

Article

Effect of the Addition of Dandelion (*Taraxacum officinale*) on the Protein Profile, Antiradical Activity, and Microbiological Status of Raw-Ripening Pork Sausage

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S.1. Qualitative analysis of dandelion extract

LC-QTOF-MS analyses were performed to estimate the qualitative composition of the tested extract. The presence of five compounds was revealed by the analysis of mass spectra of their standards. For these compounds, the LC-MS analyses were performed in the *scan* mode to confirm their retention times and in the *target* mode to confirm their fragmentation spectra. Other compounds were identified on the basis of literature data and available databases (PubChem, ChemSpider). In Table S1 precursor ions for each identified compound as well as compound CID number described in the Pub Chem database are inserted. All compounds were earlier identified in dandelion, which was confirmed by appropriate references.

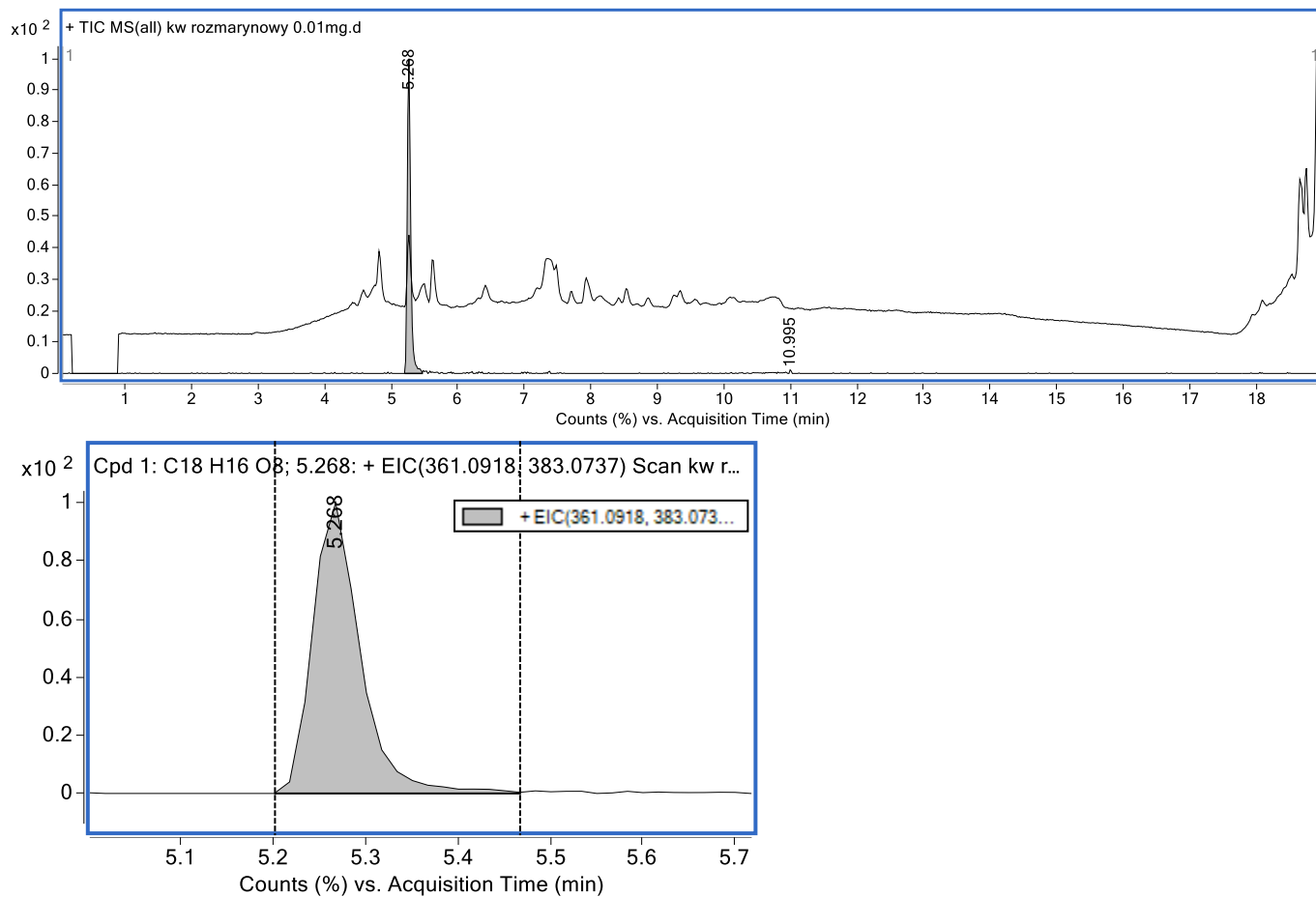
Table S1. Identification of phenolic compounds in dandelion leaf water extract determined with the LCMS-ESI-QTOF method in positive (ESI+) ionization modes.

