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ANTIOXIDANT ACTIVITY OF FLAVONOIDS OF DIFFERENT POLARITY, ASSAYED BY MODIFIED ABTS CATION RADICAL DECOLORIZATION AND EPR TECHNIQUE

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Modified ABTS cation radical decolorization assay and EPR technique were applied to screen the antioxidant activity of three flavonoids with different polarity: 7-*O*-β-[2-*O*-feruloyl-β-glucuronopyranosyl (1→2) glucuronopyranoside] (tricine), 4'-methoxy-5,7-dihydroxyflavone 6-*C*-β-glucopyranoside (isocytisoside) and I 3' II 8 biapigenine (amentoflavone), with nonpolar all-trans β-carotene used as standard carotenoid molecule. The ABTS [2,2'-azino-bis(3-ethylbenzthiazoline-6-sulphonic acid] cation radical decolorization assay was modified as follows: (1) measurements extended up to 8 days after preparation, (2) method adapted for flavonoids with different polarity and β-carotene, (3) concentrations in the 0.01-10 μM range of both trolox and antioxidants in order to use the same experimental conditions for both this technique and EPR measurement.

Key words: 7-*O*-β-[2-*O*-feruloyl-β-glucuronopyranosyl (1→2) glucuronopyranoside] (tricine), 4'-methoxy-5,7-dihydroxyflavone 6-C-β-glucopyranoside (isocytisoside), I 3' II 8 biapigenine (amentoflavone), all-*trans* β-carotene, ABTS cation radical, TEAC, EPR technique, free radicals, oxidation.

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