

Encapsulated Cannabis Oil Oolong Tea Formulation

ABSTRACT

Today, infused teas are attracting much attention in younger generations and older. The infusion itself means adding or dispersed any nutrition into the water to create solutions. On the other side, cannabis or marijuana is also getting more opinion and becoming popular, not only for being drugs, but its medicinal purpose itself exceeds its harmfulness as psychedelic drugs. Cannabis comes in many forms, but the most popular in terms of medicinal use is the oil form. This project aims to formulate and to create a new type of infused tea. To formulate tea that contains high in antioxidants and high in nutritive value along with the addition of cannabis medicinal properties, which can be developed further to play in an essential role in the medicinal industry. Content in cannabis oil can be controlled easily to vary the illegal psychoactive substances. In cannabis, there are two primary active compounds, which are CBD (cannabidiol) and THC (Tetrahydrocannabinol). THC or tetrahydrocannabinol is a psychoactive substance that makes the user psychoactive high. In Thailand, THC content of more than 2% is illegal by law. THC is also the intoxicant, such as uncontrollable vomiting, or psychosis. CBD, on the other hand, is the medicinal compound that acts as a relaxant. Both compounds use cannabinoid receptors as an active site. Infusing Cannabis oil along with tea, not only to improve benefits but to innovate new types of products. In this project, Cannabis Sativa or marijuana strain is processing into cannabis oil by ethanol extraction, which will later be encapsulated and added into a loose-leaf tea with the weight of 0.6 grams to 2.5g weight of Oolong tea leaves. At first sensory analysis of Jasmine, Oolong, and green tea with varieties of encapsulated oil were given to find the most suitable formula, the daily dosage of cannabis oil is measured and used as the highest sample. However, because cannabis oil cannot be dissolved in the water itself, the oil molecule is needed to be coated to make oil molecule soluble in water. With the help of Beta-cyclodextrin, the oil molecule is bound to the hydrophobic sites inside the beta-cyclodextrin molecules and will be dissolvable in water due to the hydrophilic site. Via chemical analysis with the average GAE of 5.233mg/ml and 87% antioxidant activity, the final product shows significant differences in both GAE and antioxidant activity of 1.5miligrams per milliliters and 14% respectively, therefore shows that the final product increases in nutrition and health.

Keyword: *Cannabis Sativa*, cannabidiol, extraction, formulation