| No | Name* | R _t | Molecular formula | Precursor type | Precursor m/z | Precursor type | Precursor m/z | PubChem | Identification /confirmation |
|----|-------------------------------|----------------|---|--------------------|---------------|---------------------|---------------|---------------|------------------------------|
| | | | | | | | | Com-pound CID | |
| 1 | Neochlorogenic acid | 1.274 | C ₁₆ H ₁₈ O ₉ | [M+H] ⁺ | 355.102 | - | - | 5280633 | [2, 3] |
| 2 | Caffeoyltartaric acid | 1.307 | C ₁₃ H ₁₂ O ₉ | [M+H] ⁺ | 313.0556 | [M+Na] ⁺ | 335.0377 | 6440397 | [1, 2] |
| 3 | 7-hydroxycoumarin | 1.307 | C ₉ H ₆ O ₃ | [M+H] ⁺ | 163.039 | - | - | 5281426 | [4] |
| 4 | Cichoriin | 1.623 | C ₁₅ H ₁₆ O ₉ | [M+H] ⁺ | 341.0871 | [M+Na] ⁺ | 363.0589 | 442101 | [4] |
| 5 | Esculetin | 2.772 | C ₉ H ₆ O ₄ | [M+H] ⁺ | 179.0347 | - | - | 5281416 | [4] |
| 6 | Dihydrosyringin | 3.288 | C ₁₇ H ₂₆ O ₉ | [M+H] ⁺ | 375.169 | [M+Na] ⁺ | 397.147 | 71720642 | [4] |
| 7 | Taraxafolin | 3.738 | C ₁₁ H ₁₄ O ₅ | [M+H] ⁺ | 227.093 | - | - | 10987942 | [4] |
| 8 | Quercetin-3-O-Ara-Glc | 3.821 | C ₂₆ H ₂₈ O ₁₆ | [M+H] ⁺ | 597.1455 | - | - | 5484066 | [1] |
| 9 | Quercetin-3, 4'-di-Glc | 3.855 | C ₂₇ H ₃₀ O ₁₇ | [M+H] ⁺ | 627.1578 | [M+Na] ⁺ | 649.1403 | 5320835 | [1] |
| 10 | Quercetin-3-(malonyl-Glc)-Glc | 3.888 | C ₃₀ H ₃₂ O ₂₀ | [M+H] ⁺ | 713.1576 | [M+Na] ⁺ | 735.1489 | 74978238 | [1] |
| 11 | Caffeoyl malic acid | 4.021 | C ₁₃ H ₁₂ O ₈ | [M+H] ⁺ | 297.0623 | [M+Na] ⁺ | 319.0429 | 6124299 | [3] |
| 12 | Scopoletin | 4.337 | C ₁₀ H ₈ O ₄ | [M+H] ⁺ | 193.0499 | [M+Na] ⁺ | 215.0306 | 5280460 | [4] |
| 13 | Luteolin 3', 7-O-di-Glc | 4.371 | C ₂₇ H ₃₀ O ₁₆ | [M+H] ⁺ | 611.1635 | [M+Na] ⁺ | 633.1416 | 5490298 | [1] |
| 14 | Quercetin-3-O-Ara | 4.504 | C ₂₀ H ₁₈ O ₁₁ | [M+H] ⁺ | 435.0931 | [M+Na] ⁺ | 457.0769 | 12309865 | [1, 2] |
| 15 | Chlorogenic acid | 4.504 | C ₁₆ H ₁₈ O ₉ | [M+H] ⁺ | 355.1026 | [M+Na] ⁺ | 377.0855 | 1794427 | Standard, [1, 3] |
| 16 | L-chicoric acid | 4.504 | C ₂₂ H ₁₈ O ₁₂ | [M+H] ⁺ | 475.0878 | [M+Na] ⁺ | 497.0702 | 5281764 | [1, 2, 3] |
| 17 | Luteolin 7-O-Rhamnoside | 4.851 | C ₂₇ H ₃₀ O ₁₅ | [M+H] ⁺ | 595.1652 | [M+Na] ⁺ | 617.1558 | 4636593 | Standard, [1, 2] |
| 18 | 3,5-di-O-caffeoylquinic acid | 4.903 | C ₂₅ H ₂₄ O ₁₂ | [M+H] ⁺ | 517.1352 | - | - | 6474310 | [1] |
| 19 | Luteolin 7-O-Glc | 4.947 | C ₂₁ H ₂₀ O ₁₁ | [M+H] ⁺ | 449.1085 | [M+Na] ⁺ | 471.0867 | 5282149 | Standard,[1,2,3] |
| 20 | Rosmarinic acid | 5.268 | C ₁₈ H ₁₆ O ₈ | - | - | [M+Na] ⁺ | 383.0742 | 5281792 | [4] |
| 21 | Luteolin | 6.073 | C ₁₅ H ₁₀ O ₆ | [M+H] ⁺ | 587.0527 | - | - | 5280445 | Standard, [3] |

