

SKRIPSI

SETIAJIE CAHYADI

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**PERBANDINGAN PENGARUH KOH DAN K_2CO_3
TERHADAP PERSENTASE METIL *o*-
METOKSIBENZOAT HASIL REAKSI METILASI
ASAM SALISILAT DENGAN DIMETIL SULFAT**



MILIK
PERPUSTAKAAN
UNIVERSITAS AIRLANGGA
SURABAYA

**FAKULTAS FARMASI UNIVERSITAS AIRLANGGA
BAGIAN KIMIA FARMASI
SURABAYA
2004**

Lembar Pengesahan

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**Dibuat untuk Memenuhi Syarat Gelar Sarjana Farmasi
Pada Fakultas Farmasi Universitas Airlangga**

2004

Oleh :

**SETIAJIE CAHYADI
050012212**

Disetujui oleh :



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ABSTRACT

Methylation of salicylic acid with dimethyl sulphate has been done with two different base that are KOH and K_2CO_3 . Identification of the resulted compound was done by TLC test, refractive index test, FT-IR spectrophotometry, 1H NMR spectrometry and Mass spectrometry. Identification showed that the resulted compound was methyl *o*-methoxybenzoate.

Reaction in KOH and K_2CO_3 gave 28% and 10% yields, respectively. Statistical method showed that there was significant difference in the yield of both base and the highest yield was given by KOH. These base effects may be explained by the ion forming ability of phenol and carboxylic acid which depend on the alkalinity of both base. Using KOH as base, the amount of fenoxide ion and carboxylic ion are much enough for being substituted by methyl group from dimethyl sulphate and will increase the percentage yield. On the other hand, the use of K_2CO_3 as base decreased the ion forming ability so that the percentage yield decreased.

Key Word: Salicylic acid, methyl *o*-methoxybenzoate, methylation, dimethyl sulphate, KOH and K_2CO_3 .