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Characterization and evaluation of antifungal activity in vitro of *Aloe vera* fractions against postharvest fungi

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Aloe vera leaves can be separated in a liquid fraction (exudate) and a mucilaginous pulp (gel). Recently, the antifungal activity of their components has been reported. The common technique for gel extraction from *A. vera* leaves are the traditional manual (in this case the liquid fraction is not separated) and a mechanical methods. Moreover, as a result of its processing the bagasse is obtained. The aim of this work was to recover and characterize the fractions of *A. vera* and to identify the fraction with highest antifungal activity against phytopathogen postharvest fungi (*Botrytis cinerea* and *Penicillium spp.*). A simple and inexpensive extraction method was used to obtain *A. vera* fractions from 50 kg leaves by means of a designed laboratory roll processor. The yields of extraction were as follows: 15.76% ± 4.0, 51.20% ± 5.20, and 33.02% ± 5.0 for gel, liquid fraction and bagasse, respectively. The three fractions were physico-chemically characterized (protein, monosaccharide composition, ashes, lipids) and resulted to be mainly composed by glucose and mannose in all the cases. Results showed the effectiveness of *A. vera* fractions in the growth control of phytopathogen postharvest fungi, with visible reduction of fungal growth.