Development of functional protein-polysaccharide complexes from low value poultry meat

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Introduction

Proteins and polysaccharides are widely present in various foods and industrial applications. They are considered functional ingredients influencing the physical, the textural and the rheological properties of the food product as well as its stability.

In the past few years, protein/polysaccharide complexes have gained interest in the food, cosmetic and pharmaceutical sectors as biomaterials with enhanced physical and organoleptic characteristics.

Objective

This study aims to use low value poultry meat to produce functional protein/polysaccharide complexes through high pressure processing (HPP).

Material

Proteins were isolated from mechanically separated turkey meat (MSTM) using the pH-shifting technology as described in Figure 1.

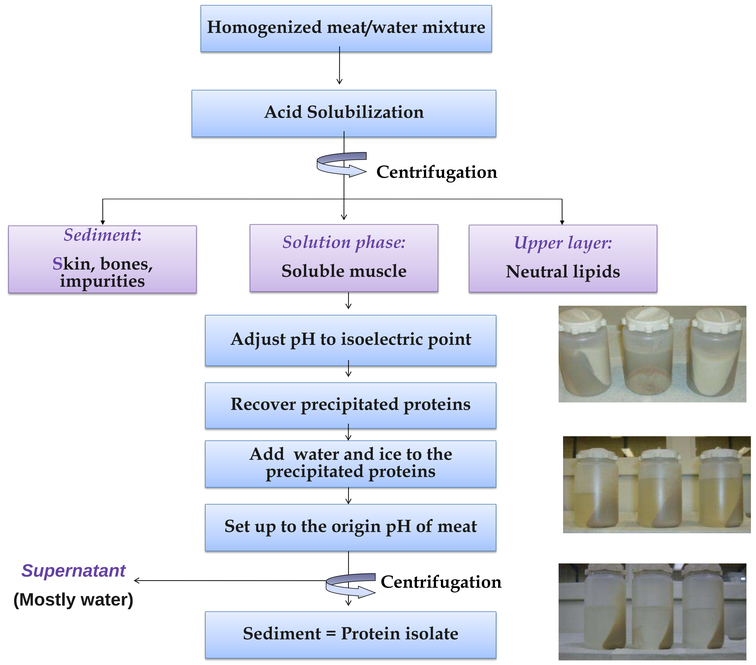
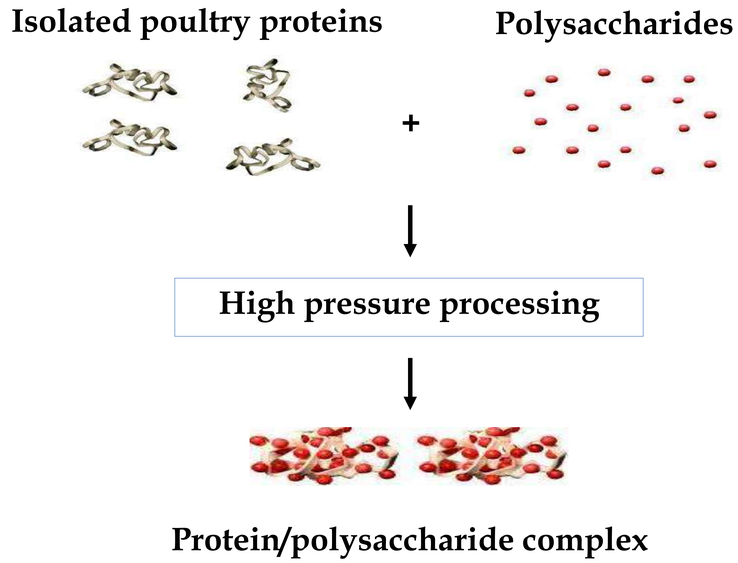


Figure 1. Isolation of turkey meat proteins by the pH-shifting process

Practical approach



Key Benefits

- Superior functional properties (gelation, emulsification and solubility)
- Improved thermal stability.
- Desirable visual (color) and organoleptic (taste) properties.

Possible Applications

- Potential use as emulsifiers in foods sector.
- Possible use as nutritional or bioactive ingredient for health purposes.
- Possible reduction of protein allergenicity.

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