Selecting an LCMS Technique

1. Select the Source:

	APPI	APCI	ESI	MALDI
Compound Class				
Proteins/peptides			■	■
Natural products	▪	■	■	▪
Forensics	▪	■	■	▪
Pharmaceuticals	▪	▪	■	▪
Environmental	■	■	■	
Polymers			▪	■
Carbohydrates			▪	■
DNA			■	■
Organic Chemistry	▪	■	■	▪
Biochemistry	▪	▪	■	■
Functional Groups				
Acid/Basic	▪	▪	■	■
Alcohols/Carbonyls	■	■	▪	▪
PAHs	■	▪		

	APPI	APCI	ESI	MALDI
Volatility / Thermal Stablility				
non-volatile			■	■
thermally unstable			■	■
volatile and stable	■	■	▪	
LC separation				
reverse phase	▪	■	■	
normal phase	■	■		
size exclusion	▪	▪	■	
ion paired	▪	▪	■	
Flowrate				
1 ml/min	■	■	▪	
0.1 - 0.4 ml/min	■	■	■	
5 -20 ul/min	▪	▪	■	▪
less than 0.1 ul			■	■

■ Best option
■ Good Option
▪ Fair Option
Poor Option

2. Select the Instrument:

	Quad	Triple Quad	Ion Trap	TOF	Q-TOF
Function					
Quantitation- few compounds	■	■	▪	■	▪
Quantitation- many compounds	■	■	▪	■	▪
High throughput quantitation	▪	■	▪	■	▪
Metabolite identification	▪	▪	■	■	■
Degradation products	▪	▪	■	■	■
Peptide sequencing/protein id	▪	▪	■	■	■
Polymer characterization	▪	▪	▪	■	■
Data dependent operation	▪	▪	■	▪	■
Characterize FAST LC peaks (1-3 s peak widths)	▪	▪	▪	■	■

	Quad	Triple Quad	Ion Trap	TOF	Q-TOF
Instrument Need					
Full scan sensitivity	▪	▪	■	■	■
SIM or MRM sensitivity	■	■	■	■	■
Specificity (MS/MS)	▪	■	■	▪	■
Mass resolution	▪	▪	■	■	■
Mass accuracy	▪	▪	▪	■	■
Quantitative accuracy	■	■	▪	■	■
Linear dynamic range	■	■	▪	■	■
Mass Range	▪	▪	■	■	■
Scan speed	▪	▪	■	■	■
Low cost	■	▪	■	■	▪

Contact the TRACES Manager for full details.