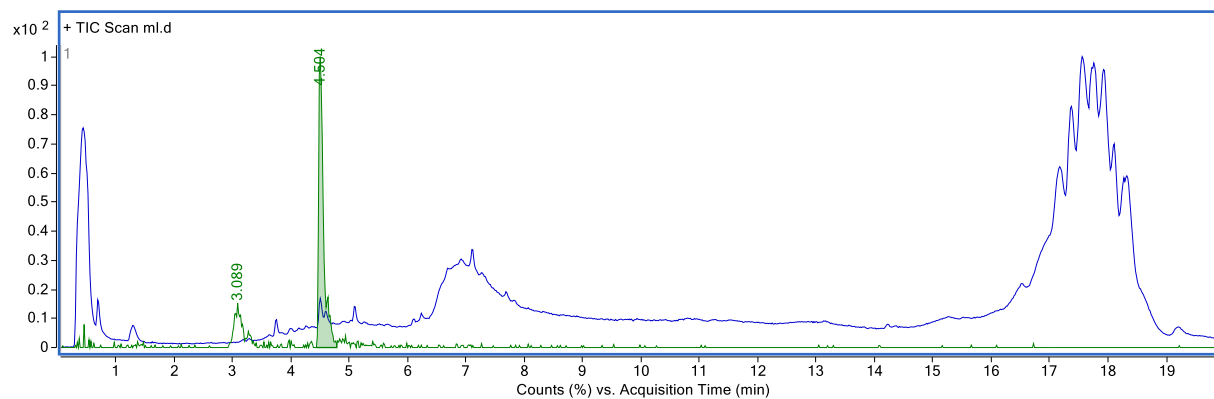
Glc: glucoside, Gal: galactoside, Ara: arabinoside

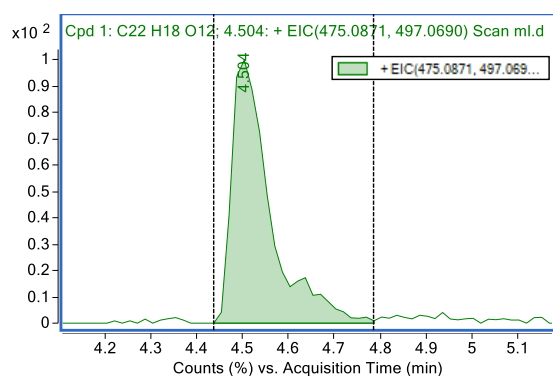
S2. Q-TOF spectra for standard compounds

