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Studies On The Perezona Production In Different Culture Systems Of *Acourtia Cordata* (Cesr.) Turner (Compositae).

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Abstract: Perezona is a sesquiterpenic benzoquinone, which accumulates in the roots of several *Acourtia* species. This compound has proved to be of great value. The aim of this work was to study the effect of conditions *in vitro* and *ex vitro* culture perezona production over time, further develop and validate a method that allows for the selective quantification of perezona. Perezona crystals were obtained from hexane extraction. Perezone was characterized by several analytical methods, using the crystallized compound isolated from roots of wild plants as standard. The roots of plants *ex vitro* increased perezona production from 2.4 mg /g dry weight at 12 weeks to 43.6 mg /g dry weight at 31 weeks. A procedure was developed for perezone selective quantification in its non-ionic and ionic forms. The present study shows the feasibility of using *in vitro* culture systems to propagate and conserve the *Acourtia* germplasm for a large number of *ex vitro* plants and extract perezona comparable to the levels obtained in wild plants.

Keywords: *Acourtia cordata, Micropropagation, Perezona and chemical characterization*

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