

Abstract

Iranian fermented soup (kashk-e-zard) is one of the native fermented foods of the Sistan and Baluchistan province, based on cereal fermentation. In this study, the effect of starter culture (in two levels including Yogurt and Dough), fermentation temperature (in three levels of 25, 30 and 35 ° C) and adding times of dairy product (single and two stage) on quantitative and qualitative properties of produced the kashk-e-zard. prepared Samples were assessed for microbial tests (total, mold, lactic acid bacteria, mesophilic aerobic bacteria, coliforms, Escherichia coli and Staphylococcus aureus count) as well as pH and total titratable acidity (TTA) changes on days 1, 3, 6, 9 and 12th fermentation time. Measurements indicated how these parameters affected pH, TTA, moisture, protein, ash, fat, soluble and insoluble fiber, total fiber, phytic acid, antioxidant property (DPPH), crude protein digestibility, minerals (Ca, Mg, Fe, P, Cu, Zn, Mn, Na and P), phenolic acid compounds (free, bonded and total), flavonoid values (total, free and bonded), water and oil absorption, Essential amino acid, colorimetric and sensory evaluation (appearance, homogeneity, flavor, viscosity and consistency and overall acceptance) contents in Kashk -e Zard samples. The results showed, starter culture and fermentation temperature had significant effect on all examined parameters ($P < 0.05$). Adding times (one and two steps) except for insoluble fiber and TTA, Phenolic acid and Flavonoids had significant effect in all of treatments ($P < 0.05$). Considering the overall acceptance score, protein digestibility as well as the limiting amino acids (lysine and methionine), the method prepared by adding yogurt, two-stage and fermented at 35 ° C is recommended.

Key words: starter, temperature, sense properties, kashke- zard.



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**Optimization of production conditions for the Iranian
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