Habtu Shumoy, J Food Process Technol 2018, Volume 9
DOI: 10.4172/2157-7110-C10-104

Traditional fermentation of tef injera: Impact on *in vitro* iron and zinc dialysability

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Tef [Eragrostis tef (Zucc.) Trotter], an ancient cereal mainly produced in Ethiopia is increasingly getting higher acceptance in the global market because it is gluten-free and has high iron content. The aim of this study was to evaluate the in vitro dialysability of Fe and Zn in a backstop fermented gluten-free flatbread known as injera. The traditional fermentation caused up to 49-66% reduction of phytic acid (PA). Molar ratios of PA: Fe and PA: Zn decreased from 14 to 1 and from 63 to 19, respectively, after 120 h of fermentation. The total soluble fractions of Fe and Zn ranged between 11 and 38% and between 11 and 29%, respectively, after 120 h of fermentation. The dialyzable Fe content of the white varieties ranged between 3 and 9% after 120 h fermentation while no effect was observed for the brown varieties. The dialyzable Zn ranged between 2 and 11%, with only a clear effect of fermentation in one white variety. Consumption of tef could be a good source of Fe and Zn, but may not provide the absolute recommended daily Fe and Zn intakes.

Biography

Habtu Shumoy (32) is a 4th year PhD student in Food Science and Nutrition at Gent University, Belgium. He has published 7 research papers in reputable international journals. He had worked for 3 years as a lecturer in food science and postharvest technology department at Mekelle University, Ethiopia before the start of his PhD.

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