GFORSS LEARNING

Food Safety Laboratory Capacity Building

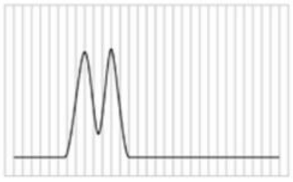
Module 4 Quiz – Answer Key

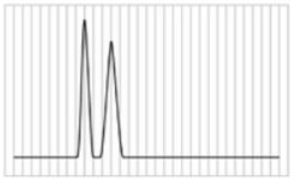
1. Pair the terms:

a.	Chromatogram	1.	Technique
b.	Chromatograph	2.	Instrument
c.	Chromatography	3.	Result

a – 3; b – 2; c – 1

2. Which of the two chromatograms results from reducing the particle size in the column?

a. 

b. 

3. The mobile phase used in HPLC analysis is

a) gas

b) solid

c. liquid

4. Increase in flow rate of mobile phase leads to

a) Elution of more different peaks

b. Faster elution of sample components

c) Lower pressure in the column

5. Most commonly used mode of HPLC analysis

a) normal phase chromatography

b) abnormal phase chromatography

c. reverse phase chromatography

d) equal phase chromatography

6. Isocratic mode of operation implies

a) Use of two solvents used in different proportions throughout the analysis

b) Use of solvents with similar isoelectric properties

c. Use of constant composition of mobile phase irrespective of number of solvents used throughout the analysis run

d) Use of a single solvent, not mixtures, throughout the analysis run

7. Degassing of the HPLC solvents is carried out essentially to

a) Increase the purity of the solvent

b. Remove dissolved gases so as to avoid bubble formation inside the system

c) Add carbon dioxide to the solvent to ensure that there is no oxygen present to oxidize (degrade) the sample

8. Which technique is not recommended for degassing of mobile phase

a. Boiling of mobile phase

b) vacuum filtration

c) sonication

9. Which of the following will improve the efficiency of the separation process in liquid chromatography?

a) Increase in sample size, increase in column diameter

b) Reduction in sample size, increase in column diameter

c) Increase in sample size, reduction in column diameter

d. Reduction in sample size, reduction in column diameter

10. Which values increase when decreasing the particle size in the column? (select all that apply)

a. Number of theoretical plates

b. Back-pressure

c. Resolution

d) Analysis time