RC1 - Amino Acids and Proteins – Chemistry Revision

Draw the general structure of an amino acid:

Define the term ‘zwitterion’:

Draw the amino acid cysteine (R-CH_2SH), at:

pH 2	pH 10

Draw the products which form when this dipeptide is hydrolysed:

What is the reverse reaction called?

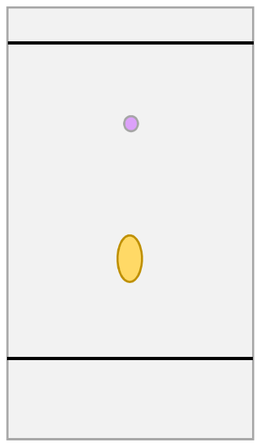
Explain why thin-layer chromatography is able to separate amino acids:

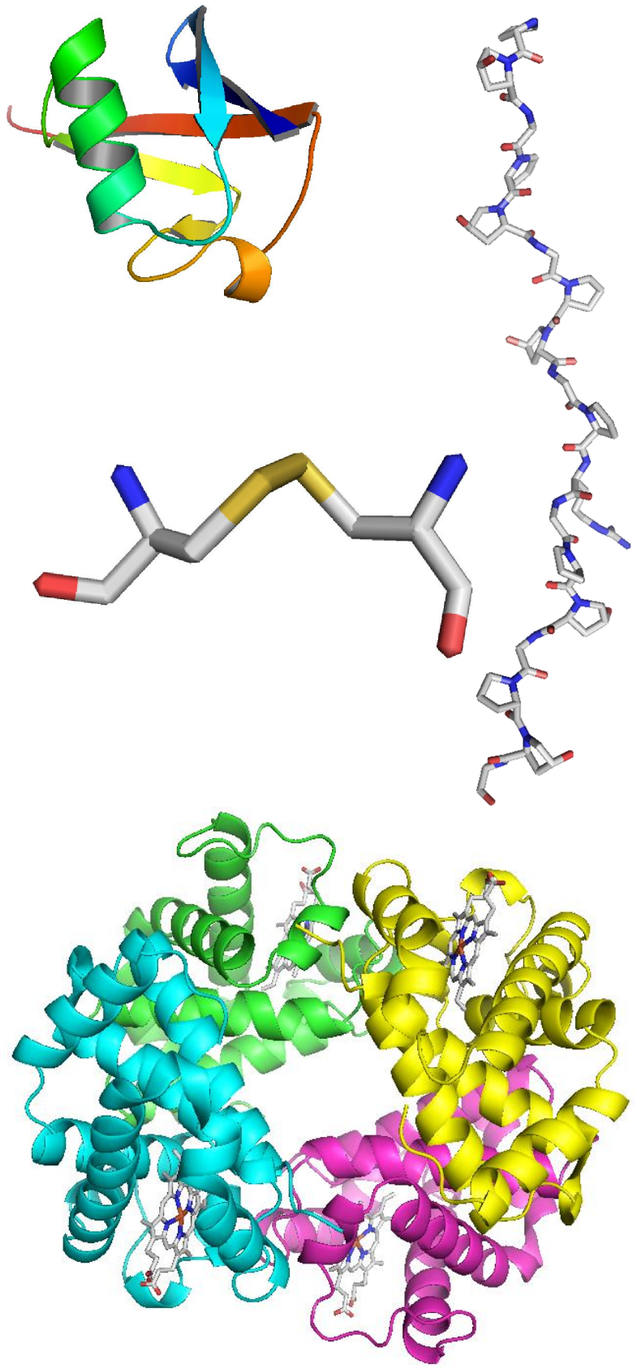
Give two ways which can be used to view invisible amino acids on a chromatogram:

Finish the equation:

$$R_f = \text{_____}$$

Calculate the R_f value of each of the two spots:





Define the following terms:
Protein:

Primary structure:

Secondary structure – include 2 examples:

Tertiary structure:

Quaternary structure:

Conjugated protein:

Explain why hydrogen bonding is important to the overall structure of a protein:

Explain how disulfide bonding affects the tertiary structure of a protein:

Produced by Adam Stubbs at Newcastle University as part of a summer outreach project.