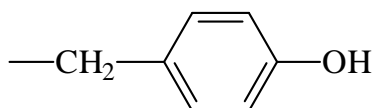


- L-Tyrosine is a naturally occurring amino acid with the following side-chain.



The pK_a values of tyrosine are 2.20 (α -COOH), 9.19 (α -NH₃[⊕]) and 10.47 (sidechain). Draw the Fischer projection of L-tyrosine indicating the correct charge state at physiological pH.

Marks
6

What is the absolute stereochemistry of L-tyrosine? Write (*R*) or (*S*).

What is the value of the pI of L-tyrosine?

What does pI represent?

Account for the difference in acidity of the carboxylic acid group and the phenol.