INTISARI

MALA, RC. 2018. FORMULASI DAN KARAKTERISASI S-SNEDDS (*Solid Self-Nanoemulsifying Drug Delivery System*) MELOKSIKAM MENGGUNAKAN AEROSIL DAN CROSPOVIDONE SEBAGAI ADSORBEN DENGAN TEKNIK *ADSORPTION TO SOLID CARRIER*. SKRIPSI. FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI. SURAKARTA.

Meloksikam (MEL) merupakan obat golongan AINS yang memiliki kelarutan rendah dalam air serta memiliki aktivitas farmakologis sebagai analgesik dan antiinflamasi. Profil farmakokinetik meloksikam dapat diubah dalam bentuk sediaan *solid* SNEDDS dengan penambahan adsorben aerosil dan crospovidone untuk dapat meningkatkan kelarutan dan stabilitasnya.

Formula optimum SNEDDS meloksikam berdasarkan penelitian sebelumnya dengan komposisi minyak zaitun sebesar 0,052 mg, tween 80 sebesar 1,826 mg dan PEG 400 sebesar 0,122 mg selanjutnya dibuat dalam bentuk padat dengan penambahan adsorben aerosil dan crospovidone dengan metode *adsorption to solid carrier* dan dikarakterisasi berdasarkan *emulsification time*, *drug loading*, persen transmitan, ukuran partikel, FT-IR, SEM dan uji disolusi.

Hasil karakterisasi *solid* SNEDDS meloksikam dengan adsorben aerosil dan crospovidone menunjukkan *emulsification time* sebesar 60,17±0,54 detik dan 34,12±1,44 detik, persen transmitan sebesar 52,30±1,51 % dan 38,50±1,47 %, *drug loading* sebesar 75,22±1,24 ppm dan 49,69±0,12 ppm, ukuran partikel 122,2 nm dengan PDI 0,476 dan 168,1 nm dengan PDI 0,776. Berdasarkan hasil karakterisasi tersebut, aerosil menunjukkan hasil yang lebih baik dibandingkan crospovidone. Uji disolusi *solid* SNEDDS meloksikam dengan adsorben aerosil pada media dapar fosfat pH 6,8 mencapai 102,06% dalam waktu 30 menit lebih tinggi 68,06% dari meloksikam murni.

Kata kunci : meloksikam, *solid* SNEDDS, *adsorption to solid carrier*, aerosil, crospovidone

ABSTRACT

MALA, RC. 2018. FORMULATION AND CHARACTERIZATION OF MELOXICAM S-SNEDDS (Solid Self-Nanoemulsifying Drug Delivery System) USING AEROSIL AND CROSPOVIDONE AS ADSORBEN WITH ADSORPTION TO SOLID CARRIER. UNDERGRADUATE THESIS. PHARMACY FACULTY, SETIA BUDI UNIVERSITY. SURAKARTA.

Meloxicam (MEL) is an enolate class of oxycam derivatives of which its solubility is low in the water and has pharmacological activity to reduce pain as well as inflammation symptoms, but it has lower toxicity than other Anti-Inflammation Medicine (OAINS). Meloxycam pharmacokinetics profile can be converted using SNEDDS formulation with the addition of aerosyl and cropovidone adsorbents to improve their solubility and stability.

The optimum formulatory of SNEEDS meloxicam based on previous research with olive oil composition of 0,052 mg, tween 80 equal to 1,826 mg and PEG 400 0,122 mg then made in solid form with additional of aerosil adsorbent and crospovidone by adsorption to solid carrier and characterized based on emulsification time, drug loading,`percent transmitan, particle size, FT-IR, SEM and dissolution test.

The result of solid characterization of SNEDDS meloxicam with arosil and crospovidone adsorbents showed emulsification time of 60.17±0.54 second, transmitter percentage by 52.30±1.51 %, and 38.50±1.47, drug loading by 75.22±1.24 ppm and 49,69±0,12, particle size by 122.2 nm with a PDI of 0.476 and 168,1 nm with PDI 0,776. Based on the results of the characterization, aerosil showed better results than crospovidone. The solid dissolution test of SNEEDS meloxicam with aerosyl adsorbent on phosphate buffer with pH 6.8 attains 102.06% in 20 minutes, which it is higher the pure meloxycam by 68.06%.

Keywords : meloxycam, solid SNEDDS, adsorption to solid carrier, aerosil, crospovidone