

Table 1.-- Sugar Alcohols and Plaque pH, Acid Production

Study	Study Design	Subjects	Methods	Results	Comments												
Jensen, unpublished (Ref. 47)	In vivo study of interproximal plaque pH using HSW compared to SOR and S	4 adults, ages 24 to 38	A removable telemetric appliance was constructed which contained a glass pH microelectrode. The appliance was placed interproximally and placed in the mouth approximately 10 min prior to first test. Resting pH measured. Ss rinsed with test substance for 30 sec. Plaque pH monitored for 30 min at which time Ss rinsed with distilled water. Paraffin was chewed for 5 min to restore resting pH. 5 different test substances were used and were tested; their compositions were not identified. 50% SOR and S solutions were used as control rinses. Student's t-test for paired samples was used to compare test solutions with control solutions.	<table><thead><tr><th>Test Substance</th><th>Minimum pH Values</th></tr></thead><tbody><tr><td>1</td><td>6.39</td></tr><tr><td>2</td><td>6.38</td></tr><tr><td>3</td><td>6.53</td></tr><tr><td>4</td><td>6.37</td></tr><tr><td>5</td><td>6.42</td></tr></tbody></table> t-tests showed the experimental solutions were statistically significantly different (p<0.005) from the 3 control minimum pH values. No significant differences between the SOR control and test substances.	Test Substance	Minimum pH Values	1	6.39	2	6.38	3	6.53	4	6.37	5	6.42	Test substances were not identified. HSW solutions were slowly fermented and produced little acid. SOR was mildly acidogenic.
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Maki et al., 1983 (Ref. 48)	In vitro study to examine acid production from isomaltulose in dental plaque suspensions	12 Ss - no description	Dental plaque was collected and prepared for acid production measurement. Endogenous acid production was first measured followed by the addition of a 1% sugar soln. pH was kept constant by the addition of buffer. Acid production activity was expressed as $\Delta\text{pH} \cdot \text{H}^+$ (equivalent weight) of acid per mg protein of plaque per min. Solutions used: isomaltulose, SOR, X.	<p>Series 1 Mean acid (a±2) production activities:</p> <table><tbody><tr><td>S</td><td>= 20.6 (100%)</td></tr><tr><td>isomaltulose</td><td>= 9.6 (4.7%)</td></tr><tr><td>SOR</td><td>= 3.3 (1.1%)</td></tr><tr><td>X</td><td>= 0</td></tr></tbody></table>	S	= 20.6 (100%)	isomaltulose	= 9.6 (4.7%)	SOR	= 3.3 (1.1%)	X	= 0	There was little acid production from SOR and none from X in this study.				
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