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Emulsifying properties of oolong tea

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Oolong tea is a traditional Chinese tea and now is a popular beverage widely consumed in the Far East. Green, oolong, and black teas all come from the leaves of the *Camellia sinensis* plant. Oolong tea is set aside and maintained in stringently controlled highly sensitive environments to oxidize at its own pace, i.e. semi-fermented product. The tea is also known as weight loss tea which has been scientifically proven to increase metabolism and fat oxidation. Besides the physiological action, refreshment of oiliness in oral cavity is an attractive property of oolong tea in high-fat meal. We showed, in the last ECRO, that the oolong tea reduced the oiliness in oral cavity more than the water with the sensory evaluation and decreased interfacial tensions of water/oil more than the water and green tea. In this study, another physical properties related to remove oiliness from oral cavity were analyzed using the teas and water.

Particle size analysis: The particle size of emulsion effects on the texture and creates a unique feeling on the tongue. For the preparation of emulsion, soya-bean oil and water were mixed with high blend mixer at 19,000 rpm for 3 min. followed by homogenation with the ultra-sonication. The particle size tended to decrease in oolong tea/oil emulsion but there was no significant difference from emulsions of green tea/oil and water/oil.

Emulsion stability: An appearance of emulsion is the index of the emulsion stability. The phase separations of water/oil and green tea/oil were observed quickly just after sample preparation. And the amounts of separated oil were increased in a time- dependent manner. Emulsion of oolong tea/oil showed the better stability than those of water/oil and that of green tea/oil. These results suggest that higher affinity of oolong tea to oil than other beverages supports to taking oil from oral cavity and keeping it until gastrointestinal tract without re-adhesion.