INPLASY PROTOCOL

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None declared.

Influence of modeling resins on the color stability of composite resins: A systematic review

Chagas, R[1]; Oliveira, AP[2]; Castro, D[3]; Reis, A[4]; Fronza, B[5].

Review question / Objective: **Can the application of modeling resins interfere with the color stability of composite resins?**
Eligibility criteria: **Inclusion Criteria: Experimental laboratory studies that evaluated the color stability of composite resins with and without the application of modeling resins. No restrictions were defined regarding the aging challenge methods used by each work, which evaluated the optical properties of composite resins. EXCLUSION CRITERIA: Case reports, case series, books, reports, letters to the editor, conference abstracts, editorials, literature reviews. Experimental studies in which data could not be collected. Experimental studies that did not evaluate the influence of modeling resins on the optical properties of composite resins after aging challenges. Studies that have not been published in English.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 December 2021 and was last updated on 15 December 2021 (registration number INPLASY2021120068).

INTRODUCTION

Review question / Objective: **Can the application of modeling resins interfere with the color stability of composite resins?**

Rationale: **Considering the clinical applicability of the use of modeling resins on the surface of different types of composite resins, a clearer understanding of the clinical performance of these materials is needed.**

Condition being studied: **Conduct a survey of available scientific evidence that assesses the influence of the application of modeling resins in relation to the color stability of composite resins.**

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METHODS

Search strategy: "composite* resin" OR "restorative materials" OR "resin composite*" OR "resin restorations" OR "composite restoration*" OR "dental composite*" AND "wetting resin" OR "composite wetting" OR "surface seal*" OR "surface polish*" OR "surface penetrating seal*" OR "liquid polish*" OR "liquid glaze" OR "modeling resin" OR "modeling agent" AND "color stability" OR "color change" Fortify OR BisCover OR Protect-it OR "Bisco Glaze" OR "Embrace WetBond Seal-n-Shine" OR Permaseal OR Durafinish OR Optiguard OR "Pro Seal" OR OpalSeal.

Participant or population: Composite resins manipulated by the conventional incremental technique.

Intervention: Application of modeling resins.

Comparator: Color stability of composite resins without the application of modeling resins.

Study designs to be included: Observational studies.

Eligibility criteria: Inclusion Criteria: Experimental laboratory studies that evaluated the color stability of composite resins with and without the application of modeling resins. No restrictions were defined regarding the aging challenge methods used by each work, which evaluated the optical properties of composite resins. EXCLUSION CRITERIA: Case reports, case series, books, reports, letters to the editor, conference abstracts, editorials, literature reviews. Experimental studies in which data could not be collected. Experimental studies that did not evaluate the influence of modeling resins on the optical properties of composite resins after aging challenges. Studies that have not been published in English.

Information sources: MEDLINE / PubMed, Web of Science, Scopus, Google Scholar e Open Grey.

Main outcome(s): Influence of the application of modeling resins in relation to the color stability of composite resins, after tests that simulate the conditions of the restoration in the oral cavity, such as thermal, hydrolytic and mechanical challenges.

Data management: Software Mendeley Reference Manager.

Quality assessment / Risk of bias analysis: Randomization of composite resins to experimental groups, presence of control group, sample size calculation, samples with similar dimensions, material applied following manufacturer's instructions, test procedures performed by a single operator, sample examined by a blind operator, statistical analysis proper.

Strategy of data synthesis: Type of composite resin, type of modeling resin, evaluated optical properties, type of test equipment, aging methodology.

Subgroup analysis: Software Revman (Review Manager 5.4.1) produced in collaboration with Cochrane.

Sensitivity analysis: Software Revman (Review Manager 5.4.1) produced in collaboration with Cochrane.

Language: Only studies that were published in the English language will be included.

Country(ies) involved: Brazil.

Keywords: modeling resins, wetting resins, modeling agents, surface sealants, composite resins, restorative materials, color stability, color change.

Contributions of each author:

Author 1 - Rafael Chagas - Author 1 is the manuscript's first reviewer and writer.
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Author 5 - Bruna Fronza - Author 5 is the expert on the topic of systematic review.

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