

# THE DEVELOPMENT OF A METHOD FOR DISINTEGRATING THE YEAST CELL WALL AIMED AT OBTAINING MICROBIAL PROTEINS



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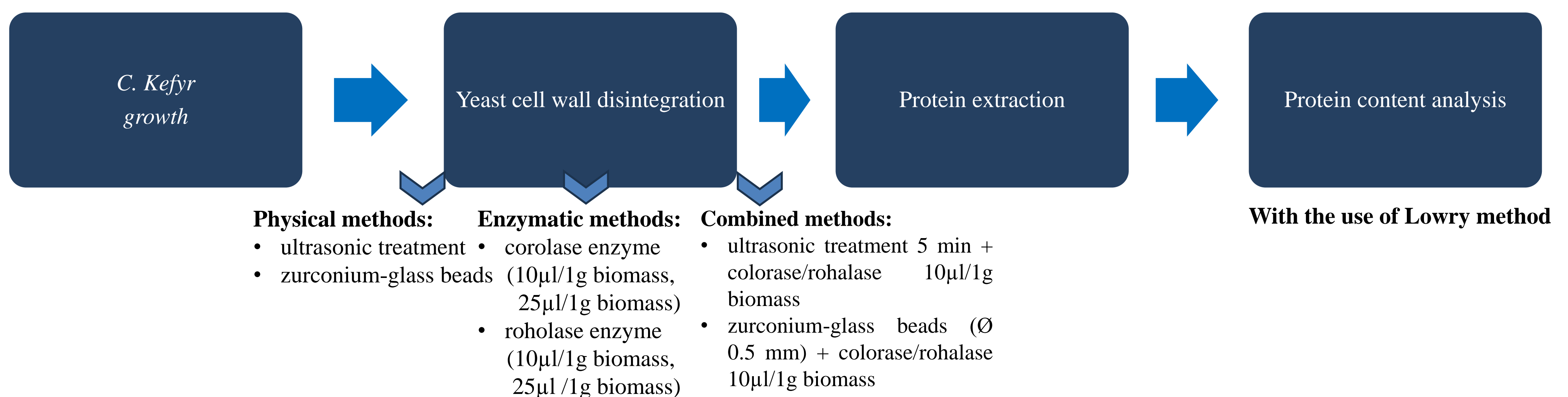
## INTRODUCTION

**Single cell protein (SCP)** is the protein extracted from microorganism biomass. Numerous sources of microorganisms may be used for the production of SCP, including yeasts (e.g. *Saccharomyces cerevisiae*) or molds (e.g. *Fusarium venenatum*). Some of the unconventional microorganisms may also be used. To improve efficiency of protein extraction various methods of disintegration of microorganisms cell wall can be applied.

## AIM

The aim of the study was to compare combined (enzymatic and physical) methods of disintegration of the *Candida kefir* yeast cell wall in order to increase the efficiency of protein extraction from biomass.

