

Name: \_\_\_\_\_

Date: \_\_\_\_\_

[2 pt] 1. What is the amino acid sequence of a heptapeptide that, upon hydrolysis yields the tripeptides. Explain.

Fragment 1: Gly-Phe-Leu

Fragment 2: Phe-Ala-Gly

Fragment 3: Leu-Ala-Tyr.

[3 pt] 2. What is the amino acid sequence of a protein that, upon hydrolysis yields the following fragments:

Fragment 1 Ala—Ala—Met—Arg—Val

Fragment 2 Val—Pro—His

Fragment 3 Arg—Val—His

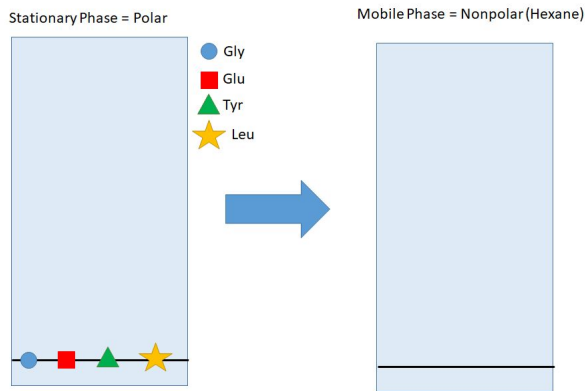
Fragment 4 Pro—His—Glu—Ala

[4 pt] 3. What is thin-layer chromatography? What two properties of Amino Acids that can be used to separate them, **AND** explain how it the experiment separates them

[3 pt] 4. A student performs a chromatography experiment to try and separate the amino acids Leu and Asp. Sketch a picture of the experimental setup. Which AA would move the furthest up to chromatography paper if the solvent is water? Explain.

CHE 102 - Homework - Ch 29c

- [3 pt] 5. A student performs a chromatography experiment using a **Polar Solid Phase** and a **Nonpolar Liquid Phase**. Draw a picture of the results. Explain.



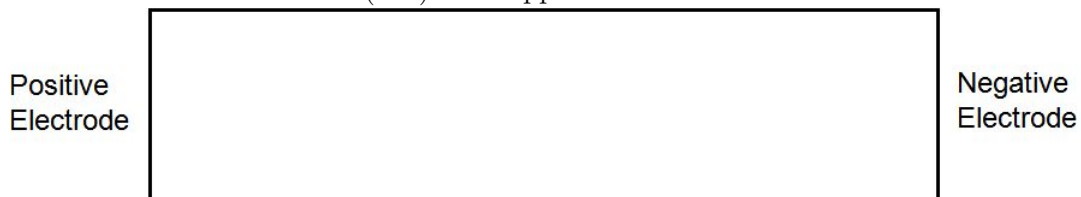
- [3 pt] 6. Explain how electrophoresis can be used to separate amino acids and proteins based on charge.

- [3 pt] 7. Explain how electrophoresis can be used to separate amino acids and proteins based on size only.

- [4 pt] 8. A student performs an electrophoresis experiment to try and separate the amino acids shown below. Show the position of the amino acids at the end of the experiment. Explain.

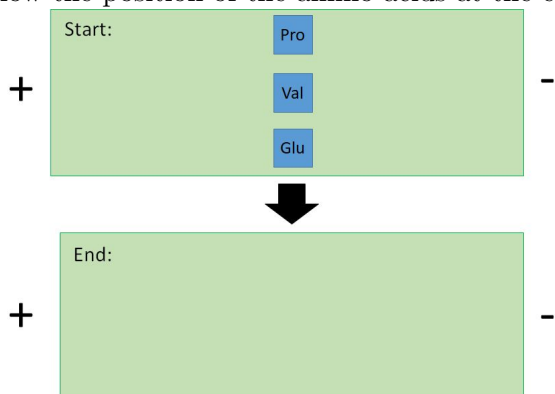


Distribution of Amino Acids (AA) after application of an electric field:



**CHE 102 - Homework - Ch 29c**

[4 pt] 9. A student performs an electrophoresis experiment to try and separate the amino acids shown below. Show the position of the amino acids at the end of the experiment. Explain.



[6 pt] 10. Complete the following table for each of the diagnostic tests.

	<b>Ninhydrin</b>	<b>Biuret</b>	<b>Xanthoproteic</b>
Visible Evidence:			
+ Result for:			
- Result for:			