

Free Radical Scavenging Activity and Secondary Metabolites from *in vitro* Cultures of *Sanicula graveolens*

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An *in vitro* propagation system was developed to obtain shoot and root cultures from the Andean spice *Sanicula graveolens* (Apiaceae). Propagation of shoots, roots and plantlets was achieved by the temporary immersion system. The free radical scavenging effect of the methanol/water (7:3 v/v) extracts was determined by the discoloration of the 1,1-diphenyl-2-picrylhydrazyl radical (DPPH). Total phenolic, flavonoid, chlorogenic acid (CA) and quercetin 3-*O*-glucoside content in the samples was assessed by spectrophotometry and DAD-HPLC analysis, respectively. On a dry weight basis, the crude extracts showed total phenolic values ranging from 3.57 to 6.93%, with highest content for the root culture sample. Total flavonoid content ranged from 1.23 to 2.23% and was lower for the root culture. Chlorogenic acid and neochlorogenic acid were identified by TLC in all samples. Highest free radical scavenging effect was observed for the root culture which also presented the highest CA content. Two of the shoot culture samples, with similar IC₅₀ values in the DPPH discoloration assay, also presented close quercetin-3-*O*-glucoside content.

Key words: *In vitro* Propagation, Secondary Metabolite Content, *Sanicula graveolens*