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## The proper use of the dentifrices avoiding the paraben toxicity

Hyo-Kwang Ahn, Ha-Jeong Kwon and Yong-Duk Park  
Kyung Hee University, South Korea

This study analyzed methylparaben in saliva after using paraben-containing dentifrices, and predicted the intake amount from the dentifrices. Twelve of health volunteers used 500 mg of dentifrices for tooth brushing, and expectorate the toothpaste lather, and then the residue was washed with 20 mL of water for 1-10 times. The rinsed water samples were filtration and HPLC injected to measure the amount of parabens. It is calculated that 895  $\mu\text{g}$  of methylparaben is contained in 500 mg of dentifrices sample which were used for tooth brushing. Most of them were eliminated when expectorating the lather and 64.63  $\mu\text{g}$  was detected in first rinsed water, and 1.89  $\mu\text{g}$  was detected in final rinsed water, on average. The intake amount of methylparaben was corresponded to sum of the amount from rinsed water from next steps to final. It was calculated that 84  $\mu\text{g}$  (9%), 37  $\mu\text{g}$  (4%) and 18  $\mu\text{g}$  (2%) of methylparaben could be ingested if the mouth was washed for 1 times, 3 times and for 5 times, respectively. If toothpaste was used three times daily, the daily intake amount of methylparaben from toothpaste is calculated to 0.11 mg and 0.05 mg if the mouth was rinsed three or five times, respectively. Therefore, the use of parabens in dentifrices needs to be regulated by using other anti-microbial agents such as surfactant, glycerin, natural products and essential oils products and essential oils. Additionally, users should rinse their mouth enough (more than 5 times) for minimizing the methylparaben intake.

### Biography

Hyo-Kwang Ahn has completed his DMD in 2005 and his Medical Science Master Degree at 2011 in Kyung Hee University. Now, he is a second year in a PhD in Dental Science in Kyung Hee University directed by Prof. Yong-Duk Park. He has published more than 5 papers in reputed journals.

[khu0344@daum.net](mailto:khu0344@daum.net)