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Development of plant milk tablets from Wild almond and Millet

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Abstract

Plant-based dairy alternatives are widely available on the market. Because it is a product in the healthy food group with high nutritional value. It is an alternative product suitable for consumers who are allergic to cow's milk. The sensory quality was assessed using the Ranking Test method for all 5 formulas using 30 general testers. The formula that consumers accepted the most was selected, Formula 4. The chemical quality of wild almond and millet milk was analyzed. For all 5 formulas, pH, protein, fat and ash were found to be between 6.28-6.47, protein was between 1.11-1.75%, fat was between 0.73-2.07% and ash was between 0.14-0.2%. Making Spray dry by adjusting the amount of solids (Total Soluble Solid) in milk mixed with millet to 30% with maltodextrin before spray drying at temperatures of 160 and 180 degrees Celsius. The resulting powder is pressed into pellets. Weigh the milk pellets. It was used to measure hardness, color and solubility. Pellet weights were 0.23, 0.30 grams. Moisture values were 8.73, 7.50. Aw values were 0.43, 0.44. Hardness values were 14.59, 15.54. Measurement values Color (L* , a* , b*) Milk pellets using inlet temperatures of 160 and 180 degrees Celsius had L* , a* and b* values of 91.27, 0.55, 5.89 and 91.87, 0.55, 5.31, respectively, and The solubility values were 74.63, 76.45%, respectively, at temperatures of 160 and 180 degrees Celsius. The differences were statistically significant at the 95 percent confidence level.

Keywords: Plant-based alternative milk; Wild almonds; Millet; Spray drying; pelletizing process

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