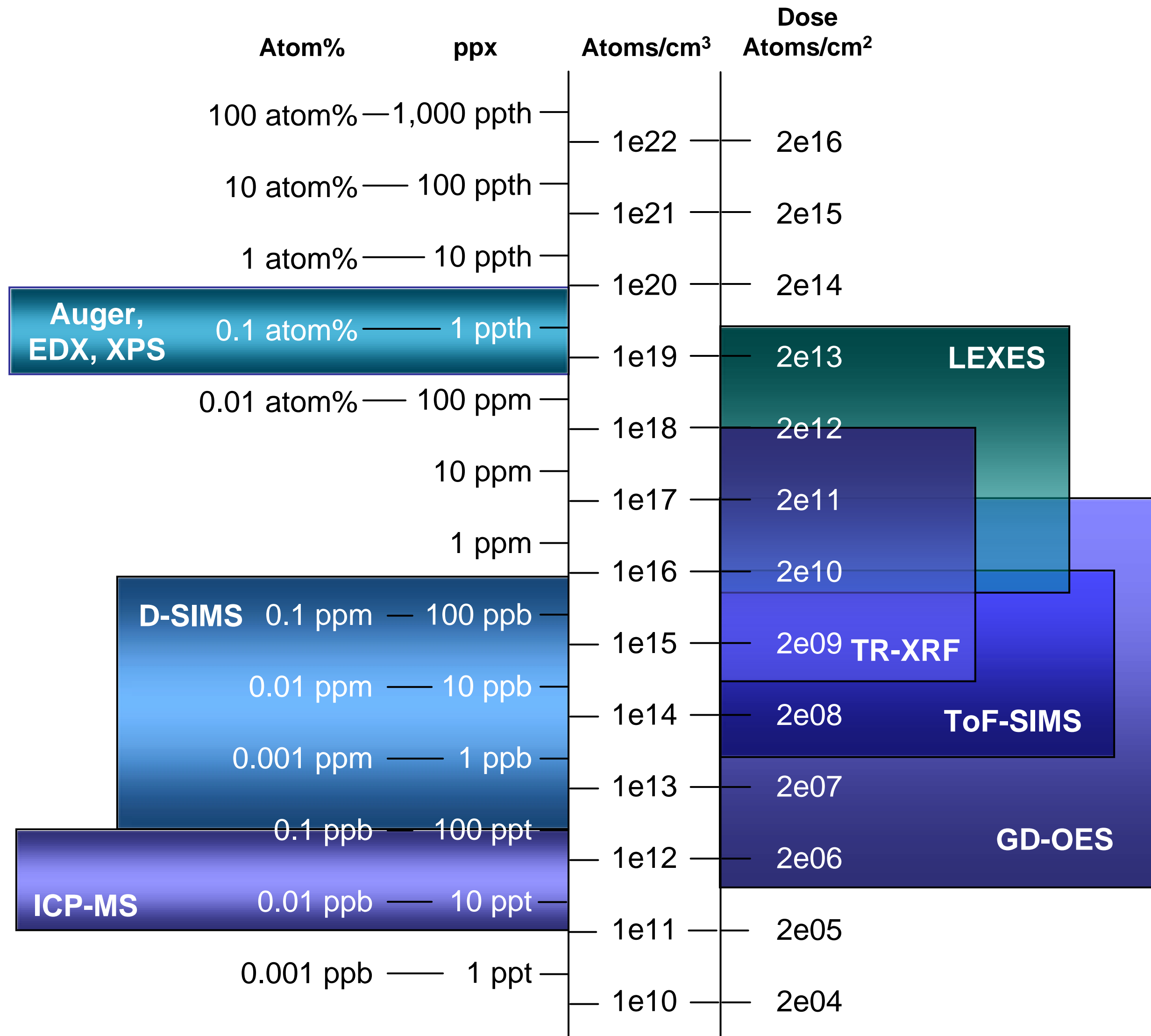
| Technique | Analysis Area / Beam Smallest | Analysis Area / Beam Largest |
|---|---|---|
| TR-XRF | >10,000 μ | 15,000 μ |
| GD-OES | >2,000 μ | 7,000 μ |
| D-SIMS | >20 μ | 250 μ |
| XPS | >15 μ | 500 μ |
| LEXES | >5 μ | 200 μ |
| EDX | >0.5 μ | 4 μ |
| ToF-SIMS | >0.2 μ | 600 μ |
| Auger | >0.015 μ | 100 μ |

| Technique | Minimum Film Thickness | Depth of Information |
|---|---|---|
| TR-XRF | 10 nm | 1-3 nm |
| GD-OES | 3 nm | 0.1-0.3 nm |
| D-SIMS | 20 nm | 1-10 nm |
| XPS | 5 nm | 1-10 nm |
| LEXES | 12 nm | 700 nm |
| EDX | 500 nm | 500-3,000 nm |
| ToF-SIMS | 0.2 nm | 0.2 nm |
| Auger | 5 nm | 1-10 nm |

| Technique | Range of Elements | Quantitative Accuracy* |
|---|---|---|
| TR-XRF | S-U (16-92) | ± 1-20% (std) |
| GD-OES | H-U (1-92) | ± 0.4% (std) |
| D-SIMS | H-U (1-92) | ± 2% (std) |
| XPS | Li-U (3-92) | ± 10% (no) |
| LEXES | Be-U (4-92) | ± 5-10% (std) |
| EDX | B-U (5-92) | ± 10% (no) |
| ToF-SIMS | H-U (1-92) | ± 30% (std) |
| Auger | Li-U (3-92) | ± 30% (no) |

* with standards = std, standard not needed = no

## Detection Limits

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