

**ANTIOXIDANT ACTIVITY OF MILK FERMENTED WITH
LACTOBACILLUS PLANTARUM 1 AND *LEUCONOSTOC
MESENEROIDES* ISOLATED FROM NON-DAIRY SOURCES**

Maryam A.S. Abubakr *, Zaiton Hassan, Galia Salem

Faculty of Science and Technology, Universiti Sains Islam Malaysia, Bandar Baru Nilai, 71800 Nilai
Negeri Sembilan, Malaysia

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ABSTRACT

*The aim of this study was to evaluate the antioxidant activity of skim milk hydrolysate fermented with lactobacilli isolated from non-dairy sources as determined by 1, 1-diphenyl-2-picrylhydrazyl (DPPH) assay, ferrous chelating activity (FCA) and reducing power (RP). The values of DPPH, FCA and RP increased with concentration of skim milk hydrolysate (SMH) and varied LAB isolates. The DPPH IC₅₀ values of SMH fermented with *Lb. plantarum*1 was higher (2.92 mg/ml) than *Ln. mesenteroides* and *Lb. plantarum* ATCC8014. While, the IC₅₀ values of SMH fermented with *Lb. plantarum* 1 and *Ln. mesenteroides* were 0.46 and 0.69 mg/ml, respectively greater than *Lb. plantarum* ATCC8014 (IC₅₀ value 0.74 mg/ml) but lower than EDTA. All isolates showed poor reducing power compared to ascorbic acid. Among the LAB isolates *Lb. plantarum* ATCC8014 and *Ln. mesenteroides* seemed to generate peptides with similar reducing power activity. *Lb. plantarum*1 and *Ln. mesenteroides* isolated from non-dairy sources have probiotic properties and antioxidative properties which could benefit consumers.*

Key words: Antioxidant Activity, *Lactobacillus Plantarum* 1, *Leuconostoc Mesenteroides*, Fermented Milk,