Rosmarinic acid

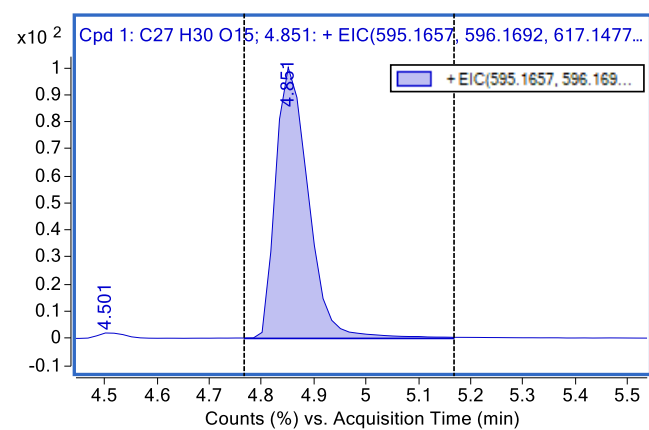
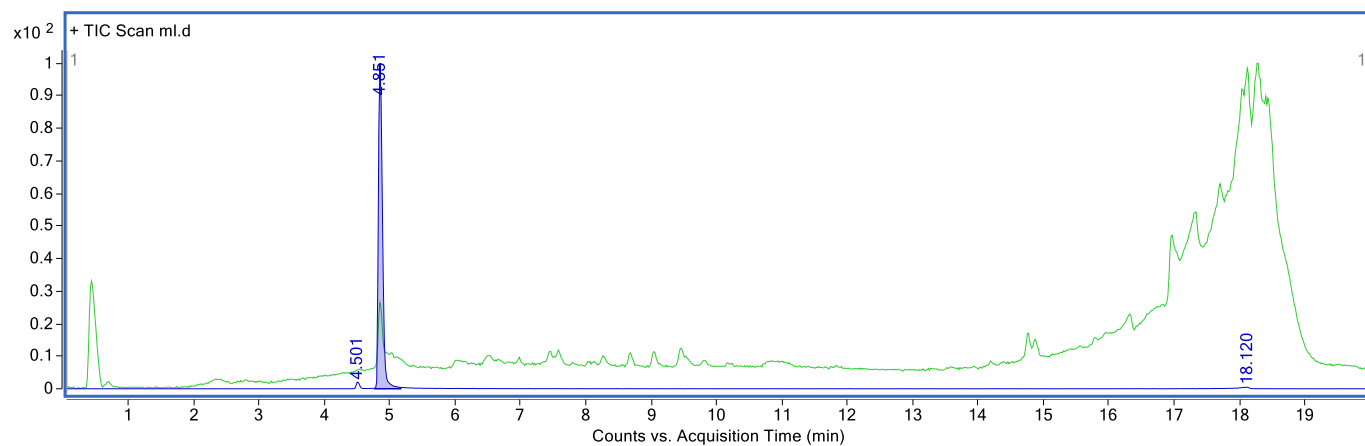


