Oggt: Traditional dried fermented buttermilk of Saudi Arabia; microbiological and physicochemical characteristics

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Oggt is dried fermented buttermilk manufactured from goat, sheep, camel or cow milk. It is a popular Saudi native dairy food produced by desert dwellers. Safety and nutritional value assessments were the objectives of the current work with the aim to enhance the overall characteristics and functionality of oggt. Brown (B) and white (W) coloured oggt were collected from local markets to determine mesophilic bacteria (1), coliform (2), mold & yeast (3), enterococci (4), lactobacilli (5), and Listeria (6) counts. Total solids (TS), fat (F), acidity (A), pH, lactose (L), protein (P), and solubility index (SI), free fatty and amino acids were monitored. Average counts for (B) samples ranged from 23x10^{2}-51x10^{4}, 0-20x10^{1}, 0-7x10^{1}, 0-5x10^{1}, 0-3x10^{1} and 0 CFU/ml for items 1, 2, 3, 4, 5, and 6, respectively. However, (W) revealed average counts ranged 1x10^{4}-49x10^{4}, 0-46x10^{1}, 0-6x10^{1}, 0-7x10^{1}, 0-11x10^{1}, and 0 CFU/ml for items 1, 2, 3, 4, 5, and 6, respectively. Physicochemical analysis averages of (B) samples were 95.72-97.64%, 0.6-1.2%, 0.72-0.78%, 4.43-4.54, 10.30-11.20%, 36.90-40.72%, and 14 ml for TS, F, A, pH, L, P, and SI respectively. Similar items for (W) samples were 95.12-97.18%, 0.18-1.2%, 0.52-0.62%, 4.55-4.70, 11.0-11.80%, 36.86-38.71%, and 9.0 ml, respectively. Fatty acids methyl esters (FAME) for (B) according to its retention time (RT) and relative area (RA%) were C10:0, C12:0, C14:0, C14:1, C15:0, C16:0, C18:0, C18:1, C18:2, C18:3 and C18:2,t10,c12. FAME for (W) according to its retention time (RT) and relative area (RA%) were, C9:0, C10:0, C12, C14:0, C14:1, C15:0, C16:0, C18:0, C18:1 and C18:2. Both oggt types contain 17 similar amino acids. However, its concentration as mg/100 g sample were significantly higher in type (W) compared to type (B).