

4th International Conference and Exhibition on **Nutrition**

October 26-28, 2015 Chicago, Illinois, USA

Effect of different cookers on folate retention in white rice and brown rice

Taisun Hyun¹, Ji-Hyun Kim¹, Min-Ji Kim¹, So-Jin Lee¹, Kun-Jong Lee², Heajung Chung², Jiyeon Chun³ and Junsoo Lee⁴

¹Chungbuk National University, Korea

²Creative Culinary Institute of Korea, Korea

³Sunchon National University, Korea

Rice, a staple food of Asians, is one of the major contributors of folate even though it is not a good source of folate. The purpose of the study was to understand the effect of different cookers on folate retention in white rice and brown rice. Rice was cooked using three types of pots (stainless pot, stone pot, pressure pot) on a gas stove, and two types of electric rice cookers (plain cooker, pressure cooker), and microwave. Cooking was repeated three times, and folate was measured in three different laboratories by microbiological assay after trienzyme extraction. Certified reference materials and in-house quality control samples were used to monitor the inter- and intra-assay variations. Mean folate contents were 7.5 µg/100g in white rice and 21.8 µg/100g in brown rice before cooking. Folate loss varied from 16.4% (electric cooker) to 48.4% (stainless pot on a gas stove) in white rice depending on the type of cooker, and mean folate loss after cooking with six different cookers was 28.3%. However, there was no significant loss of folate after cooking regardless of the type of cooker in brown rice. Our results show that folate loss in white rice, but not in brown rice, was dependent on the type of cooker, and a plain electric cooker was the best considering folate retention in white rice. Our study also demonstrates that folate in brown rice is more stable than folate in white rice during cooking.

Biography

Taisun Hyun has completed her PhD from University of Alabama at Birmingham. She is a Professor of the Department of Food and Nutrition in Chungbuk National University. She has been serving as an Editor-In-Chief of "*Korean Journal of Community Nutrition*" and Director of Center for Children's Food service Management.

taisun@chungbuk.ac.kr

Notes: