

Advantages of using a 3.0mm ID HPLC column for LCMS – Tech Information

Some scientists use a 2.1mm ID and smaller columns for LCMS which have optimal flow rates of approximately 0.3ml/min.

This is fine for isocratic analysis but when you must use a gradient method, specialized pumps and mixing valves are necessary that can reproduce the very small changes in the mobile phase's composition.

3.0mm ID columns use more traditional flow rates and can be used easily on LCMS without specialized pumps for both gradient and isocratic methods. Also, when using small column ID's it is important that you invest the time to completely optimize your system's plumbing to minimize extra-column band broadening to achieve acceptable chromatography.

If you have sufficient sample for loading, you may want to consider using a 3.0mm ID column for any situation that a 2.1mm ID has been recommended for all of these and other reasons.