

## APPENDIX 3

## Comparison of Common Ionisation Techniques\*

<i>Ionisation technique</i>	<i>Symbol</i>	<i>Mass limit</i>	<i>Types of molecules</i>	<i>Advantages</i>
Electron ionisation	<b>EI</b>	500	Volatile organics, gases, non-polar compounds	Provides structural information as well as molecular weight
Chemical ionisation	<b>CI</b>	500	Volatile organics, gases, non-polar compounds	Easy to implement on EI source, enhances molecular ion production
Fast atom bombardment	<b>FAB</b>	20,000	Polar compounds including small biopolymers	Modest ionisation efficiencies for large molecular weight compounds
Matrix-assisted laser desorption ionisation	<b>MALDI</b>	up to 1,000,000	Polar compounds from small molecules to large biopolymers	Easy to perform, suited to high throughput, high ionisation efficiencies
Electrospray ionisation	<b>ESI</b>	up to 5,000,000	Polar compounds from small molecules to large biopolymers	High ionisation efficiencies, compatible with LC and CE separation

\* Descriptions are to be used as a guide only.