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Opinion

Chickpea as a Fresh and Fermented Alternative to Soy in Plant-Based Beverages

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INTRODUCTION

Although dairy-based foods have traditionally been the primary source of probiotics, a variety of plant-based products are currently being developed to meet the needs of vegetarians, lactose intolerant people, people on low cholesterol diets, and people allergic to milk proteins. This chapter examines non-alcoholic plant-based probiotic beverages in Europe and Africa. It starts with an overview of the regulations that govern the production, safety, and marketing of probiotic beverages in Europe and Africa, and then moves on to a discussion of commercial, traditional, and experimental studies of plant-based non-alcoholic beverages, which are classified as cereals, vegetable, legume, and fruit-based probiotic beverages [1].

Sensory evaluation revealed that the fresh chickpea beverage was just as tasty as the soy beverage. In terms of appearance, the fermented chickpea beverage received lower ratings than the soy beverage. This study found that chickpea can be a promising alternative to soy in the development of a fresh plant-based beverage, but it will need to be optimised before it can be used in a fermented beverage [2,3].

Plant-based beverages (PBB) are becoming increasingly popular as viable substitutes for dairy-based products. There has been no study to date that compares mineral composition and the effect of in vitro digestion on the bioaccessibility of various PBBs. The purpose of this study was to look into the content of essential minerals (calcium (Ca), magnesium (Mg), iron (Fe), and zinc (Zn) in plant-based beverages, as well as the effect of in vitro digestion on antioxidant bioactive compounds (phenolic compounds and antioxidant capacity). In addition, the presence of antinutritional factors such as myo-inositol phosphate fractions was assessed [4].

PBB (rice, cashew nut, almond, peanut, coconut, oat, soy, blended or not with other ingredients, fortified with minerals or naturally present) and milk samples were tested. TPC ranged from 0.2 mg GAEq/L for coconut to 12.4 mg GAEq/L for rice, while DPPH ranged from 3.1 to 306.5 mol TE/L for peanut and oat samples, respectively.

Fresh chickpea beverage demonstrated nutritional and organoleptic potential as a soy milk substitute. The fresh chickpea beverage was lower in protein and fat, but higher in carbohydrates than soymilk. The fermentability of the product was comparable to that of soymilk. Further developments are required to minimize syneresis of the fermented chickpea beverage and evaluate micronutrients and phytochemicals [5].

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