**Antimicrobial effect of methylene blue formulations with oxygen carrier at different pHs: pilot study**

Jessica Klöckner Knorst DDSa jessicaknorst1@gmail.com, Gabriela Scarton Barriquello DDSb gbarriquello@gmail.com, Marcos Antonio Villettic mvilletti@hotmail.com, Roberto Christ Vianna Santosd robertochrist@gmail.com, Karla Zanini Kantorskie\* DDS MScD PhDd\* kzkantorski@hotmail.com

a Graduate Program in Oral Science, Pediatric Dentistry Unit, School of Dentistry, Federal University of Santa Maria, Santa Maria, Rio Grande do Sul State, Brazil.

Address: Marechal Floriano Peixoto Street 1184, 97015-372, Santa Maria/RS, Brazil.

b Graduate Program in Oral Science, School of Dentistry, Federal University of Santa Maria, Santa Maria, Rio Grande do Sul State, Brazil.

Address: Marechal Floriano Peixoto Street 1184, 97015-372, Santa Maria/RS, Brazil.

c Graduate Program in Chemistry, Chemical-Physical Unit, Federal University of Santa Maria, Santa Maria, Rio Grande do Sul State, Brazil.

Address: Roraima Avenue 1000, 97105-900, Santa Maria/RS, Brazil.

d Graduate Program in Pharmaceuticals Science, Federal University of Santa Maria, Santa Maria, Rio Grande do Sul State, Brazil.

Adress: Roraima Avenue 1000, 97105-900, Santa Maria/RS, Brazil.

e\* Graduate Program in Oral Science, Periodontology Unit, Stomatology Department, School of Dentistry, Federal University of Santa Maria, Santa Maria, Rio Grande do Sul State, Brazil.

Address: Marechal Floriano Peixoto Street 1184, 97015-372, Santa Maria/RS, Brazil.

\*Corresponding author at: Marechal Floriano Peixoto Street 1184, 97015-372, Santa Maria/RS, Brazil. Tel.: +55.55.3220.9284.

ORCID:

Jessica Klöckner Knorst: 0000-0001-7792-8032

Gabriela Scarton Barriquello: -

Marcos Antonio Villetti: 0000-0002-5138-7343

Roberto Christ Vianna Santos: 0000-0002-0533-3483

Karla Zanini Kantorski: 0000-0002-6219-0255

Potential reviewers:

1. Juliana Campos Junqueira, email: juliana@ict.unesp.br, Av Engenheiro Francisco José Longo, 777, Jardim São Dimas, Cep 12245-000, tel: 12-39479022.
2. Luciane Dias de Oliveira, email: luciane@ict.unesp.br, Av Engenheiro Francisco José Longo, 777, Jardim São Dimas, Cep 12245-000, tel: 12-39479022.

The role and contribution of each author: I confirm that each author has participated sufficiently in the work represented by the article to take public responsibility for the content. Participation has included:

a Substantial contributions to the analysis or interpretation of data; revising it critically for important intellectual content and final approval of the version to be published.

b Contributions to the analysis or interpretation of data, revising it critically for important intellectual content.

c Contributions to the conception and design of the work or the acquisition, analysis or interpretation of data.

d Contributions to the conception and design of the work or the acquisition, analysis or interpretation of data.

e Substantial contributions to the conception and design of the work or the acquisition, analysis or interpretation of data, revising it critically for important intellectual content and final approval of the version to be published.