

TLC를 이용한 인진 속으로부터의 Polyphenol 화합물의 분석 및 최적의 분리용매 조건

이지영*, 김남규, 이은정, 조진국, 이치호
건국대학교 축산가공학과

This study was carried out to investigate the identification of polyphenol compounds and establish the extraction condition of Mugwort by using Thin Layer Chromatography.

To elucidate the structures of polyphenols from Mugwort, the extractives was removed by evaporation under reduced pressure, and the resulting aqueous solution was shaken with chloroform and ethylacetate for separation from non-polarity monomeric and dimeric polyphenol, and then the concentrated extract in aqueous suspension was partitioned successively with chloroform, ethylacetate, leaving a residual water extract.

Making of various extraction conditions (100% ethyl alcohol, acetone-water 7 : 3), Mugwort was extracted and then the total polyphenol contents of ET-100% , AT-WT(7:3,v/v)) were measured.

four materials (flavone, Hydroquinone, Naringenin, Resorcin crystal) selected as standard were investigated. The rest of standards were investigated by G. Pastuska et al. (32.33)

Analytical separation by TLC was performed on Silica Gel using solvents by Benzene : Dioxane : Acetic acid (90 : 25 : 4) and Benzene : Methanol : acetic acid (45 : 8 : 4).

The results obtained were summarized as follows ;

1. The weight of extracts in Mugwort was 0.907g/50g(100%ET) and 0.457g/50g(AT-WT(7:3,v/v)).
2. The contents of total polyphenol was 2.53mg/50g(AT-WT(7:3,v/v)).
3. The Rf value of extracts was measured.

Benzene : Dioxane : Acetic acid (90 : 25 : 4)

* 100%ET : 4, 67-68, 70-71, 87-88

* AT-WT(7:3,v/v) : 16-17, 24, 46, 53-54, 67, 71

Benzene : Methanol : acetic acid (45 : 8 : 4)

100%ET : 8-9, 46-47, 54, 58-59, 62, 73, 77-78, 83-84

AT-WT(7:3,v/v) : 30, 39, 46-47, 54, 62, 77-78

Therefore, This suggest that the polyphenol compounds (Vanillin, Caffeic acid, Vanillic acid, Isovanillin, Catechol, Ethyl protocatechuate, Protocatechuic acid, Hydroquinone) may exist in Mugwort extracts.