

# Comparison of 4 Salivary Test Kits in Detecting Mutans Streptococci

[K. OHMORI](#), C. HARADA, A. TAKAO, and Y. MOMOI, Tsurumi University, Yokohama, Japan

**Objectives:** The purpose of this study was to compare the performance of 4 commercial salivary test kits, Dentocult SM (Orion, Finland), CRT (Vivadent, Liechtenstein), CARIO CHECK SM (Sunstar, Japan) and SALIVA-CHECK SM (GC, Japan) in detecting mutans streptococci. Their handling property was also evaluated. **Methods:** Stimulated saliva was collected from 55 students (age 24-28, male 30, female 25). Saliva was placed on the proprietary agar slide of each kit except SALIVA-CHECK and incubated for 48 hours. After cultivation, the colony density of each slide was evaluated comparing its density with that presented in the model chart provided by each kit. Same saliva was applied on the test sheet of SALIVA-CHECK where *S. mutans* are detected by a monoclonal antibody. In addition, 100µL saliva diluted using 10-fold dilution method was also placed on MSB agar plate and cultivated in an anaerobic jar. The number of colonies on MSB was counted, by which CFU was calculated. Comparisons were made between each kit and MSB result using correlation coefficient. The handling property of 4 materials was evaluated by 4 operators using questionnaire. **Results:** Correlation (r) found between each kit and MSB result ranged from 0.225 to 0.412. In the comparisons of test kits, higher correlation was found between CARIO CHECK and CRT (r=0.749), Dentocult and CRT (0.516), and Dentocult and CARIO CHECK (0.489). In the saliva samples of high colony density, there was a good agreement in CARIO CHECK, CRT and SALIVA-CHECK. Regarding the handling property, CARIO CHECK was highly evaluated than other kits. **Conclusions:** None of the salivary test kits evaluated in this study was capable of detecting the accurate number of cariogenic bacteria or *S. mutans*, however, these kits might be sensitive enough when used in the screening test and for educational purpose to promote the patient oral health.

[Seq #358 - Cariogenic Bacteria, Biofilm/Plaque](#)

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