

Mass spectrometry (MS) is one of the most popular detection techniques for liquid chromatography (LC). It is also a technique that is not compatible with many of the mobile phase buffers and solvents that are used in LC-ultraviolet (UV) detection. In addition to this, HPLC column dimension must be taken into consideration for LC-MS detection.

All of this means that choosing the right HPLC column for LC-MS takes a little more consideration than you would when choosing a column for other detection systems. Here we have outlined a couple of important considerations when choosing an HPLC column for LC-MS.

Choose the Right Column Stationary Phase

This is the most important consideration when it comes to choosing an HPLC column for LC-MS. There are a wide range of columns out there, including reversed phase, normal phase, and ion- exchange.

Reversed phase is a good fit for LC-MS because it can perform high-resolution separations on a wide range of compounds using a combination of aqueous and organic mobile phase mobile phase.

Ion-exchange columns require inorganic buffer solutions, which are not compatible with the mass spectrometer. If an ion-exchange column must be used with the mass

spectrometer(MS) make sure you use volatile buffers and solvents that are compatible with MS detection. You should also desalt your sample before you inject it on the LC-MS.

Use Volatile Buffers

Buffers are used to help achieve good peak shape, resolution, and selectivity by maintaining the pH of the mobile phase. While there are many potential buffers to choose from, for LC-MS, you should use a volatile buffer, containing ammonium salts, rather than a non-volatile buffer, such as phosphate buffers.

Ion-pairing reagents that form ionic and covalent bond complexes with any ionic compounds and the stationary phase should typically be avoided in LC-MS if possible. If not possible, then use only volatile forms of these reagents.

Regardless of what HPLC column you use for your LC-MS, be sure to prepare and condition it according to the manufacturer's specifications and keep it clean. This will help extend the life of your column and ensure you get desired results.

If you would like more information about choosing the right HPLC column for your LC-MS separations, reach out to us today and speak with a one of our technical specialists through our free online portal: **Chat Now**

Share with friends and coworkers:

- [Click to email a link to a friend \(Opens in new window\)](#)
- [Click to share on Twitter \(Opens in new window\)](#)
- [Click to share on Facebook \(Opens in new window\)](#)
- [Click to share on Pinterest \(Opens in new window\)](#)
- [Click to share on LinkedIn \(Opens in new window\)](#)
- [Click to share on Tumblr \(Opens in new window\)](#)
- [Click to share on Reddit \(Opens in new window\)](#)