

## Application of natural substances with bioprotective action in oral medicine

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**Abstract.** In oral medicine, the antioxidant compounds and those obtained from different plants act by blocking the oxidative degradation process which includes the free radicals. Thermal stabilities of solid extracts of wild thyme (*Thymus Serpillum*), savory (*Thymus Vulgaris*), bay laurel (*Laurus Nobilis*), pimento (*Pimento Officinalis*) and caraway (*Carum Carvi*) added in paraffin matrix have been studied using chemiluminescence. Then, pimento solid extract has been added as antioxidant in the acrylic monomer in order to rehabilitate the oral functions by coating the acrylic prosthesis. Pimento (*Pimento Officinalis*) has been selected due to its oil content successfully used in dental caries treatment and to its pleasant taste and smell. The immediate local reactions after coating have determined hyperemia at the fibro-mucous level and itching in the case of a very small number of patients, while in the case of hyperemia at the buccal mucous level and burning sensation these symptoms were not determined.

The incontestable advantages of the production of bioprotective dental prosthesis materials lead to the improvement in dental and general health problems by the release of active principles contained in acrylic resins. The addition of 1.5% antioxidant in the liquid acrylic monomer do not modify the polymer quality; the method is simple, and the inflammatory and allergic reactions of oral mucous are reduced or even absent.

*Keywords:* polymethacrylate, thermal stability, natural antioxidants, chemiluminescence

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