

Uji Aktivitas Antioksidan dan Kestabilan Fisik Sediaan Krim Ekstrak Daun Teh Hijau dan Krim Ekstrak Daun Teh Putih (*Camellia Sinensis*. L) = Antioxidant Activity and Physics Stability Test of Green Tea Leaf Extract Cream and White Tea Leaf Extract Cream (*Camellia sinensis* L.)

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Abstrak

[ABSTRAK

Teh memiliki efek antioksidan karena kandungan senyawa polifenol, khususnya katekin dan asam fenolik yang tinggi. Teh hijau dan teh putih adalah dua jenis teh yang diperoleh tanpa proses fermentasi. Teh putih berasal dari pucuk dan daun teh muda sementara teh hijau berasal dari daun teh yang lebih tua. Penelitian ini bertujuan untuk menguji aktivitas antioksidan dan kestabilan fisik dari formulasi krim ekstrak daun teh hijau dan krim ekstrak daun teh putih. Kedua jenis teh diformulasikan ke dalam sediaan topikal dengan konsentrasi masing-masing 0,15%. Penentuan aktivitas antioksidan dilakukan dengan metode peredaman DPPH. Berdasarkan hasil penelitian, krim ekstrak daun teh putih memiliki aktivitas antioksidan yang lebih tinggi daripada krim ekstrak daun teh hijau. Nilai IC₅₀ krim ekstrak teh putih adalah 1184,25 ppm sedangkan nilai IC₅₀ teh hijau adalah 1792,84 ppm. Uji kestabilan fisik dilakukan dengan penyimpanan sediaan pada tiga suhu yaitu suhu kamar (28±2oC); suhu rendah (4±2oC) dan suhu tinggi (40±2oC), uji sentrifugasi dan cycling test. Hasil pengamatan menunjukkan bahwa formulasi krim ekstrak daun teh hijau dan krim ekstrak daun teh putih memiliki kestabilan fisik yang cukup baik.

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ABSTRACT

Tea has antioxidant effects because the content of polyphenol compound, particularly catechin and phenolic acid. The green tea and white tea are two types of tea obtained without the fermentation process. White tea comes from the buds and young tea leaves while green tea comes from the older mature tea leaves. This study aimed to test the antioxidant activity and determine the physical stability of the formulation of green tea leaf extract cream and white tea leaf extract cream. Both of tea were formulated into topical preparations with a concentration of 0.15%, respectively. Determination of antioxidant activity conducted by DPPH reduction method. Based on this research, white tea leaf extract cream had higher antioxidant activity than green tea leaf extract cream. IC₅₀ values of white tea extract cream is 1184.25 ppm whereas the IC₅₀ value of green tea leaf extract cream was 1792.84 ppm. Physical stability test conducted by keeping those two creams at three temperature conditions: in room temperature (28±2oC); low temperature (4±2oC) and high temperature (40±2oC), centrifuge test dan cycling test. Observations showed that the cream formulation of green tea leaf extract and white tea leaf extract cream had a good physical stability.; Tea has antioxidant effects because the content of polyphenol compound, particularly catechin and phenolic acid. The green tea and white tea are two types of tea obtained without the fermentation process. White tea comes from the buds and young tea leaves while green tea comes from the older mature tea leaves. This study aimed to test the antioxidant activity and determine the physical stability of the formulation of green tea leaf extract cream

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