

Mr. Indranil Chatterjee, Regional Product Line Manager – Business Unit Protein for IFF, gave a talk on **‘Plant-based protein: Challenges in plant-based proteins and how to overcome challenges in creating plant-based protein with solutions.’**

He discussed the functionality of muscle protein in emulsified meat products, highlighting the challenges of mimicking colour, structure, aroma, flavour, and taste in plant-based proteins. He explained that plant proteins have a globular structure, while animal proteins have fibrous structures. The texture of plant-based products is influenced by functionalities like solubility, emulsification, gelation, water-binding, and elasticity. Salt is a crucial factor in modification, as it dictates the protein's behavior in food. He also discussed the texture analysis of plant-based products using web diagrams and mouthfeel wheel. Plant proteins suppress flavour more than animal proteins, and authenticity is crucial when creating plant-based products. Off-notes in plant proteins can be due to protein sources and processing conditions, with bitterness and astringency being common taste issues. Mr. Indranil suggested choosing sources with lower flavour intensities, such as oat rice, for developing new products. Masking technology is used to reduce certain flavour components like bitterness. Lastly, he discussed the challenges in plant-based protein beverages.