

**THE COMPARISON BETWEEN THE SURVIVAL OF
PROBIOTICS STRAIN IN CLASSIC AND LESS SUGAR
CULTURED MILK DRINK TOWARDS
LOW PH AND BILE**

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ABSTRACT

Probiotics is part of the terms that is being thrown around these days thanks to the renowned reputation that it obtains from the list of health benefits that it is capable to confer to the human host. This probiotics that everyone is talking about comes in many forms of food and one of the most common forms of food that probiotics may come in would be in cultured milk drink. In this study, the cultured milk drinks that were put into test are YC and YLS which contained the strain of bacteria called *Lactobacillus casei* strain Shirota. Throughout the study, the product samples were tested for its viable cell count which turns out very satisfying which were 8.90 log units for YC and 8.84 log units for YLS. Other than that, the products were also put into acid tolerance test at pH 3.0, 6.0 and 7.2 (control). YC and YLS yielded satisfying results which were all passed the minimal cell count set by WHO /FAO which is 6 log units. And the last test for the study was the bile tolerance test where the samples were incubated in MRS broth with different bile concentration (0%, 0.3%, 1.0% and 2.0%) for 24 hours. The result obtained at the end of 24 hours incubation showed that when bile concentration increased, the cell count would decrease directly proportional. Nonetheless, the cell count after 24 hour for both the products were still more than the minimal standard which is within the range of 7.794 log units to 10.415 log units. At the end of the study, YC and YLS can be concluded as a good source of probiotics and value for money to the consumers.