

FULL TEXT LINKS



J Agric Food Chem. 2007 Apr 18;55(8):3027-36. doi: 10.1021/jf062508c. Epub 2007 Mar 24.

Flavor retention of peppermint (*Mentha piperita* L.) essential oil spray-dried in modified starches during encapsulation and storage

Renata Baranauskiene ¹, Egle Bylaite, Jurate Zukauskaite, Rimantas P Venskutonis

Affiliations

PMID: 17381102 DOI: [10.1021/jf062508c](#)

Abstract

The effect of different commercial modified food starch carrier materials on the flavor retention of the essential oil (EO) of peppermint (*Mentha piperita* L.) during spray drying and storage was evaluated. The obtained results revealed that the emulsification and encapsulation efficiencies of peppermint EO were higher for all n-octenyl succinic anhydride (OSAN)-modified starches as compared to those of hydrolyzed starches (dextrins). The compositions of pure, emulsified, and encapsulated peppermint EOs in different matrices were quite similar; however, some changes in the percentages of some individual compounds were observed. Larger differences in the compositions of surface oils from various encapsulation products were obtained. Flavor components were released at different rates by each of the encapsulated products. The aroma binding capacity of different modified starch matrices to lock EO droplets depends on the water activity, and the leakage of aromas from encapsulated powder products during storage increased with increasing water activity.

[PubMed Disclaimer](#)

Related information

[GEO Profiles](#)

[PubChem Compound](#)

[PubChem Substance](#)

LinkOut – more resources

Full Text Sources

[American Chemical Society](#)

Other Literature Sources

[The Lens - Patent Citations Database](#)