

Evaluation of mutagenicity of three eugenol-containing materials

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20435451&lokasi=lokal>

Abstrak

Eugenol containing materials are still widely used, both by the lay people or by the dentist. Professionally it is used to relieve dental pain by placing it in the cavity, or as a mixture for temporary filling, temporary cementation, and root canal sealer. Eugenol, however, is also known to be toxic to the tissue, and aflatoxin, a substance known to be mutagenic, has been found in material labeled as clove oil. The purpose of this study was to investigate the safety of these materials, in particular the mutagenicity. The materials tested were imported eugenol material (95.8% eugenol) and local eugenol material (99.5%), both used by dentists, and clove-oil material (6.8% eugenol) used by the lay people. These materials were assayed in Ames test using *Salmonella typhimurium* TA 1535 and TA 1537 strain without S-9 mixture. It was shown that all revertants were below the negative control of the test. It was concluded that neither the eugenol used by the dentist nor the clove oil used for suppressing the dental pain by the lay people showed mutagenicity to *Salmonella typhimurium* TA 1535 and TA 1537 strain.