

Microbial count of common Algerian fermented wheat: Hamoum and matmora

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In Algeria, naturally fermented wheat is consumed as couscous, appointed Hamoum; indeed this type of wheat is produced after a natural fermentation process in an underground granary called Matmora. After 5 months of natural fermentation of the sample, identification of lactic acid bacteria and yeasts was performed by determining the morphological, physiological and biochemical characteristics of isolates. In this study, 134 lactic acid bacteria isolates were isolated and purified from the fermented wheat "Hamoum". In 42 isolates of lactic acid bacteria, only 5 yeast strains were identified. All bacteria isolated contain different genres of *Lactobacillus* (62%), *Pediococcus* (14%), *Streptococcus* (10%), *Lactococcus* (10%) and *Enterococcus* (2%). The dominant species in our sample is the *Lactobacillus plantarum*. The *Lactobacillus paracasei* shows antibacterial effect more pronounced than the other strains after testing. Five yeast strains were identified in our fermented wheat Hamoum belonging to 3 different genera and species: *Candida ciferrii*, *Cryptococcus laurentii* and *Trichosporon mucoides*. Most of the lactic acid bacteria strains showed amyolytic and efficient proteolytic activity, the same results were reported for the yeast. Most of the lactic acid bacteria strains with amyolytic and proteolytic activity performance, tested after production of these enzymes, and the same results were reported for the yeast.

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Establishment of a world food preservation center LLC®

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