

***Aloe vera* as a source of antioxidant phenolic compounds**

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Introduction. *Aloe vera* has been used for many centuries for its medicinal properties. It contains several compounds such as phenolics, which includes Aloin that has been proposed as a potential therapeutically option in cancer. Phenolic compounds are also of great interest for the food industry, since they have been assigned as functional ingredients. This study aimed to extract, identify and quantify the main phenolic compounds of *Aloe barbadensis* Miller gel and to evaluate its antioxidant activity. **Methodology.** *Aloe vera* gel was previously extracted and lyophilized. Then, four different extractions were applied using a solid-liquid ratio of 1 g of *Aloe vera* to 30 ml of solvent (water, water plus enzyme (*Cellulase*), ethanol/water (80:20 v/v) or ethanol/water (80:20 v/v) plus enzyme) for 2 h at 45 °C, to obtain bioactive extracts. Total phenolic content were quantified by Folin-Ciocalteu colorimetric method. Individual phenolic compounds were identified by UPLC-DAD. Antioxidant activity was evaluated by DPPH, ABTS and FRAP assays. **Results.** Results shown that the enzymatic process with the organic solvent was the best strategy to recover phenolic compounds from *Aloe vera* gel. These data were corroborated with the phenolic profile obtained in these extractions, including aloin, naringin, rosmarinic acid, ellagic acid, apigenin cinnamic acid, and hesperidin. Other compounds were also identified in all *Aloe vera* extracts, though in lower amount, such as resveratrol, ferulic acid, quercetin, coumaric acid, vanillic acid and syringic acid. The antioxidant activity values determined by the FRAP and ABTS methods are in agreement with the results obtained for the phenolic compounds, showing that extracts with a higher concentration of phenolic compounds have greater antioxidant activity. **Conclusion.** *Aloe vera* is a good source of phenolic compounds with high antioxidant activity raising its industrial interest as a functional ingredient.

Keywords: *Aloe vera*, phenolic compounds, extraction, antioxidant activity, functional ingredients.

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