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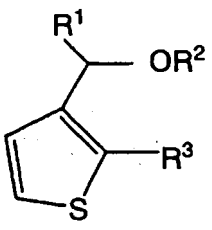
(54) NOVEL THIOPHENE COMPOUND AND PROCESS FOR PRODUCING CAFFENOFURAN OR ANALOGUE THEREOF FROM THE SAME

(57) The present invention provides a novel thiophene compound as a synthetic intermediate that is useful for efficient production of kahweofuran or an analogue thereof. The present invention also provides a process for producing kahweofuran or an analogue thereof using the novel thiophene compound as an intermediate material.

Of novel thiophene compounds represented by Formula (1):



(1)

wherein R^1 is a hydrogen atom or a C_1-C_4 lower alkyl group; R^2 is a hydrogen atom or an alcohol-protecting group; R^3 is a hydrogen atom, $-COR^4$ or $-C(OH)R^5$ (wherein R^4 and R^5 each represent a C_1-C_4, lower alkyl group); provided that

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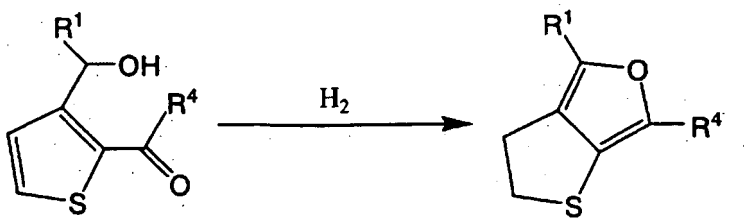
when R^2 and R^3 are hydrogen atoms, R^1 is not any of a hydrogen atom, methyl group, or n-propyl group; a thiophene compound represented by Formula (2) is reduced and cyclized in the presence of a transition metal catalyst to produce kahweofuran or kahweofuran analogue (3a) shown below:



(2) (3)

wherein R^1 is a hydrogen atom or a C_1-C_4 lower alkyl group, and R^4 is a C_1-C_4 lower alkyl group.