**Validation of the reliability of the optical fluorescence method for the diagnosis of dental biofilm in young permanent molars: A randomized controlled clinical trial.**

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**Abstract**

Dental Caries disease is controlled through biofilm control, which balances demineralization and remineralization reactions, considering individual factors to prevent recurrence. However, there are still few studies that make it possible to systematize a new protocol for the evaluation of dental biofilm through the use of light for the implantation of new biofilm control protocols through the use of optical fluorescence diagnosis. Fluorescence appears clearly in the plaque in red tones, showing the presence of microorganisms in regions where there is biofilm accumulation. **Objectives:** To evaluate the applicability and effectiveness of the diagnosis of oral biofilm with the optical fluorescence technique using the EVINCE (LED with emission centered at 400 ± 10nm - MMOptics, Brazil) equipment and to create a clinical evaluation protocol for the presence of biofilm using the same equipment. Furthermore, we intend to compare the efficacy of the optical fluorescence diagnostic method with the traditional method (Fuchsin-based dye biofilm) and to observe whether EVINCE alone would be sufficient for the evaluation of dental biofilm in young people with mixed dentition without use of traditional dyes. **Methods:** Children (6 to 12 years) will be evaluated by 3 different professionals, starting the evaluation where the 1st evaluator will note the IHOS observing only with EVINCE. In the second stage, a 2nd evaluator will perform the traditional disclosure technique with Fucsina, later noting the IHOS, and finally a 3rd evaluator who will observe with EVINCE the teeth previously stained in stage 2. We expect to find advantgens with Evince.

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**Biography:**

Master's student in "Biofôtonia applied to health sciences" at Nove De Julho University. Graduated in Dentistry in 2001, from the University of Mogi Das Cruzes. Specialist in Public Health, at São Leopoldo Mandic College, Specialist in preceptorship at Hospital Sírio Libanês. She has been working in basic public health for 17 years. She acts nowadays as a dental surgeon in the city of Mogi das Cruzes. Her goal is to bring new ideas and technologies to the area of ​​dentistry, focused mainly on public health.