

PENURUNAN SENSIVITAS RASA MANIS AKIBAT PEMAKAIAN PASTA GIGI BERDETERJEN (SODIUM LAURYL SULPHATE 5%)

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**ABSTRACT**

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*Sodium Lauryl Sulphate (SLS) is an anionic surfactant that is used in household products such as toothpastes, shampoos, shaving foams and bubble baths for its thickening effect and its ability to create a lather. SLS is a surfactant, a sudser that is added to toothpaste. It creates the froth that toothpaste becomes after you begin brushing by lowering the surface tension of the saliva in your mouth and allowing bubbles to form. But the presense of this item sometimes make food taste worst after using the toothpaste. Scientists believe that SLS denaturates polypeptides of protein molecules. This shows that after using toothpaste contains Sodium Lauryl Sulphate 5%, the proteins structure of taste buds and saliva are change causing the different of taste sensitivity which is probably the best explanation for why orange juice and toothpaste taste gross together. The aim of this research is to proof the hypothesis that by using toothpaste containing SLS will effect the sweet taste sensation. Subjects will be divided into two groups, the SLS group and non SLS group. Firstly, subject will be tested their sweet taste thresholds by dropping sucrose at the anterior of the tongue from 0,01 M until subject sense the sweet sensation. Then, subject is ask to brush their teeth using the toothpaste contains SLS or non SLS according to group. After brushing teeth, subject will be tested same as before brushing teeth to see any difference change of taste thresholds. The result from this research then being analyzed using Wilcoxon Signed Ranks Test to show any significant results. The SLS group shows a significant differences with  $p = 0,011$  ( $p < 0,05$ ) while for the non SLS group; there were no significant differences with  $p = 0,317$  ( $p > 0,05$ ). From this results, it is proof that Sodium Lauryl Sulphate 5% change the sweet taste sensitivity. As a conclusion, Sodium Lauryl Sulfate 5% appear to be safe in formulations designed for discontinuous, brief use followed by thorough rinsing from the surface of the skin or mucose. In products intended for prolonged contact with skin or mucose, concentrations should not exceed 1 percent.*

**Keywords:** Sodium Lauryl Sulphate, creates the froth, denaturates polypeptides of protein molecules.