

PROTEIN ANALYSIS METHODS

R. Yasothai and R. Giriprasad*

Veterinary University Training and Research Centre, Erode
(Tamilnadu Veterinary and Animal Sciences University)

Veterinary Assistant Surgeon, Chozhapandi*

Based on size of protein:

Principle: These techniques is the separation of proteins based on size difference

- SDS-PAGE
- Size exclusion chromatography
- Western blot

Based on charge of protein:

Principle: These techniques separates compounds according to the nature and degree of their ionic charge

- Ion exchange chromatography

Based on hydrophobicity:

Principle: These techniques the proteins elute according to their hydrophobicity

- High performance liquid chromatography or high pressure liquid chromatography
- Hydrophobic Interaction Chromatography

Processing of proteins:

Fortification: Enzymatically produced hydrolysates can be used to fortify soft drinks to protein contents equivalent to milk (Criswell *et al.*, 1964).

Texturization:

- Fibre spinning
- Thermoplastic extrusion

Fibre spinning: Defatted proteins treated with Food grade alkali and then passed through Spinnerret-0.2mm Dia then treated with Acid and Brine ph-3 to 4.5 to form 'tow' of fibres then it is added with fat, Egg albumen, Polysaccharides, Flavours and Colourants

- Fibres of poorly defined ultrastructure with larger pores are obtained (Swinger and Lawrie, 1978)
- By mixing of protein obtained from intestinal sources and offals with plasma proteins fibres of better texture is Obtained (Young and Lawrie, 1975)

Thermoplastic extrusion: By this process pieces of analogue are produced which after rehydration, have a chewy texture.

- For protein recovered from abattoir wastes cereal carrier is necessary to develop desired range of texture-35% of protein isolate from bovine stomach and 65% of soya grits (Mittal and Lawrie, 1984)
- Carbohydrate-lipid-protein interactions are important in developing the texture

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