

mouthrinses, prebrushing rinses, and dentifrices.

Mouthrinses are designed to provide cosmetic and/or therapeutic benefits. The major desirable characteristics of sodium lauryl sulfate are its affinity for enamel surfaces and its ability to reduce surface tension, which theoretically should interfere with dental plaque formation and provide a clean tooth feeling. Prebrushing rinses rely on these characteristics for additional emulsifying activity, thereby

maximizing dental plaque removal that is largely the result of bristle action. Finally, because of its properties as a surfactant, sodium lauryl sulfate is frequently used in toothpastes as a foaming agent. Its superior cleansing properties compared to soap as a toothpaste ingredient were reported as early as 1937 (Ref. 358).

In general, human mouthrinse studies have shown a moderate reduction in plaque formation in the test groups using sodium lauryl sulfate in various

formulations, as compared to a control group using no sodium lauryl sulfate. No significant difference was observed between the test and control groups in gingivitis studies.

Typical plaque and gingivitis scores from two representative studies are shown below. The scores at the end of these studies represent plaque and gingivitis score changes from a zero baseline, following an initial prophylaxis:

TABLE 12.—PLAQUE AND GINGIVITIS SCORES FROM THE BARONS STUDY (REF. 359)

Study	Group (n)	Baseline	End
Plaque scores			
Test Product	Test (13)	0	2.86
(0.3% SLS)	Water (13)	0	5.13
Net plaque reduction: 44%			
Gingivitis scores			
	Test (13)	0	0.88
	Water (13)	0	0.90
Net gingivitis reduction: 2% (not significant)			

TABLE 13.—PLAQUE AND GINGIVITIS SCORES FROM THE PRETARA-SPANEDDA STUDY (REF. 348)

Study	Group (n)	Baseline	End
Plaque scores			
Test Product	Test (7)	0	2.20
(0.3% SLS)	0.1% chlorhexidine (9)	0	2.43
	Water (9)	0	4.78
Net plaque reduction: 54%			
Gingivitis scores			
	Test (7)	0	0.93
	0.1% chlorhexidine (9)	0	1.03
	Water (9)	0	1.17
Net gingivitis reduction: 21% (not significant)			

The statistically significant reductions in plaque scores in these studies, as compared to a water placebo, were not accompanied by a statistically significant reduction in gingivitis scores.

No convincing evidence exists to support the effectiveness of prebrushing

rinses, because the net beneficial effect of the rinses as compared to placebo is clinically insignificant. One of the products tested in the Truelove study (Ref. 349) (see Table 14 of this document) contains a number of ingredients other than sodium lauryl sulfate (Ref. 360). However, sodium

lauryl sulfate is listed as the only active component. The results of this study indicated that prebrushing rinsing with two rinses that contain sodium lauryl sulfate as the active ingredient is no more effective than rinsing with a suitable sodium lauryl sulfate-free placebo.