

Potential Cariostatic Effects of Yakult[®]

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Target Audience: Dentists, Dental students/auxiliaries, food companies/researchers

Objectives: To characterize the effect of short-term Yakult[®] consumption on plaque and pH recovery after a sucrose challenge.

Materials and Methodology: 12 volunteers were selected with their caries risk assessed using Cariogram[®]. Baseline readings for Streptococcus Mutans (SM) count, Lactobacilli (LB) counts and salivary buffer capacity were taken using Dentocult SM[®], Dentobuff[®] Strips, and Dentocult LB[®] (Orion Diagnostica, Finland) test kits, respectively. The plaque pH recovery after sucrose rinse (“Stephan curve”) was evaluated at the interproximal sites between the upper canines and premolars with a palladium-touch pH microelectrode (Orion Research, Inc., Cambridge, MA). Subjects rinsed daily one bottle of 100ml Yakult[®] for two weeks before they returned for follow-up measurements. The difference between baseline and follow-up measurements of the aforementioned outcome variables was analysed using appropriate parametric and non-parametric statistical tests.

Results: The 2-week Yakult[®] consumption of subjects with moderate caries risk has an increased “lowest pH” ($p=0.05$), decreased “area under curve” ($p=0.038$) and “recovery time” ($p=0.293$) of the Stephan curve. There is no significant change of SM count and LB count.

Conclusion: A short-term Yakult[®] consumption may be promising in caries prevention and effective in modifying oral biofilms.

Estimated Cost of the Project (tangible and intangible costs): Approximately S\$1000.

How Project has been evaluated: The project was evaluated by the supervisor (50%). It was also evaluated by a panel of judges (50%) at the Faculty Research Day held in 2007. An oral presentation of the project was given at the Faculty Research Day and the team was awarded 1st runner-up at the event.