Title	Composition and Antifungal Activity of the Essential Oil of the Brazilian Chenopodium
	ambrosioides L.
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Abstract

The antifungal activity of essential oil (EO) from the Brazilian epazote (*Chenopodium ambrosioides* L.) was evaluated by the poison food assay at concentrations of 0.3%, 0.1%, and 0.05% with eight postharvest deteriorating fungi (*Aspergillus flavus, Aspergillus glaucus, Aspergillus niger, Aspergillus ochraceous, Colletotrichum gloesporioides, Colletotrichum musae, Fusarium oxysporum*, and *Fusarium semitectum*). EO components were tentatively identified by Kováts retention indices (RIs) using gas chromatography and gas chromatography combined with mass spectrometry (GC-MS). Growth of all fungi was completely inhibited at 0.3% concentration, and by 90% to 100% at 0.1% concentration. The following 13 tentatively identified compounds (relative percent) accounted for 90.4% of the total volatile oil: **Q**-terpinene (0.9), *p*-cymene (2.0), benzyl alcohol (0.3), *p*-cresol (0.3), *p*-mentha-1,3,8-triene (0.2), *p*-cimen-8-ol (0.6), **Q**-terpineol (0.5), (*Z*)-ascaridole (61.4), piperitone (0.9), carvacrol (3.9), (*E*)-ascaridole (18.6), (*E*)-piperitol acetate (0.5), and (*Z*)-carvyl acetate (0.3). Autobiographic thin layer chromatography of the EO to separate the principal fungitoxic fraction yielded only one fraction that completely inhibited the growth of all test fungi at a concentration of 0.1%. This fraction was characterized by RIs and GC-MS presenting a composition (%) of *p*-cymene (25.4), (*Z*)-ascaridole (44.4), and (*E*)-ascaridole (30.2). The results suggest ascaridoles were the principal fungitoxic components of the EO.

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