

Why am I seeing multiple peaks in HPLC runs of fructose – Tips & Suggestions

I am running an HPLC method for Fructose but I see two or more peaks. What could be the cause?

Suggestion: The peaks are likely due to the α and β anomers as well as pyranose and furanose forms. In the open chain form, either a five-member or six-member ring can form. From there, the groups may be axial or equatorial at the anomeric carbon. Therefore, there are four combinations possible. The diagram below illustrates this, with each relevant atom color-coded for clarity.

