

## Evaluation of sorghum grain hydrolysates and dried distillers grains with solubles for the production of microbial transglutaminase (Article)

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### Abstract

Sorghum grains can be used as a source of fermentable sugars to reduce the culture media cost for microbial growth of *Streptomyces* and the production of microbial transglutaminase (MTGase). In the production of ethanol from corn, dried distillers grains with solubles (DDGSs) are generated as waste. The aim of this work is to elucidate the biotechnological production of transglutaminase by *Streptomyces mobaraensis* NRRL-3191 grown in a medium containing sorghum grains hydrolysates and DDGS is feasible. The results showed that casein has a great effect on the production of MTGase while DDGS did not show any significant effect on the range of study. The model obtained predicts 0.66 U/mL of MTGase activity using enzymatic hydrolysates of sorghum grains supplemented with yeast extract (2 g/L), DDGS (2 g/L), and casein (19.5 g/L). © 2013 © 2013 Taylor & Francis.

### Author keywords

casein; dried distillers grains with solubles; hydrolysates; sorghum; *Streptomyces mobaraensis*; transglutaminase