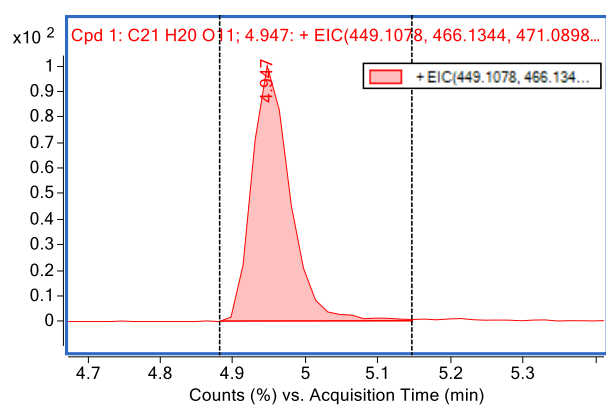
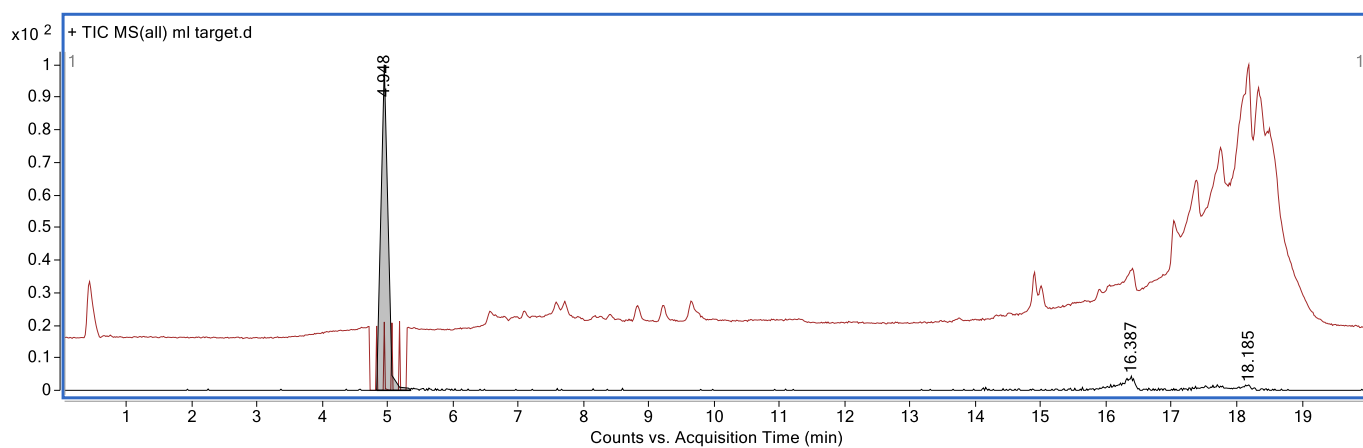
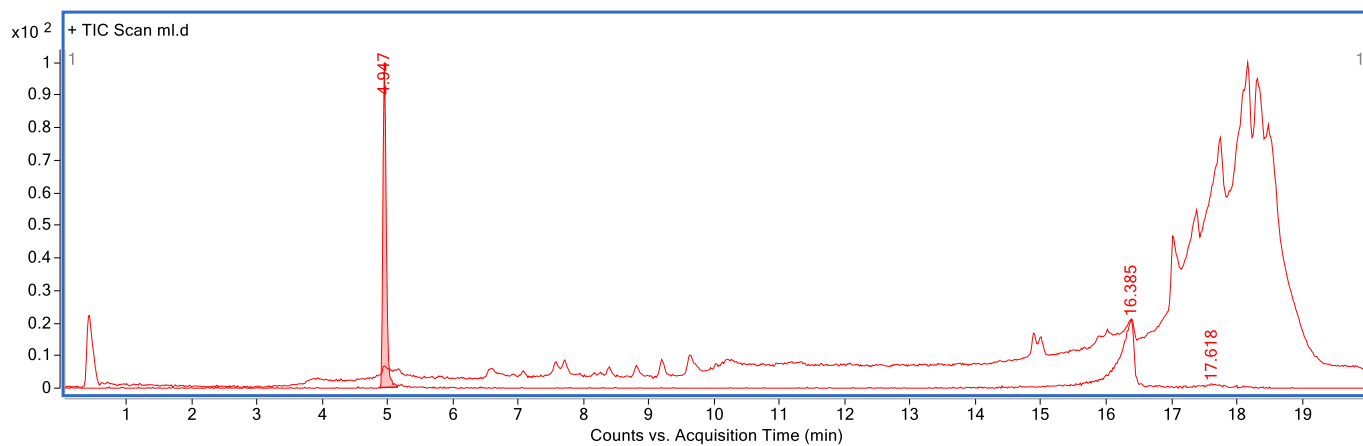
Chlorogenic acid

