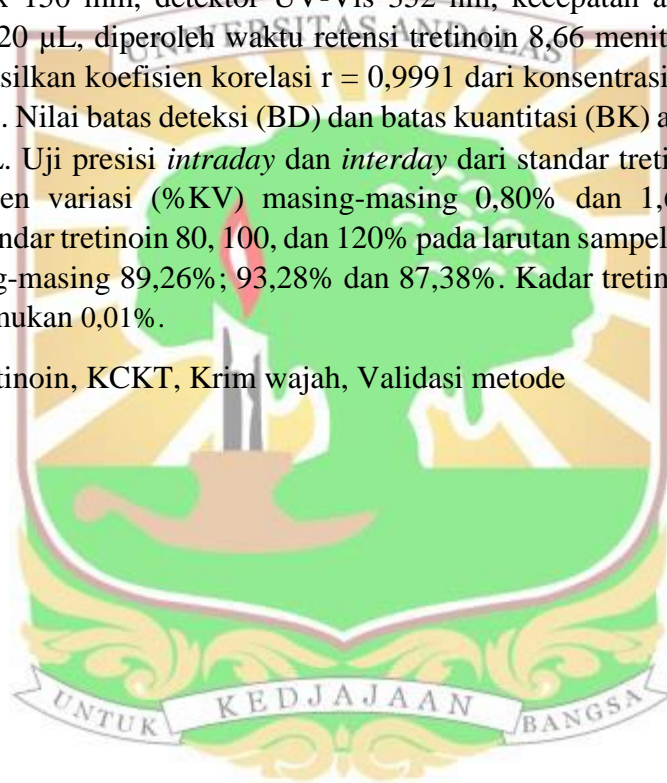


ABSTRAK

Metode Kromatografi Cair Kinerja Tinggi (KCKT) yang sederhana, sensitif, teliti dan akurat telah dikembangkan dan divalidasi untuk analisis tretinoin dalam krim wajah dari klinik kecantikan. Identifikasi tretinoin dalam sampel dilakukan dengan reaksi *Carr-Price*, Spektrofotometer UV-Vis dan KCKT fase terbalik. Fase gerak yang digunakan asetonitril : asam asetat 0,2% (95:5), kolom C18 (Oktadesil Silane), dimensi kolom 4,6mm x 150 mm, detektor UV-Vis 352 nm, kecepatan alir 1,0 mL/menit, volume injeksi 20 μ L, diperoleh waktu retensi tretinoin 8,66 menit. Validasi metode analisis menghasilkan koefisien korelasi $r = 0,9991$ dari konsentrasi standar 10 μ g/ml sampai 30 μ g/ml. Nilai batas deteksi (BD) dan batas kuantitasi (BK) adalah 1,13 μ g/mL dan 3,75 μ g/mL. Uji presisi *intraday* dan *interday* dari standar tretinoin memberikan nilai % koefisien variasi (%KV) masing-masing 0,80% dan 1,67%. Metode uji penambahan standar tretinoin 80, 100, dan 120% pada larutan sampel memberikan nilai *recovery* masing-masing 89,26%; 93,28% dan 87,38%. Kadar tretinoin dalam sampel A,B dan C ditemukan 0,01%.

Kata kunci: Tretinoin, KCKT, Krim wajah, Validasi metode



ABSTRACT

A simple, sensitive, precise, and accurate High Performance Liquid Chromatography (HPLC) method has been developed and validated for analysis of tretinoin in facial creams from a beauty clinic. Identification of tretinoin in cream was performed by *Carr-Price* reaction, spectrophotometry UV-Vis and reversed-phase HPLC. Using a mobile phase consisting of acetonitrile : acetic acid 0,2% (95:5), column C18 (Octadecyl Silane) with diameter 4,6mm x 150 mm, UV detector at 352 nm, flow rate 1,0 mL/minute, injection volume 20 μ L and retention time of tretinoin is 8,66 minutes. Analysis validation method gave values of correlation coefficient $r = 0,9991$ between concentration 10 μ g/ml to 30 μ g/ml. Limit of detection (LOD) and Limit of Quantitation (LOQ) values are 1,13 μ g/mL and 3,75 μ g/mL. *Intraday* and *Interday* precision experiment of tretinoin standard gave values of RSD are 0,80% and 1,67% respectively. Standard addition method experiment by addition 80, 100, 120 % of tretinoin standard to sample solution gave the *recovery* 89,26%; 93,28% and 87,38%. The concentration of tretinoin in sample A, B and C are found to be around 0,01%.

Keyword: Tretinoin, HPLC, Facial cream, Method validation

