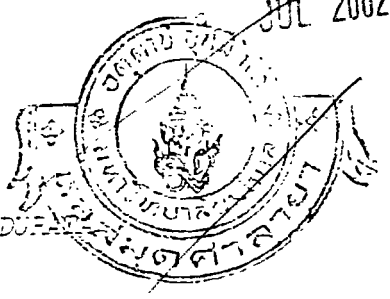




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PART I: CONSTITUENTS OF BOESENERGIA PANDURATA
(YELLOW RHIZOME) (ZINGIBERACEAE)

PART II: ADDITIONS OF LITHIO CHLOROMETHYL PHENYL SULFOXIDE
TO ALDIMINES AND α,β -UNSATURATED COMPOUNDS

BY

CHULABHORN MAHIDOL

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENT FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

ORGANIC CHEMISTRY

FACULTY OF GRADUATE STUDIES

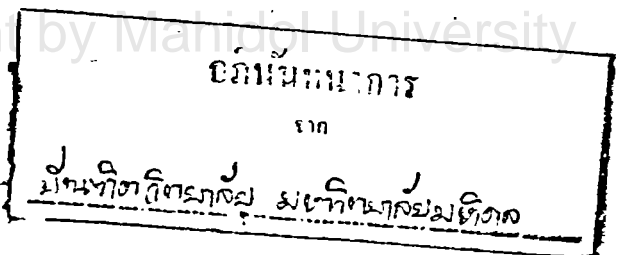
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ABSTRACT

PART I

A new chalcone derivative (\pm)-boesenbergin B and the known (\pm) panduratin A, (\pm) panduratin B₁, B₂, (\pm) boesenbergin A together with 2',6'-dihydroxy-4'-methoxychalcone, cardamonin have been isolated from *Boesenbergia pandurata* (yellow rhizome, Zingiberaceae). Spectroscopic studies and x-ray crystallographic analysis have established structure (\pm)-(E)-1-[5'-hydroxy-7'-methoxy-2'-methyl-2'-(4''-methylpent-3''-enyl)-2'H-1-benzopyran-6'-yl]-3-phenylprop-2-en-1-one for boesenbergin B. A simple synthesis of boesenbergin B has been achieved and its acid catalyzed cyclization has been studied.