Monitoring the Production Process of Friendly Bacteria Using Hplc

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***Abstract*- With the development of microbiological and nutritional sciences in the late 19th century came the technology necessary to produce cultured dairy products on an industrial or commercial basis. However ten Lactic acid bacterial (LAB) strains were isolated from milk and its products. They were identified as *Lactobacillus plantarum, Lactobacillus fermentum, Lactococcus lactis subspecie cremoris, Lactobacillus acidophilus*, *Lactobacillus brevis* and *Streptococcus thermophillus*. *Lactobacillus plantarum* produces the highest quantity of lactic acid at 72 hours of incubation (2.89g/l) while *Lactobacillus fermentum* produce the lowest (1.11g/l). *Lactococcus lactis subspecies cremoris had* the highest quantity of diacetyl (1.72g/l) while *Streptococcus thermophillus* and *Lactobacillillus fermentum* had the lowest quantity of 0.52g/l and 0.47g/l respectively. At 72 hours of incubation *Lactobacillus acidophilus* produced the highest quantity of hydrogen peroxide (1.91g/l) while *Streptococcus thermophillus* produced the lowest. The quantity of hydrogen peroxide increased up to 48hours before declination sets in. Results of the high performance liquid chromatography (HPLC) used to quantify organic acid revealed that, *Lactobacillus plantarum* produced the highest yield of Lactic acid (280.16 mg/ml) closely followed by *Lactobacillus fermentum* (215.9 mg/ml). Whereas the lowest yield (48.253mg/ml) was produced by *Lactococcus lactis* subsp *cremoris* with the retention time of 3.231. Thus considering the easiness and conciseness of sample preparation, high performance liquid chromatography could be considered as an efficient, accurate and rapid method of organic acid determination in fermented products.**

***Key word*: Lactic acid bacteria, High Performance liquid chromatography, Mam ragosa sharpe, Analytical profile index.**

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