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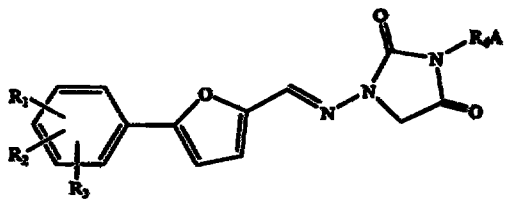
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(54) Title: PROCESS FOR MAKING 1,3–DISUBSTITUTED–4–OXOCYCLIC UREAS



(I)

(57) Abstract

A process for making 1,3–disubstituted–4–oxocyclic ureas of general formula (I): wherein R_1, R_2, and R_3 are independently selected from the group consisting of nil, Cl, F, Br, NH_2, NO_2, COOH, CH_3SO_2NH, SO_3H, OH, alkoxy, alkyl, alkoxycarbonyl, hydroxyalkyl, carboxyalkyl, and acyloxy; R_4 is selected from the group consisting of a substituted or unsubstituted alkyl, alkenyl, alkynyl, alkylacyl, and heteroalkyl; and A is a substituted or unsubstituted, saturated or unsaturated, straight–chain or branched alkyl or alkenyl amino group comprised of 1–7 carbon atoms; or A is a substituted or unsubstituted, saturated or unsaturated heterocycle having 5, 6, or 7 members containing at least one nitrogen, and R_4 is attached to this nitrogen; wherein said 1,3–disubstituted–4–oxocyclic urea is made without isolation of intermediates and comprising the steps: (Ia) reacting a 1–substituted–4–oxocyclic urea with a carbon chain containing at least two leaving groups in the presence of a mild base and a solvent to form an adduct containing at least one leaving group, and (Ib) condensing the adduct with an amine to form a 1,3–disubstituted–4–oxocyclic urea, and (II) recovering said 1–3–disubstituted–4–oxocyclic urea, are disclosed. This method is particularly preferred for making 1[[[5–(4–Chlorophenyl)–2–furanyl]methylene]amino]–3–[4–(4–methyl–1–piperazinyl)butyl)–2,4–imidazolidinedione.