

精油對食品品質之影響

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摘要

本次報告探討精油對食品品質與保質期的影響，精油為植物的次級產物，其有效成分具有抗菌及抗氧化的效果。使用 0.1% 墨西哥牛至 (*Lippia berlandieri* Schauer) 精油作為牛至粉的替代品添加到西班牙香腸之中，保存七天後紅色度、黃色度、顏色飽和度及褐變指數皆有增加，表示顏色較控制組鮮豔，西班牙香腸的硬度、彈性、黏性和咀嚼性皆是控制組高於實驗組，儲存七天後西班牙香腸的好氧菌數都有增加，實驗組細菌量較低，從官能品評中可知七天後實驗組的牛至氣味較控制組強烈。使用精油化合物與酚酸一同添加到義大利香腸中，測其對腸道出血型大腸桿菌 (大腸桿菌 O157:H7) 抑制效果，由試管實驗中得到精油化合物與酚酸的最佳組合為異硫氰酸丙酯 (AITC) 與鄰香豆酸，兩者具有協同作用，分數抑制濃度指數為 0.25，以分數抑制濃度的 10 倍與 20 倍濃度添加到義大利香腸之中，水活性無顯著差異，pH 值皆高於控制組，大腸桿菌 O157:H7 菌數在 20 倍濃度組於 21 天後下降 $\geq 5 \log \text{CFU/g}$ ，在 10 倍濃度組則在 35 天後降低 $2.8 \log \text{CFU/g}$ ，官能品評中顯示實驗組得分較低。紫蘇葉精油可以抑制大腸桿菌、沙門氏菌和金黃色葡萄球菌，添加 0.01 和 0.03% 紫蘇精油於煉製品中在冷藏四周的期間，從質地分析和感官品評得知精油的添加對食物顏色和質地的影響最小，且可顯著延緩脂質氧化和蛋白質羰基化並降低總揮發性鹽基態氮的形成，此外紫蘇精油顯現出良好的抗菌效果，0.03% 揮發油對總生菌數和大腸桿菌的抑制效果最佳。不同種類精油對食品的影響有所不同，但對於提升食品品質與保質期具有潛力，進一步改善使用比例或與其他技術結合可以增加精油在食品中使用的可能性。

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