

## New benzilidenoimine and amido derivatives: evaluation of antioxidant activity

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The use of compounds with antioxidant activity is expected to be useful for the treatment of diseases where active oxygen species and free radicals play an important role [1,2]. Phenolic antioxidants react with free radicals by a process that usually involves the transfer of a hydrogen atom, resulting in a stable phenolic radical [1,2]. Aromatic amines and imines also contain active hydrogen atoms (NH) and by analogy it is expected that these atoms can be transferred to free radicals behaving the aromatic amines and imines as antioxidants.

Numerous methods can be applied to evaluate the potential use of a new compound as an antioxidant and both chemical and electrochemical methods have been developed with this purpose [3,4]. The use of electrochemical methods, in particular voltammetric techniques, provides information regarding its reducing power.

In this work a series of benzilidenoimine and amido derivatives, presented in figure 1 and 2, respectively, were synthesised and their potential use as antioxidants was evaluated by cyclic voltammetry. The structure–activity relationships of the synthesised compounds were investigated in order to understand how the different functionalities affect their antioxidant activity.

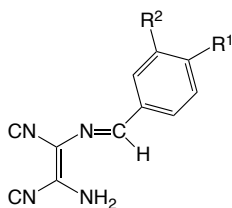


Figure 1. Chemical structure of the tested benzilidenoimine derivatives

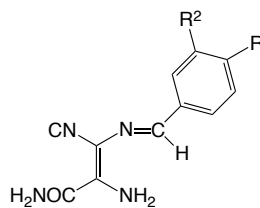


Figure 2. Chemical structure of the tested benzilidenoamido derivatives

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