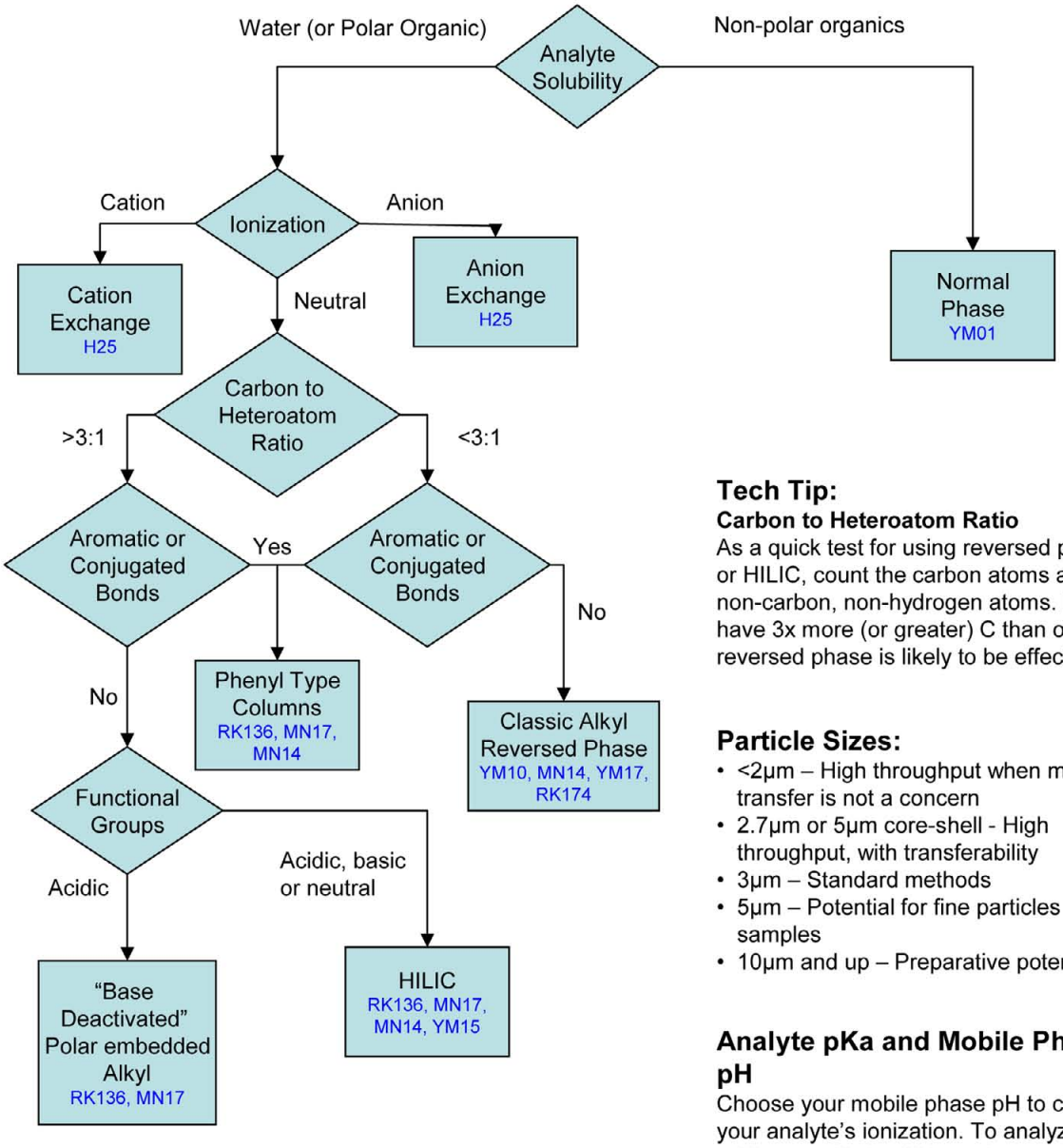
Tips for HPLC Column Selection



Mobile phase pH and Column Selection

After determining a suitable pH for your mobile phase, check for a column that is pH compatible. Check our Raptor ARC-18 for acidic mobile phases, or Triart columns for acid and base resistance.

Tech Tip:

Carbon to Heteroatom Ratio

As a quick test for using reversed phase or HILIC, count the carbon atoms and the non-carbon, non-hydrogen atoms. If you have 3x more (or greater) C than others, reversed phase is likely to be effective.

Particle Sizes:

- <2µm – High throughput when method transfer is not a concern
- 2.7µm or 5µm core-shell - High throughput, with transferability
- 3µm – Standard methods
- 5µm – Potential for fine particles in samples
- 10µm and up – Preparative potential

Analyte pKa and Mobile Phase pH

Choose your mobile phase pH to control your analyte's ionization. To analyze an acid, your pH should be at least one unit below the pKa for reversed phase, or one unit above for anion exchange. For bases, your pH should be one unit above for reversed phase, one unit below for cation exchange.

Remaining >1pH unit away from analyte pKa stabilizes the ionization and partitioning of your compounds

If you can't keep your analyte(s) all charged or all neutral, consider HILIC for a more rugged method.

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