



**Research Project** Development of White Tea (*Camelia sinensis*) Shot Formulated with White Tea Extract, Ascorbic Acid, and Sucrose to obtain High Stability of Total Catechins

**Year** 2559

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#### Abstract

White tea has been shown to possess physiological activities and catechin is the most abundant antioxidant compound found in tea. This study was conducted to develop white tea shot formulated with white tea extract (WTE), ascorbic acid (AA), and sucrose (SC) in order to get high stability of catechin in the product. First part of the study was done to choose best formula of white tea shot. The amount of WTE and distilled water was fixed to 200 mg and 50 ml. AA was varied in three levels (10, 25, and 50 mg) while SC was varied in two levels (1.5 and 3.0 grams). Based on sensory evaluation, panelists prefer formulation with higher SC concentration. Total catechins stability was analyzed toward epigallocatechin (EGC), epigallocatechin gallate (EGCG), and epicatechin gallate (ECG) and the degradation was analyzed during one week storage at 4 °C. Result showed there was no interaction between SC and AA toward the stability of catechin and only AA gave significant effect toward catechin stability. Thus, white tea shot formula with 200 mg WTE, 50 mg AA, 3.0 grams SC in 50 ml distilled water was chosen. The second part of the study was to analyzed the properties of the final formula. The pH was  $3.51 \pm 0.02$ , total polyphenol showed high value which was  $237.94 \pm 2.34$  mg GAE/100 ml, total catechins was  $100.95 \pm 0.02$ , and caffeine  $25.99 \pm 0.41$  mg/100 ml. Microbial properties which were total plate count and total yeast and mold have met standard in Indonesia and Thailand.

**Keywords** White tea shot, Catechin stability, Product development