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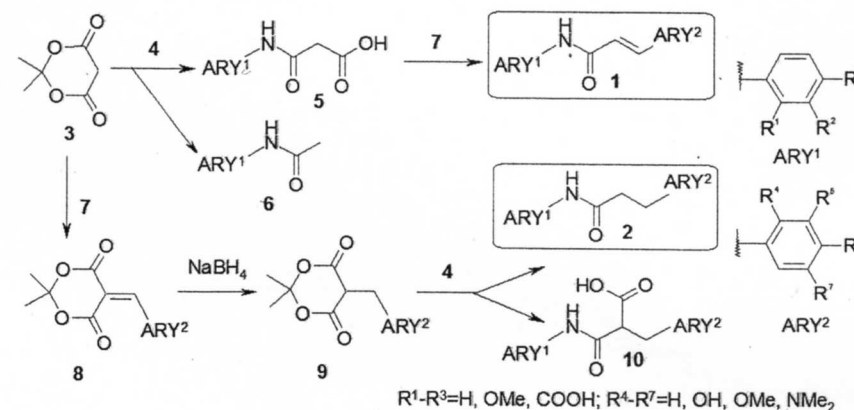
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## ANILIDES OF 3-ARYL PROPENOIC AND PROPIONIC ACIDS AS ANTIRADICAL AGENTS

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Anilides of caffeic acid (**1**;  $R^4=R^5=H$ ,  $R^6=R^7=OH$ ) are well known antioxidants [1-3]; their hydrogenated analogues **2** exhibit similar activity [4]. We studied the influence of substituents in aniline moiety  $ARY^1$  and the presence/lack of acrylic double bond on the antiradical activity of the compounds **1** and **2**. A range of 3-aryl propenoic anilides **1** were synthesized by cleavage of Meldrum's acid (**3**) with anilines  $ARY^1NH_2$  (**4**); malonic acid monoanilides **5** and by-products acetanilides **6** were obtained; the Knoevenagel condensation of malonic acids **5** with aromatic aldehydes  $ARY^2CHO$  (**7**) under Doebner conditions provided the target compounds **1**, but in case of salicylic aldehydes (**7**,  $R^4=OH$ ) corresponding 3-arylaminocarbonyl-coumarins were formed. Anilides of 3-arylpropionic acids **2** were easily synthesized by condensation of **3** with arylaldehydes **7**, followed by reduction of obtained arylidene Meldrum's acids **8** and by cleavage of 5-benzyl-Meldrum's acids **9** with anilines **4**; in some cases the last step led to 2-benzyl-*N*-aryl-malonic acids **10**. The antioxidant activity of the synthesized compounds was evaluated with DPPH test; several compounds **1** and **2** demonstrated stronger antiradical action than commercial antioxidant BHT.



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