INTISARI

ALDEVIRA, C.V., 2019, PENETAPAN KADAR FORMALIN PADA TAHU PUTIH YANG DIJUAL DI PASAR TRADISIONAL MOJOSONGO SECARA SPEKTROFOTOMETRI UV – VIS, KARYA TULIS ILMIAH, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Penggunaan formalin sebagai bahan pengawet dalam makanan telah dilarang dan diatur dalam peraturan menteri kesehatan nomor 033 tahun 2012. Banyak ditemukan penggunaan formalin pada tahu sebagai pengawet dalam lingkungan masyarakat. Maka perlu dilakukan analisis kualitatif dan kuantitatif kandungan formalin dalam tahu putih yang dijual di Pasar Tradisional Mojosongo secara spektrofotometri UV-Vis.

Penelitian dilakukan terhadap sampel yang diambil secara acak dari 3 pedagang di Pasar Tradisional Mojosongo. Sampel tahu dilakukan uji kualitatif dengan pereaksi asam kromatofat yang akan membentuk warna ungu bila terdapat formalin dan uji kuantitatif secara spektrofotometri Uv-Vis. Validasi metode yang dilakukan yaitu presisi, akurasi, linearitas, LOD, dan LOQ. Kadar formalin dihitung dengan analisis regresi linear dengan persamaan $Y = a + b X$.

Hasil uji kualitatif dengan asam kromatofattidak menunjukkan perubahan warna khas ungu. Uji kuantitatif dilakukan secara spektrofotometri Uv-Vis dengan panjang gelombang maksimal 589 nm dan *operating time* menit ke 7-9. Validasi metode menunjukkan bahwa linearitas dengan nilai r = 0,99352 dan persamaan Y = - 0,21295 + 0,028234 X, LOD= 2,0906 ppm, LOQ= 6,3352 ppm, akurasi dengan perolehan kembali = 98,73% dan presisi dengan nilai RSD = 0,000918%. Penelitian menunjukkan dari tiga sampel tahu, satu sampel mengandung formalin dengan kadar 0,0816% b/b ± 0,000666.

Kata kunci : tahu putih, formalin, asam kromatofat, spektrofotometri uv – vis.

ABSTRACT

ALDEVIRA, C.V., 2019, DETERMINATION OF FORMALDEHYDE LEVELS IN WHITE TOFU SOLD IN THE MOJOSONGO TRADITIONAL MARKET BY UV-VIS SPECTROPHOTOMETRY.

The used of formaldehyde as a preservative in food that has been banned and regulated in minister of health regulation number 33 of 2012.Many found the use of formaldehyde in tofu as a preservative in the community. Then it is necessary to do qualitative and quantitative analysis of the formaldehyde content in white tofu sold in the Mojosongo traditional market by Uv-Vis spectrophotometry.

The study was conducted on samples taken randomly from 3 traders at the Mojosongo traditional market. The tofu samples was carried out qualitative test with chromatophoric acid reagent which will form purple if there is formaldehyde and quantitative test by Uv-Vis spectrophotometry. The validation of the method used is precision, accuracy, linearity, LOD and LOQ. Formalin levels were calculated by linear regression analysis with the equation Y = a + b X.

The results of the qualitative test with chromatophoric acid didn't show a distinctive purple colour changed. Quantitative test were carried out by Uv-Vis spectrophotometry with a maximum wavelength of 589 nm and operating time 7-9 minute. The method validation shows that linearity with the value r = 0,99352 and the equation Y = - 0,21295 + 0,028234 X, LOD= 2,0906 ppm, LOQ= 6,3352 ppm, accuracy withrecovery = 98,73% andprecision with RSD value = 0,000918%.The study shows that from three tofu samples, one sample contained formalin with a level 0,0816% b/b ± 0,000666.

Key words : white tofu, formaldehyde, chromatophoric acid, Uv – Vis spectrophotometry.