MODIFICATION AND EXTRUSION OF PROTEINS TO MANUFACTURE MOISTURE TEXTURIZED PROTEIN

Abstract

Legume plant-based proteins, especially pea protein, are used as a primary source for twin-screw extrusion to manufacture an intermediate moisture, texturized protein piece that can be further processed by controlled hydration and coated with a batter, breading, or coating to produce a comestible product. Protein is the predominate ingredient (70-95%) in the extruded piece. In the preferred embodiment, the protein is pea powder and flavor is provided by addition of yeast extract to impart beef, chicken, or pork flavor. Additional components in the form of hydrophilic polymers and alkalai are also added prior to extrusion to insure desired texture and handling properties. The hydrophilic polymers impart functional properties such as water-binding, thereby aiding in foaming, emulsifying, texturizing, and gelation, important to manufacturing an intermediate moisture texturized plant-protein product by extrusion.

Fig. 3A