

**Research Title** Coating Chaiya salted eggs with tea waste to partially replace soil from termite mound

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## ABSTRACT

The research aims to study the quality of Chaiya salted eggs coated with tea waste to partially replace soil from termite mound. The residue of tea waste dried to a moisture content of 14.9% was used to prepare salt coating paste. It was found that the mixture of coating paste by substitution of termite mound soil with 10% tea waste was appropriate to coat the duck eggs. The salt content increased in both egg yolk and egg white with increasing salt coating time. Coating egg with 10% tea waste for 24 days, egg yolk contained salt 0.83%, moisture 17.04% and weighed 19.19 grams. The pH value and hardness were 6.43 and 93.67 gram and the L\*, a\* and b\* values were 21.35, 9.91 and 5.37 respectively. The egg white contained salt 5.27%, moisture 81.61% and weighed 31.02 grams. The pH value was 7.60 and the L\*, a\* and b\* values were 65.75, -1.63 and 7.99 respectively. The salted boiled eggs coated by 10% tea waste treatment for 21 days were accepted by the panelists in terms of the overall liking with the level of much liking (8.67), not significantly different ( $p>0.05$ ) from that of the control treatment (0% tea waste). Microorganisms in the salted boiled eggs did not exceed Thai OTOP standard; total microorganisms 22 CFU/g, none of appearance of mold, *Samonella* spp., *Clostridium perfringen* and *Staphylococcus aureus*. A hundred general consumers accepted this product in terms of the overall liking with the level of much liking (8.00).

An increase in tea waste substitution (10, 20 and 30%) tended to lower the salt content in egg yolk and egg white. The 3 level of tea waste substitution did not affect the

color of  $L^*$ ,  $a^*$  and  $b^*$  of egg yolk and  $L^*$  of egg white but affected  $a^*$  and  $b^*$  of egg white. In addition, no effect on microbial growth was observed.

**Keywords :** Chaiya salted egg, tea waste, termite mound soil