

ABSTRACT

**THE SUNLIGHT EFFECT ON EGCG CONTENT IN ONE OF
GREEN TEA BEVERAGE PRODUCT PACKAGED IN PLASCTIC
BOTTLES**

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Epigallocatechin gallate (EGCG) is a green tea catechin with potential health benefits, such as anti-oxidant, anti-carcinogenic and anti-inflammatory effects. In general, EGCG is highly susceptible to degradation, therefore presenting stability problems. The research was focused on the study of the sunlight effect on EGCG content during storage for 12 weeks. The samples were stored in 2 different condition, protected from the sun and exposed to the sun for 3 hours. The samples would be sampled at week-0, week-4, week-8 and week-12. The HPLC condition was as follows : RP C-18 μ bondapak 10 μ m, 3.9 x 300 mm used as column, the mobile phase was metanol : water : acetic acid (2%) = 20 : 75 : 5 (v/v/v), flow rate 1.0 ml/min, and detection monitored at 274.0 nm with spectrophotometry UV-Vis. From this study, there was a different level of EGCG in green tea product packaged in plastic bottles. The levels of EGCG in exposed to the sun green tea beverage product decreased by 52.66% while for green tea beverage product stored at room temperature decreased by 26.04%. Using paired-sampels t-test, it was proven that sun light could decrease the levels of EGCG in green tea product packaged in plastic bottles faster.

Keywords : Green tea, plastic bottles, sun light, room storage conditions, Epigallocatechin gallate (EGCG), HPLC.