新鮮及乾燥番茄甲醇萃取液之抗氧化性比較

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摘 要

本研究以黑柿（一點紅，I TIEN HUNG）與聖女（SHENG NEU）品種的番茄（LYCOPERSICON ESCULENT -UM MILL.）為材料，分成新鮮、冷凍乾燥及熱風乾燥等三種不同處理之番茄樣品，以甲醇萃取其抗氧 化活性成分，並探討各番茄樣品甲醇萃取液之抗氧化活性。 在還原力方面，以經冷凍乾燥處理之聖女番茄樣品之甲醇萃取液，其還原能力優於所有其他樣品之甲 醇萃取液，其次為新鮮與冷凍乾燥處理之黑柿番茄及新鮮之聖女番茄之甲醇萃取液，再其次則為經熱風乾燥處理之聖女番茄與黑柿番茄之甲醇萃取液，而BHA與Ａ-生育醇之甲醇萃取液在還原力上皆為最低。 在亞鐵離子螯合能力方面，以冷凍乾燥與熱風乾燥處理之黑柿番茄之甲醇萃取液，其亞鐵離子螯合能 力最佳，其次是新鮮之黑柿番茄樣品與經冷凍乾燥處理及熱風乾燥處理之聖女番茄之甲醇萃取液，其亞 鐵離子螯合能力相近，而BHA與Ａ-生育醇之甲醇萃取液則沒有亞鐵離子之螯合能力。 在DPPH自由基之清除能力方面，不論是黑柿大番茄或聖女小番茄，其新鮮與各乾燥處理樣品之甲醇萃 取液，在低濃度時（2 MG/ML）就有很強的DPPH自由基之清除能力，若與Ａ-生育醇和BHA之甲醇萃取液作比較，DPPH自由基之清除能力皆相近。 就抗氧化活性成分之定量分析而言，於抗壞血酸方面，皆以新鮮的番茄含量較高；於類黃酮素含量分 析上，不論是黑柿或聖女番茄其新鮮與冷凍乾燥及熱風乾燥處理的樣品含量均不高，其值皆為每百克乾 重含10 MG以下；而總多酚類之含量，則黑柿大番茄與聖女小番茄之熱風乾燥處理的樣品其含量較高； 此外各樣品之番茄紅素含量之比較，則以新鮮之聖女番茄樣品其含量最高。

關鍵詞 : 番茄、抗氧化性、番茄紅素、冷凍乾燥、熱風乾燥、還原力、亞鐵離子螯合能力、DPPH自由基清除能力

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