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# COMPARATIVE STUDY OF YOGURT ENRICHED WITH MORINGA POWDER IN DIFFERENT CONCENTRATIONS

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**Abstract.** Yoghurt is a probiotic food readily consumed among different populations owing to its nutritional and intrinsic benefits.[1, 2] This product serves as an excellent source for fortification with other bioactive compounds making it a suitable vehicle for fortification with *Moringa oleifera* which contains substantial quantity of bioactive compounds.[3] This study evaluates the physicochemical parameters of low-fat yoghurt enriched with *Moringa oleifera* leaf powder during 14 days of storage at 4±1°C. Five samples of low-fat yoghurt were produced and coded samples 1, 2, 3, 4, and 5. Sample 5 served as the control sample, while samples 1, 2, 3, 4 were low-fat yoghurt enriched with moringa leaf powder at 1%, 0.7%, 0.5%, 0.3%, respectively. The pH of the samples at different concentrations was significantly different ($p<0.05$) ranging from 4.438 to 4.340 and decreased in all samples during storage while there was a significant increase in titratable acidity of the samples (0.882% to 1.158%) during storage.

Water holding capacity (WHC) was found to be higher in samples fortified with moringa as compared to the control and syneresis significantly reduced in samples fortified with moringa. There was a significant difference ($p<0.05$) between the viscosity of samples with different moringa concentrations besides, samples fortified with moringa leaf powder were higher in viscosity than the control sample. Yoghurt sample 1 which had the highest concentration of moringa was low in viscosity, WHC and higher in total solids in comparison to the control. Based on the data obtained from this present study, samples with a lesser concentration of moringa are recommended for further studies as they enhance the physicochemical properties of yoghurt.

**References**

1. Francisco,C. R. L., Heleno,S. A., Fernandes,I. P. M., Barreira,J. C. M., Calhelha,R. C., Barros,L., and Barreiro, M. F. (2018). Food Chemistry, **245**, 845–853.
2. Pereira,E. P. R., Faria,J. A. F., Cavalcanti,R. N., Garcia,R. K. A., Silva,R., Esmerino,E. A., Cruz,A. G. (2016). Food Research International, **81**, 149–156.
3. Zhang,T., Jeong,C. H., Cheng,W. N., Bae,H., Seo,H. G., Petriello,M.C., and Han,S. G.(2019). LWT- Food science and technology, **101**, 276–284.