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## Biological Activity of Pomegranate Extract Against Phytopathogenic Fungi From Strawberry

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### Resumo

The phenolic compounds are found in many species of plants. The classes of these compounds have mostly antioxidant action, fighting to free radicals and in some species have been demonstrated antimicrobial activity becoming sources of promoting beneficial to human health. The pomegranate is a source of these compounds and therefore has been studied excelling its composition of anthocyanins, phenolic acids and tannins, among them, the punicalagin. This work aimed to evaluate in vitro antifungal activity of an aqueous extract of pomegranate peel. This extract was tested against post harvested fungi from strawberries. For this purpose increasing concentrations of pomegranate extract (0, 2.5, 25 and 100 mg/mL) was added to the culture medium Potato Dextrose Agar (PDA). The inoculum was composed by discs with mycelium (0.5 cm in diameter) from each fungus (*Botrytis cinerea*, *Colletotrichum gloeosporioides* and *Pilidium concavum*). The disc was inserted in Petri dishes with PDA and incubated at 25 °C for 10 days. The diameter of the colonies was measured daily and compared to the control plates (without pomegranate extract). The results showed the ability of the pomegranate extract in controlling the mycelial growth of fungi. The best result was observed in *Colletotrichum gloeosporioides*. For this species the growing percentage values were 3.67 % (2.5 mg/mL), 11.94 % (25 mg/mL) and 42.25% (100 mg/mL), respectively. For others fungi also the concentration of 100 mg/mL reduced

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### Referência:

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fungal growing of *Botrytis cinerea* (41.2%) and *Pilidium concavum* (2.7%). This study showed the potential of pomegranate extracts controlling post harvested pathogens from strawberries. Due the antifungal properties of the pomegranate peels its open an opportunity to reduce this agro-industrial waste with potential applications in agriculture.

**Palavras-Chave:** fungi, phenolics, pomegranate extract, postharvest diseases

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