## METHODS



## RESULTS

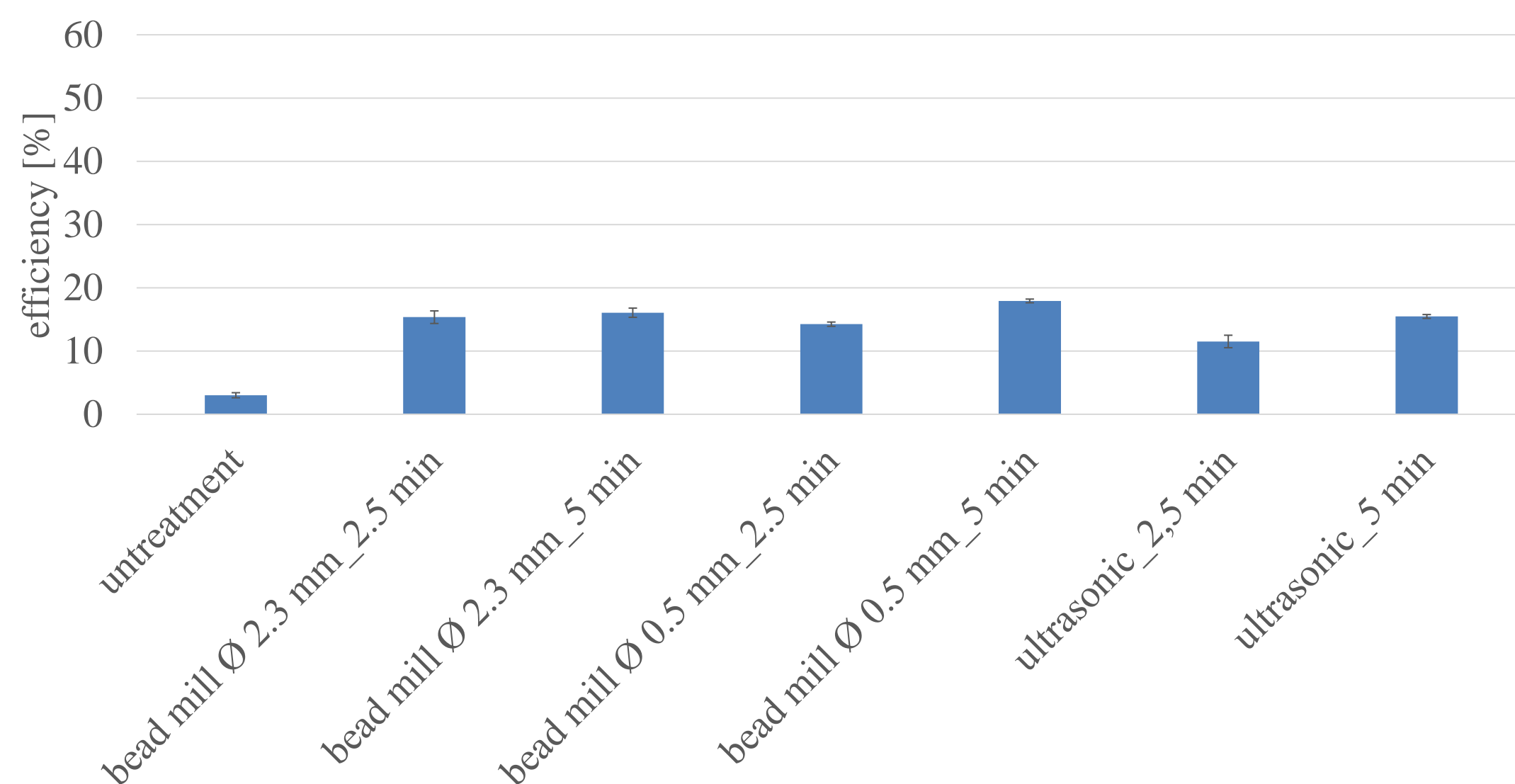


Fig. 1. Efficiency of the physical treatment

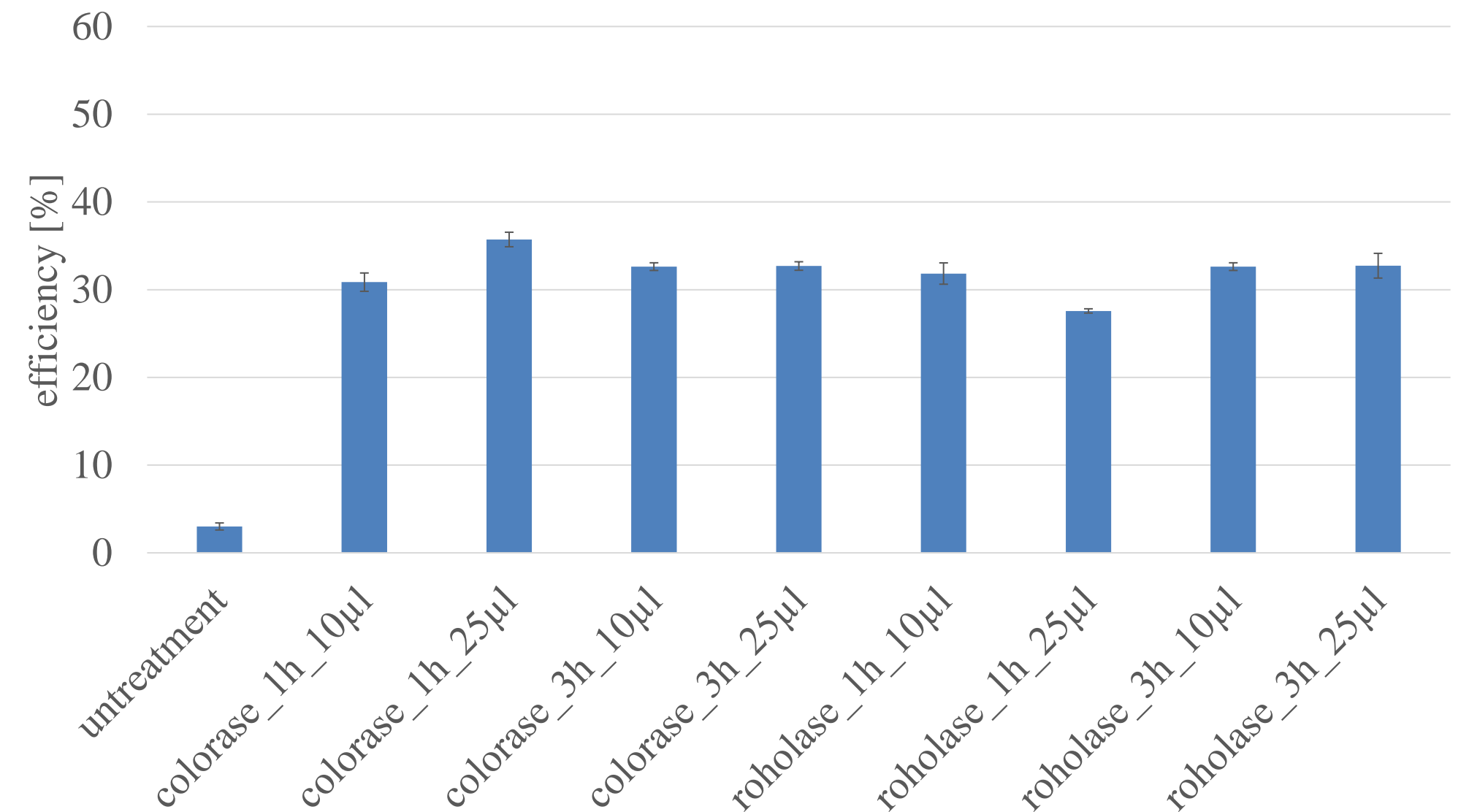


Fig. 2. Efficiency of the enzymatic treatment

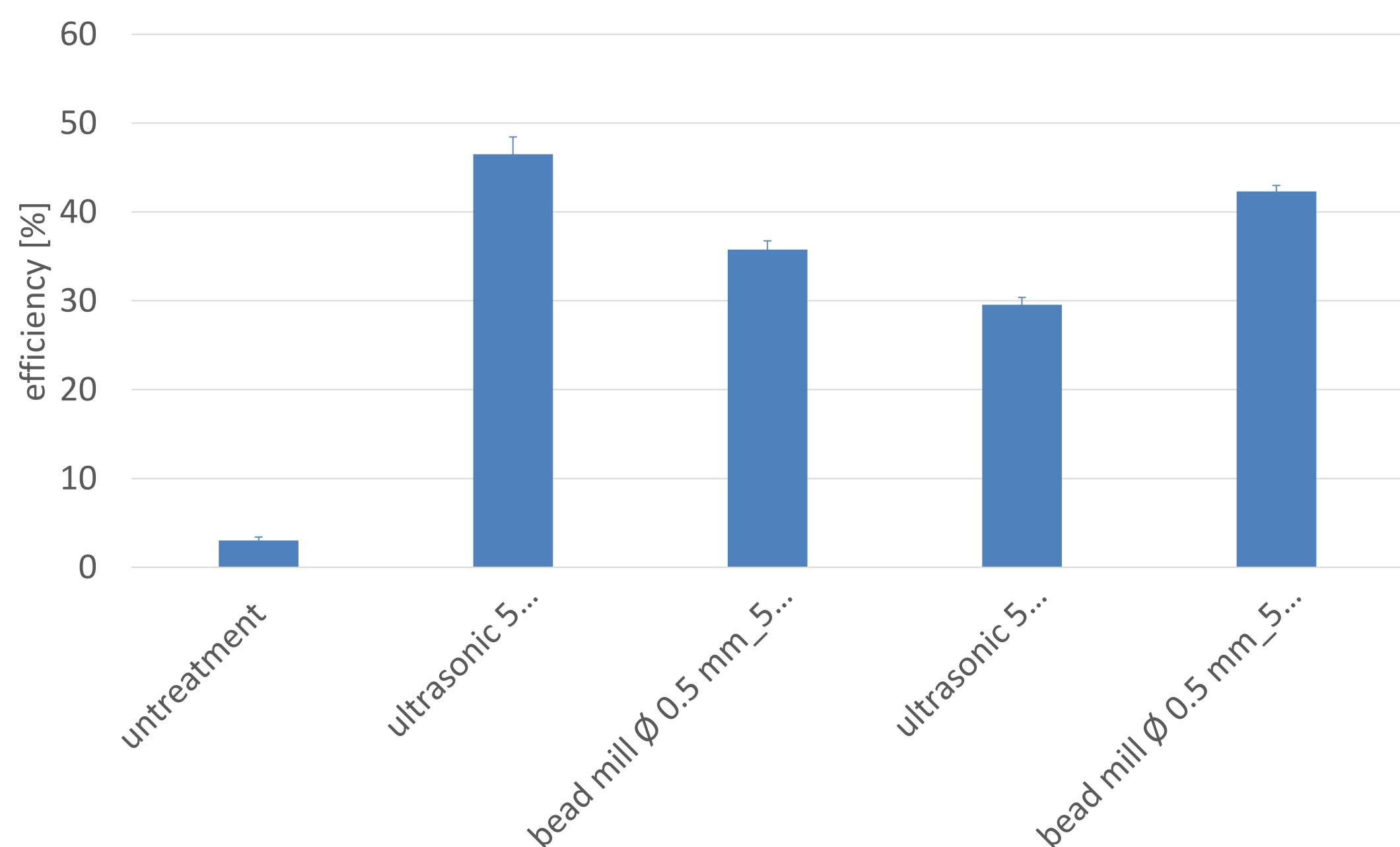


Fig. 3. Efficiency of the enzymatic and physical treatment

## CONCLUSIONS

- The use of cell wall disintegration increases the efficiency of protein extraction in a significant way
- Enzymatic treatment is more efficient in comparison to the physical method.
- The use of beads is more efficient as compared to ultrasonic treatment in physical methods.
- Combined methods of disintegration (both physical and enzymatic) are most efficient.