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Isolation and characterization of probiotics from traditional cereal-based porridges in Burkina Faso

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Permented foods are an important part of the diet of West African populations. Among these are fermented porridges with large microorganisms, some of which have probiotic potential. The general objective of the study is the analysis of the quality of traditional porridge, and more specifically the isolation and characterization of microorganisms with probiotic potential. The study focused on 120 porridge producers identified in the city of Ouagadougou. The information collected from the producers mainly concerned the age and experience in the sector, the ethnic group and religion, the quantity of cereals used and the income per sale, the stages of production, the type of porridge, the appreciation of the premises of production and sales. Microbiological analyzes were carried out and allowed to isolate microorganisms such as lactic acid bacteria, yeasts, molds, E. coli and pathogens that will be characterized by the method of molecular biology (PCR). Physicochemical analyzes were used to quantify sugars, proteins, lipids, dry matter, minerals and vitamins. The energy values of the porridges were calculated, and their viscosities measured, which made it possible to establish links. The characterization of microorganisms as probiotic and ferment from locally produced porridges will open a way for the establishment of starter cultures that will allow formulation to optimize production and better control of the fermentative process.