

## INTRODUCTION

Fresh cheeses belong to a group of soft unripened cheeses. Produced from the enzymatic coagulation of milk with rennet and starter cultures, these cheeses are characterised with a soft texture, slightly acidic flavour, high moisture content and a low price. Application of kombucha as a non-conventional starter culture in dairy technology represents the theme of intensive investigation in recent studies. Milk proteins are important source of bioactive peptides, which can be released by hydrolysis (e.g. pepsin, trypsin and chymotripsin) during gastrointestinal digestion or by enzymatic activity of applied starter culture.

The main objective of this research was the investigation of non-conventional (kombucha inoculum) and traditional starter culture (XPL-1) on proteolysis and *in vitro* gastrointestinal digestion (GI) of fresh cheeses.

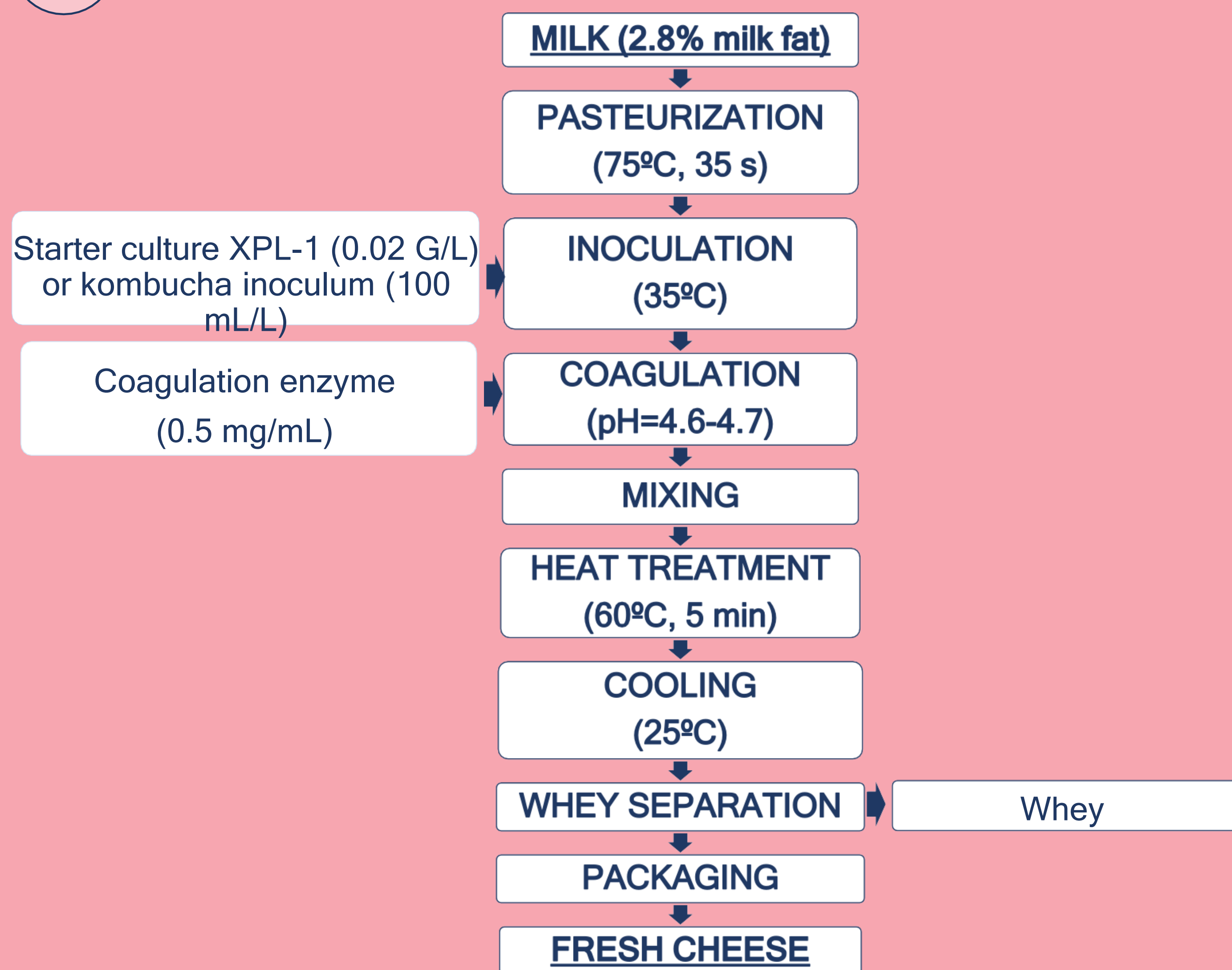


Figure 1. Manufacturing process of traditional and kombucha fresh cheese

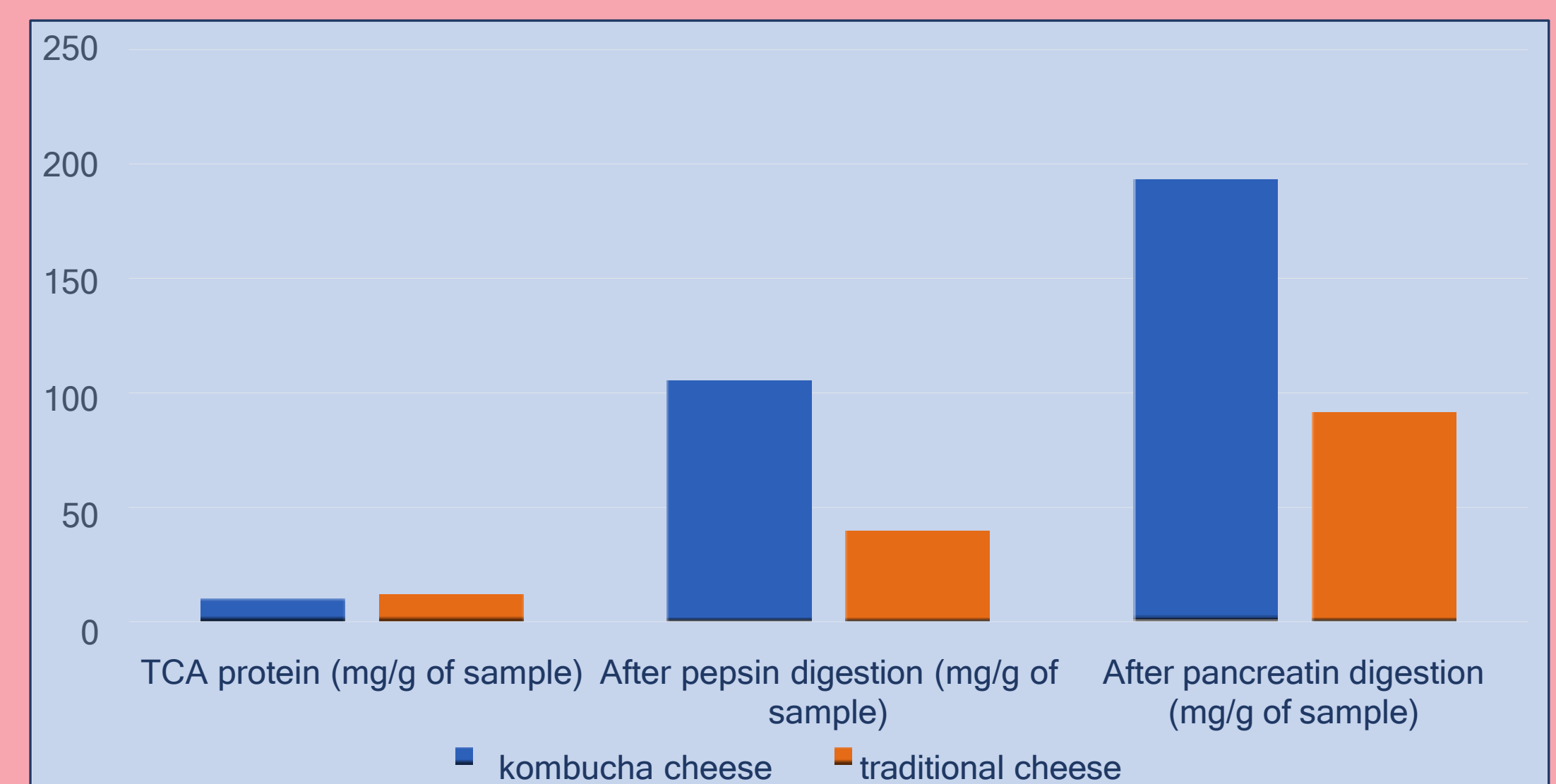


Table 1. Contents of soluble proteins in traditional and kombucha fresh cheese after *in vitro* digestion with pepsin and pancreatin

