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Chemical composition of *Verbena* and *Glandularia* native to South Brazil

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Glandularia and *Verbena* are two genera of the family Verbenaceae and most of the species nowadays recognized as *Glandularia* were described as *Verbena* L. These genera still present problems of circumscription, since they have characteristics in common, being difficult to differentiate them morphologically.¹ Although the genus *Verbena* is well reported in the literature only a few chemical studies have been carried out with *Glandularia* species. The objective of this work was to accomplish screening of extracts of different species of the genera *Verbena* and *Glandularia* in order to verify their chemical compositions. Screening was performed by extracting 0.25 g of the leaves of different species of *Glandularia* and *Verbena* with 5 ml of methanol for 1 h by ultrasound-assisted maceration. The extracts were analyzed by high performance liquid chromatography with photodiode array detection (HPLC-PDA), the chromatographic separation was carried out on Kinetex C18 column (250 × 4.6 mm, 5 µm particle size), using a mobile phase consisting of water (A) and methanol (B) in gradient elution, flow rate of 0.7 ml.min⁻¹ and detection at 230-350 nm. The HPLC analyzes showed that the species of *Verbena* and *Glandularia* have similar chemical composition, predominating iridoids and phenylpropanoids, but derivatives of flavonoids, of the class of flavones, were observed especially in the species of *Glandularia*. Therefore, the chemical composition of the species of the genus *Verbena* and *Glandularia* is similar, but it is possible to emphasize the presence of flavonoids, mainly in the genus *Glandularia*. This fact motivates a deeper investigation, due to the pharmacological activity of flavonoids and the existence of few studies on this genus.

Keywords: *Glandularia*; *Verbena*; Chemical composition.

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References

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