

## INTISARI

**DESTYA, P.R., 2023. PENGARUH VARIASI pH PADA PENETAPAN KADAR BAHAN BAKU UNTUK PRODUKSI AMLODIPIN BESILAT DENGAN MENGGUNAKAN KROMATOGRAFI CAIR KINERJA TINGGI (KCKT), SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.**

Tekanan darah tinggi diobati dengan menggunakan berbagai obat antihipertensi, termasuk diuretik, *Angiotensin Converting Enzyme* (ACE inhibitor) seperti kaptopril, dan *Calcium-Channel Blockers* (CCB) seperti amlodipin besilat. Di Indonesia, amlodipin besilat terkadang dikombinasikan dengan obat lain, terutama untuk pasien geriatri yang mengalami komplikasi penyakit yang mengalami kesulitan menelan atau dalam keadaan koma. Mencampur atau mengubah bentuk sediaan obat sebelum digunakan dapat mempengaruhi pH akhir sediaan. Pada penelitian ini dilakukan dengan metode KCKT untuk mengetahui pengaruh pH terhadap stabilitas amlodipine besilat.

Penelitian ini digunakan kolom analisis C- 18 Shimadzu Shim-pack VP-ODS ukuran 150 x 4,6 mm i.d 3 $\mu$ m sebagai fase diam dan Methanol, acetonitrile, and Buffer (35:15:50) dideteksi oleh detektor UV Vis pada panjang gelombang 237 nm. Dilakukan validasi metode dengan parameter linearitas, presisi, akurasi, LOD dan LOQ. Stabilitas amlodipin besilat dilakukan dalam larutan amlodipin besilat pH 1, 3, 6 dan 10.

Pada penelitian variasi pH 1, 3, 6, 10 pada tablet amlodipin besilat pembacaan 1 dan 2 mengalami penurunan kadar, sehingga pH basa mempengaruhi penurunan kadar.

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**Kata Kunci :** amlodipin besilat, KCKT , kadar, pH, LOD, LOQ

## ABSTRACT

**DESTYA, P.R., 2023. THE EFFECT OF pH VARIATIONS ON RAW MATERIAL CONTENT FOR THE PRODUCTION OF AMLODIPINE BESILATE USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC), THESIS, STUDY PROGRAM OF S1 PHARMACEUTICAL, FACULTY OF PHARMACY, UNIVERSITAS SETIA BUDI, SURAKARTA.**

High blood pressure is treated using a variety of antihypertensive medications, including diuretics, Angiotensin Converting Enzyme (ACE inhibitors) such as captopril, and Calcium-Channel Blockers (CCB) such as Amlodipine. In Indonesia, amlodipine besylate is sometimes combined with other drugs, especially for geriatric patients who have complications from diseases who have difficulty swallowing or are in a coma. Mixing or changing the dosage form of the drug before use can affect the final pH of the dosage. This research was carried out using the HPLC method to determine the effect of pH on the stability of amlodipine besylate.

A C-18 Shimadzu Shim-pack VP-ODS analytical column measuring 150 x 4.6 mm i.d. 3 $\mu$ m was used as the stationary phase and Methanol, acetonitrile, and Buffer (35:15:50) were detected by a UV Vis detector at a wavelength of 237 nm. Method validation was carried out with linearity, precision, accuracy, LOD and LOQ parameters. Stability of amlodipine besylate was carried out in amlodipine besylate solutions of pH 1, 3, 6 and 10.

In the research, variations in pH 1, 3, 6, 10 in amlodipine besylate tablets readings 1 and 2 experienced a decrease in levels, so that the alkaline pH affected the decrease in levels.

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**Keywords :** *Amlodipine besylat, KCKT, content, pH, LOD, LOQ*