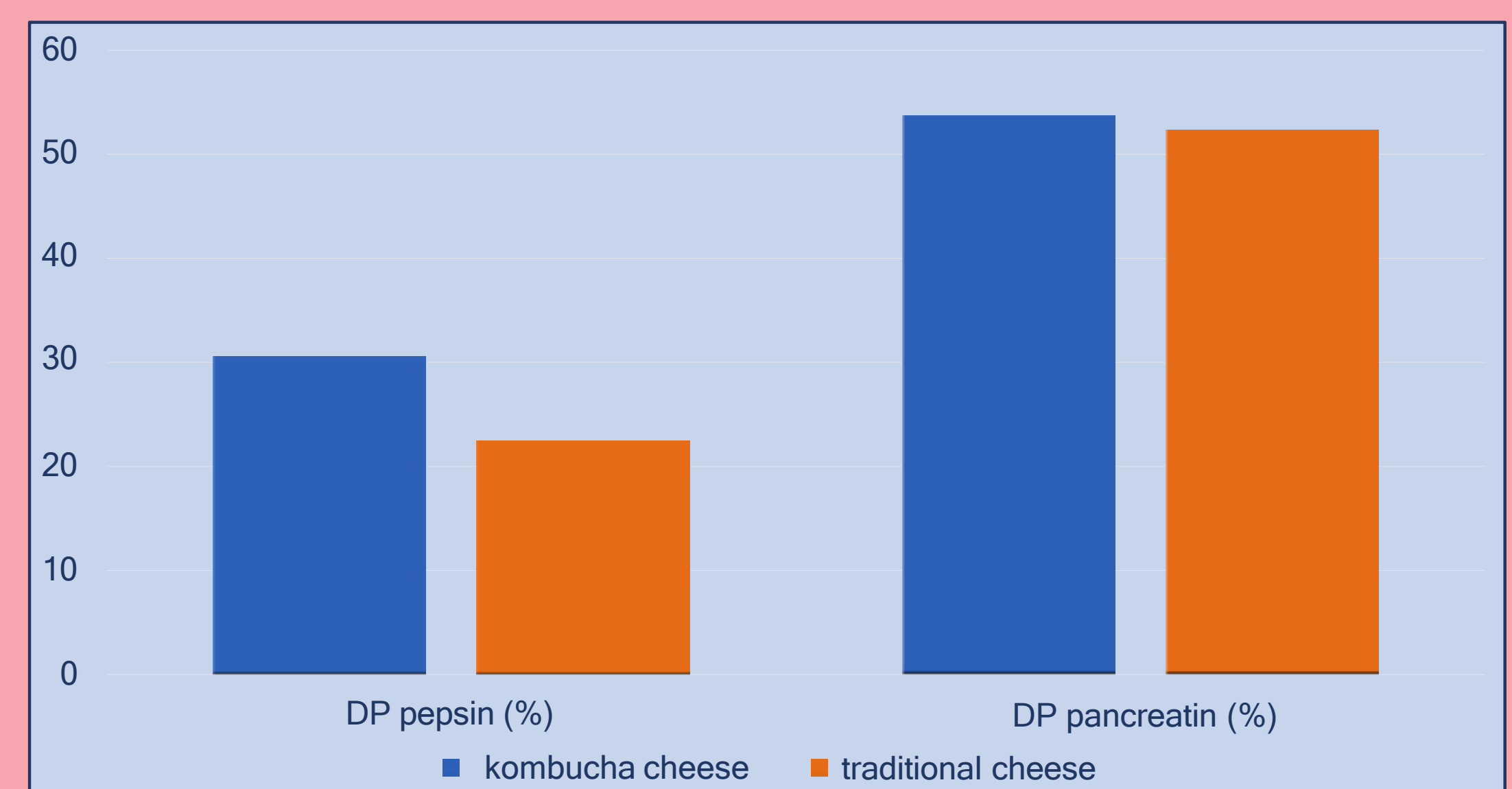


Table 2. Degree of proteolysis in traditional and kombucha fresh cheese



## CONCLUSION

The use of kombucha inoculum as a starter culture for cheese production resulted with higher degree of hydrolysis and the content of soluble proteins compared with traditional starter culture in all phases of gastrointestinal digestion. The hydrolysates of prepared kombucha fresh cheese showed high digestibility and therefore this product could be a rich source of bioactive peptides.