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[\[PDF \(268K\)\]](#) [\[References\]](#)**Surface Change of Dental Amalgam after Treatment with 10% Carbamide Peroxide**[Hyung-Joon AHN<sup>1\)</sup>](#), [Keun-Bae SONG<sup>2\)</sup>](#), [Young-Eun LEE<sup>2\)</sup>](#), [Jung-Tae LEE<sup>2\)</sup>](#), [Sung-Am CHO<sup>3\)</sup>](#) and [Kyo-Han KIM<sup>4\)</sup>](#)

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**Abstract:**

The aim of this study was to explore the effect of bleaching agents on the release of metal ions and change in physical and chemical characteristics of amalgams. Amalgam surface changes resulting from bleaching on amalgam were assessed with inductively coupled plasma atomic emission spectrophotometer, an automatic mercury analyzer, a colorimeter, and atomic force microscopy. Analysis of the release of metal ions indicated that the bleaching agent caused more copper, tin, and mercury ions to be released into the immersion solution. Furthermore, metal ion release increased progressively as immersion time was increased from 42 to 84 hours. Morphological examination revealed no significant effects of the 10% carbamide peroxide bleaching agent on the surface morphology of any of the amalgams tested. These results demonstrated that bleaching using 10% carbamide peroxide did not adversely affect the two types of amalgam tested. In other words, a 10% carbamide peroxide bleaching agent can be safely used on a short-term basis in dentist-monitored bleaching of the dental amalgam.

**Key words:**[Carbamide peroxide](#), [Dental amalgam](#), [Surface change](#)

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