

Universitas Ngudi Waluyo
Program Studi Farmasi, Fakultas Kesehatan
Skripsi, Agustus 2023
Baiq Zahratul Hasanah
05221101

**PERBEDAAN KADAR NITRIT DALAM SAYUR KANGKUNG
DARAT DAN KANGKUNG AIR DENGAN METODE
SPEKTROFOTOMETRI UV-VIS**

ABSTRAK

Latar belakang : Nitrit (NO_2) merupakan senyawa yang terbuat dari nitrogen yang telah teroksidasi oleh aktivitas mikroba di laut, darat, dan udara. Kangkung terdiri dari 2 jenis yaitu Kangkung darat dan Kangkung air. Untuk menganalisis kadar nitrit pada kangkung darat dan kangkung air

Metode : Analisis kangkung darat dan kangkung air yang didapatkan dari Pasar Bandarjo, Ungaran, Kabupaten Semarang. Penetapan kadar dilakukan dengan metode spektrofotometri visibel. Hasil diolah menggunakan SPSS dan disajikan dalam bentuk *One-Way ANOVA* guna melihat apakah ada pengaruh kadar nitrit pada kangkung darat dan kangkung air dengan 3 perlakuan berbeda.

Hasil : Hasil pengujian menunjukkan terdapat perbedaan yang signifikan pada kadar nitrit pada kangkung. Sampel pada kangkung air dilakukan replikasi sebanyak 3 kali didapatkan hasil sebesar 5.904 (mg/kg); 5.856 (mg/kg); dan 5.88 (mg/kg). Sedangkan kangkung darat sebesar 8.671 (mg/kg); 8.688 (mg/kg); dan 8.776 (mg/kg). Validasi metode pada penelitian ini memenuhi persyaratan linieritas, akurasi, presisi serta LOD 0,106 ppm dan LOQ 0.354 ppm regresi linier $y = bx + a$ yang diperoleh dari kurva kalibrasi yaitu $y = 0,2144x + 0,1051$ memiliki nilai $r = 0,99911,4$ ppm; 1,8 ppm dan 2,2 ppm berturut-turut adalah 97.8% ; 96.7% ; 95.96%

Simpulan : Kadar nitrit pada kangkung air menggunakan metode spektrofotometri yang dilakukan replikasi sebanyak 3 kali didapatkan hasil sebesar 5.904 (mg/kg); 5.856 (mg/kg); dan 5.88 (mg/kg). Sedangkan kangkung darat sebesar 8.671 (mg/kg); 8.688 (mg/kg); dan 8.776 (mg/kg). Validasi metode pada penelitian ini telah memenuhi persyaratan linieritas, akurasi, presisi serta LOD dan LOQ.

Kata kunci : Nitrit, kangkung darat dan kangkung air, spektrofotometri visibel, validasi metode

Ngudi Waluyo University
Pharmacy Study Program, Faculty of Health
Final Project, August 2023
Baiq Zahratul Hasanah
052211001

DIFFERENCES IN NITRITE LEVELS IN GROUND KALE AND WATER KALE WITH UV-VIS SPECTROPHOTOMETRY METHOD

ABSTRACT

Background: nitrite (NO_2) is a compound made of nitrogen which has been oxidized by microbial activity in the sea, land and air. There are 2 types of water spinach, namely water spinach and water spinach To analyze nitrite levels in land and water spinach

Methods: analysis of ground kale and water spinach obtained from bandarjo market, ungaran, semarang regency. Assay was carried out using the visible spectrophotometry method. The results were processed using spss and presented in the form of one-way anova to see whether there was an effect of nitrite levels on ground kangkong and kangkong ai with 3 different treatments.

Results: the test results showed that there was a significant difference in nitrite levels in kale. Samples on water spinach were replicated 3 times to obtain results of 5,904 (mg/kg); 5.856 (mg/kg); and 5.88 (mg/kg). Meanwhile, ground kale is 8,671) mg/kg); 8.688 (mg/kg); and 8,776 (mg/kg). Method validation in this study met the requirements of linearity, accuracy, precision and lod 0.106 ppm and loq. 0.354 ppm linear regression $y = bx + a$ obtained from the calibration curve, namely $y = 0.2144x + 0.1051$ has a value of $r = 0.9991$ 1.4 ppm; 1.8 ppm and 2.2 ppm respectively is 97.8% ; 96.7% ; 95.96%

Conclusion: the nitrite content in water spinach using the spectro method was replicated 3 times and the results were 5,904 (mg/kg); 5.856 (mg/kg); and 5.88 (mg/kg). Meanwhile, ground kale is 8,671) mg/kg); 8.688 (mg/kg); and 8,776 (mg/kg). The method validation in this study met the requirements of linearity, accuracy, precision as well as lod and loq.

Key words: nitrite, ground and water spinach, visible spectrophotometry, method validation