

## LC-MS Methods

### Column Chemistry

- Reverse-phase C18 (non-polar)
- HILIC (polar metabolites)
- Mixed-mode columns

### Gradient Optimization

- Mobile phase composition
- Flow rate selection
- Peak resolution vs run time

### Ion Suppression

- Co-eluting compounds interfere
- Matrix effects
- Mitigated by cleanup and separation

### Method Validation

- Linearity, accuracy, precision
- Lower limit of quantification
- Stability testing