**Call for Abstract on International Symposium on Animal Bioscience 2023 (ISAB2023)**

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[Introduction] (11 pt, Justified)

[Materials and Methods] (11 pt, Justified)

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**Structural and antioxidative characterization of exopolysaccharides from *Enterococcus faecium* AK1247**

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**Keywords:** lactic acid bacteria, *Enterococcus faecium*, exopolysaccharide, antioxidant activity

**[Introduction / Objective]** Microbial exopolysaccharides (EPS) are known to have some beneficial effects on human health, skin care and food texture. This study aimed to characterize productivity, elementary structure and antioxidative capacity of EPS produced by *Enterococcus faecium* AK1247. xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx Xxxxxxxxxx xxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.

**[Materials and Methods]** AK1247 had been isolated from Uyghur traditional fermented milk, Kitek. Optimization of EPS production from AK1247 was conducted by one variable at a time and response surface methodology. Next, the EPS was purified using anion exchange chromatography (AEC), and then applied to molecular weight and monosaccharide composition analyses using HPLC. At last, oxygen and hydroxyl radical scavenging capacities of the EPS were assayed with commercial kits. Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx Xxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.

**[Results / Results and Discussion]** The maximum yield of the EPS was obtained in modified MRS broth with increase of yeast extract, meat extract and glucose. In AEC, one neutral and two acidic EPS peaks were detected and purified. These had main sizes of 1.96-3.98 x 105 Da, and consisted of mannose, glucose and galactose with different ratio. Furthermore, the crude EPS and one of the purified acidic EPS showed strong antioxidant activity. Xxxxxxxxxxxxxxxxx xxxxxxxxxx xxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.

**[References]**

* Arakawa K, Yoshida S, Aikawa H, Hano C, Bolormaa T, Burenjargal S, Miyamoto T. Production of a bacteriocin-like inhibitory substance by *Leuconostoc mesenteroides* subsp *dextranicum* 213M0 isolated from Mongolian fermented mare milk, airag. *Anim. Sci. J.* 87, 449-456 (2016).