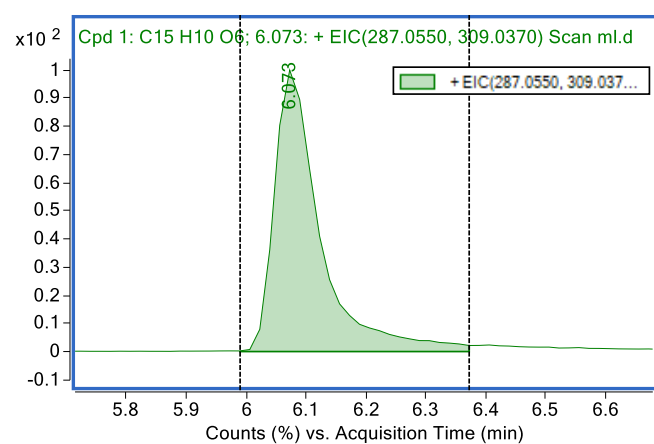
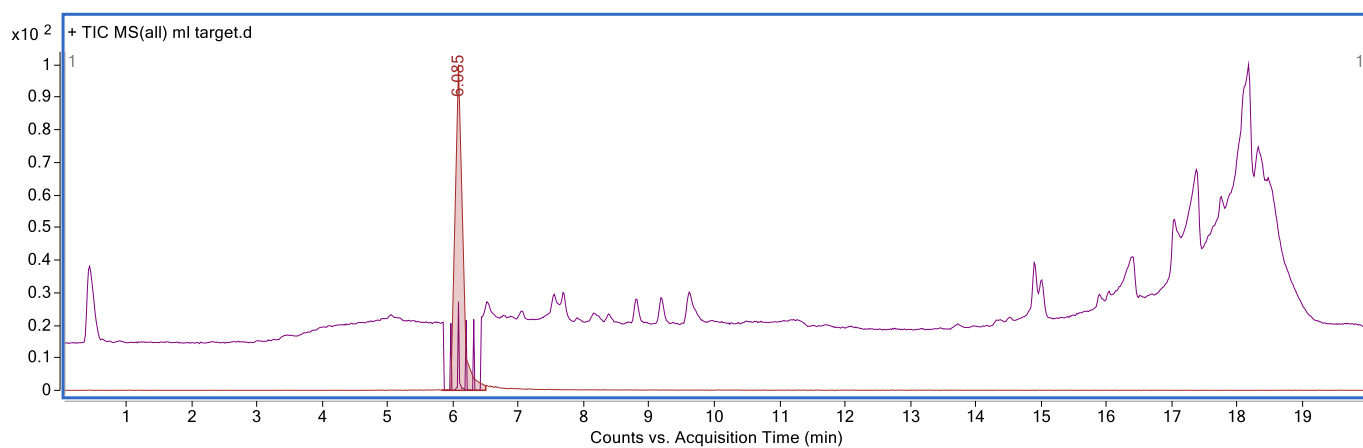
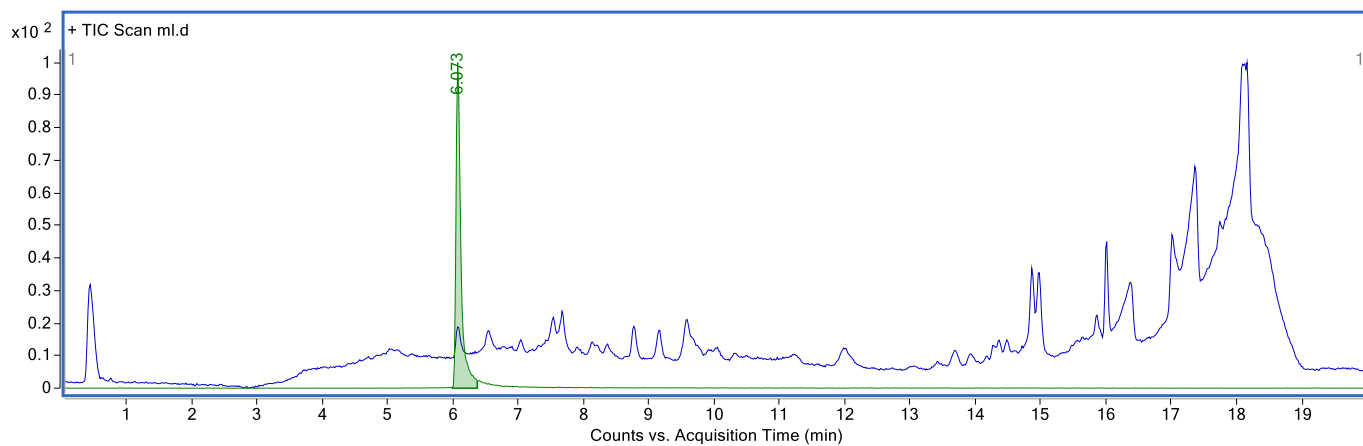




Luteolin 7-O-rhamnoside



Luteolin 7-O-glucoside

Luteolin

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