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Effect of Cetyl Pyridinium Chloride Mouthrinse on Plaque Foundation

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Studies have recently reported on antiplaque and antigingivitis efficacy of alcohol free cetylpyridinium chloride mouthrinses (Crest® Pro Health™ (CPH) (American Journal of Dentistry Vol 18, 2005). Digital imaging techniques provide a sensitive tool for assessing efficacy technologies for dental plaque (Sagel et al., Monographs in Oral Science 17; 2000). Last year we reported on the stability of Digital Plaque Imaging Analysis (DPIA) to allow intervention based studies of antimicrobial and antiplaque activity. **Objective:** This study examined the clinical antiplaque efficacy of CPH mouthrinse added to a standard regimen of toothbrushing with a fluoridated dentifrice examined in an intervention based DPIA protocol. **Methods:** 8 volunteers carried out a rigorous oral hygiene and provided with commercial tubes of Crest™ Cavity Protection (CCP) dentifrice for a run in period of 2-3 weeks with instructions for *bid* brushing morning and evening. Subjects remained on CCP dentifrice and then reported to the imaging laboratory for three separate days for plaque evaluations pre brush a.m.; post brush a.m. and p.m. regrowth respectively (mid afternoon) using standardized UV imaging techniques. Subjects were subsequently provided with Crest Pro-Health mouthrinse with directions to use *bid* after brushing periods as directed on the package – and like plaque evaluations were developed as in the CCP phase. Plaque is reported as % tooth coverage (s = significantly different $p < 0.05$). **Results:** Pre brushing: CCP alone = 15.8(±5.9); CCP + CPH rinse = 6.8(±2.8); Post brushing CCP alone = 7.1(±3.3); CCP + CPH = 3.5(±1.7)(s); pm regrowth: CCP alone = 13.1(±6.1)(s); CCP + CPH = 5.8(±1.6)(s). **Conclusion: Crest Pro-Health mouthrinse provided significant efficacy in reduction of plaque formation as examined in a DPIA intervention protocol – providing from 51-57 % relative inhibition at various evaluation points. Efficacy was established with use following dentifrice, was retained during the day and included improvements in brushing efficiency.**

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Antiplaque Efficacy of a Triclosan Pyrophosphate Dentifrice

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Digital imaging techniques provide a unique tool for assessing efficacy of hygiene and antiseptic technologies for dental plaque (Sagel et al., Monographs in Oral Science 17; 2000). Triclosan containing dentifrices are reported to have significant antiplaque and antigingivitis efficacy in numerous published reports. **Objectives:** This cross-over study examined the clinical antiplaque efficacy of a triclosan pyrophosphate dentifrice as compared with a cavity protection dentifrice under standardized conditions of oral hygiene as assessed by the Digital Plaque Imaging Analysis (DPIA) technique. **Methods:** 14 volunteers carried out a rigorous oral hygiene at study start and were randomized and provided with commercial tubes of Crest™ Cavity Protection dentifrice or test dentifrice containing triclosan antibacterial and pyrophosphate CPSAB (Crest 'Many in One' – marketed in China). Subjects used dentifrices for 2 weeks time, following which they carried out a washout with continued use of CCP dentifrice and then were crossed – over to alternate dentifrice. On 6 grading days in the morning subjects reported to the image clinic for fluorescein disclosure and UV imaging – at morning prior to hygiene (pre brush a.m.) and post brushing with assigned dentifrice (a.m. post brush). Plaque is reported as % tooth coverage. **Results:** Pre brushing: CCP = 23.2; CMIO = 20.4 (12.1 % relative reduction $p < 0.05$); Post brushing CCP = 12.3; CMIO = 10.9 (11.1 % relative reduction $p < 0.05$). **Conclusion: Triclosan pyrophosphate dentifrice provided significant reductions in plaque regrowth consistent with literature observations for this antibacterial ingredient class. The pyrophosphate formula also provided significant benefits in improving brushing efficiency measured as post brush plaque residual. Toothbrushing itself was approximately 50 % effective in plaque removal. The DPIA technique was shown effective in assessing antimicrobial and antiplaque effects of triclosan containing dentifrice.**