

ABSTRAK

Sebuah metode analisis menggunakan kromatografi lapis tipis-densitometri (KLT-Densitometri) yang sederhana, presisi, akurat dan cepat telah dikembangkan dan divalidasi untuk menentukan kadar sitikolin dalam bentuk sediaan tablet. Plat kromatografi lapis tipis fase normal (Silika Gel 60 F₂₅₄) digunakan sebagai fase diam dan metanol : air : amoniak (8 : 1 : 1) digunakan sebagai fase gerak. Sitikolin menunjukkan nilai R_f 0,71 dan dievaluasi dengan menggunakan densitometri (*TLC scanner*) pada panjang gelombang 273 nm. Kurva kalibrasi menunjukkan nilai koefisien regresi yang baik dengan R= 0,9993. Batas deteksi dan batas kuantitasi metode masing-masing adalah 15,744 µg/mL dan 52,48 µg/mL. Presisi (% RSD *intra-day* sebesar 0,86-1,41 dan *inter-day* sebesar 1,43-1,65). Analisis perolehan kembali dilakukan dengan penambahan baku sitikolin kedalam larutan sampel sebanyak 40, 80 dan 120% dan memberikan hasil berturut-turut 101,32%, 97,70% dan 98,06 %. Berdasarkan hasil, metode ini memenuhi persyaratan validasi metode yang baik.



ABSTRACT

A simple, precise, accurate and rapid thin layer chromatography-densitometry (TLC-Densitometry) method has been developed and validated for determination of citicoline in tablet dosage form. Normal phase thin layer chromatography plate (silica gel 60 F254) was used as stationary phase and the mixture of methanol: water: Ammonia (8:1:1) as mobile phase. Citicoline was showed R_f value of 0,71 and quantification was performed by densitometry (TLC-scanner) at 273 nm. The calibration curve was found to be linear in the range 240 - 560 µg/mL with the correlation coefficient R= 0,9993. The limit of detection (LOD) and the limit of quantification (LOQ) of the method was found 15,744 µg/mL and 52,48 µg/mL respectively. Precision (% RSD intraday was 0,86-1,41 and interday was 1,43-1,65). Recovery analysis were found to be 101,32%, 97,70% and 98,06 %. According to the results, this method was in accordance with good validation requirements.

