

OR-17**Synthesis of New Aminoanthraquinone from 1,4-(Dihydroxy)Anthracene-9,10-Dione**

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A new series of aminoanthraquinone were successfully synthesized *via* two step of reaction. Firstly 1,4-(dihydroxy)anthracene-9,10-dione was treated with butylamine in the presence of iodobenzene-diacetate to gives 2-(butylamino)-1,4-dihydroxyanthraquinone (**1**) (90%). In the second step **1** was subjected to reduction, methylation and acylation. Reduction using NaBH₄ result 2-(butylamino)anthracene-1,4-dione (**2**) where as methylation give a mixture of 2-(butylamino)-1-hydroxy-4-methoxyanthracene-9,10-dione (**3a**) and 2-(butylamino)-1,4-dimethoxyanthracene-9,10-dione (**3b**) in 2%, 32% and 25% respectively. The acylation produced 2-(butylamino)-9,10-dioxo-9,10-dihydroanthracene-1,4-diyl diacetate (**4**) in excellent yield. Characterizations of the products were obtained from the analysis by digital melting point equipment, Fourier Transform Infrared Spectroscopy (FT-IR), Direct Injection Mass Spectrometry (DI-MS), Gas Chromatography Mass Spectrometry (GC-MS) and also Nuclear Magnetic Resonance (NMR). Compound **4** shows good antimicrobial activities toward *methicillin-resistant Staphylococcus aureus* (MRSA), *Pseudomonas aeruginosa*, *Candida albicans* and *Escherichia coli* with MIC value of 0.1, 0.1, 0.1 and 0.5 mg/mL respectively.

Keywords: 1,4-dihydroxyanthraquinone, Amination, Aminoanthraquinone. antimicrobial activity.
