Introduction

- Gelatin has wide applications in food, cosmetic, nutraceutical and pharmaceutical industries.
- Gelatin is obtained by partial denaturation of collagen derived from the skin, connective tissue and bones of animals.
- Commercial gelatins are mainly produced from porcine, bovine and fish sources.
- However, their utilization is either restricted or limited due to some cultural and safety issues.
- Underutilized poultry materials might be an alternative source for gelatin production.

Objective

- Investigate the possibility for gelatin preparation from chicken and turkey heads.
- Evaluate the quality of the gelatin obtained from chicken and turkey heads.

Approach

- Gelatin Manufacturers of European Standard

  - Raw Material
  - Water Wash
  - Defat
  - Non-collagenous Protein Removal
  - Acid Treatment
  - Batch Extraction (50 ºC and 60 ºC)
  - Purification
  - Freeze-dry
  - Analysis

Results

1. 

- All the extracted gelatins had high level gel strength.

2. 

- Turkey head gelatins showed better cross-linked structure which stands for stronger gels.

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Take home message

- Chicken and turkey heads can be considered as new alternative to mammalian gelatins due to superior quality.
- However, the low yields may limit their industrial feasibility.

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