

Phenolic-based discrimination between healthy and *Cameraria ohridella*- and *Erysiphe flexuosa*-infected leaves of *Aesculus hippocastanum*

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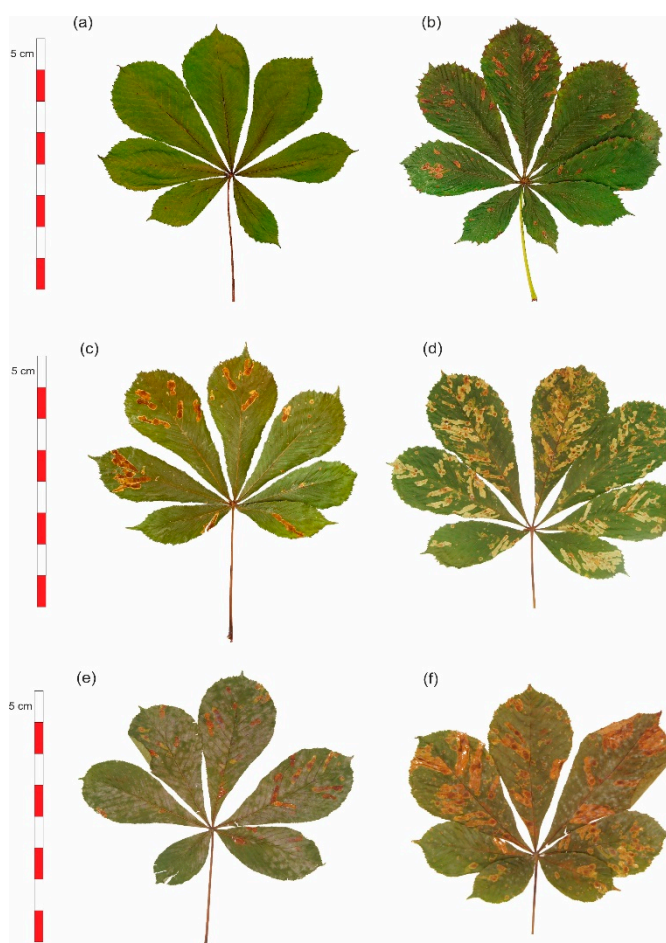


Figure S1. Representative photos of *Aesculus hippocastanum* leaves collected at the 7th collection period. Level of infection: (a) control, (b) and (c) C1E0, (d) C3E0, (e) C1E3, (f) C2E2.

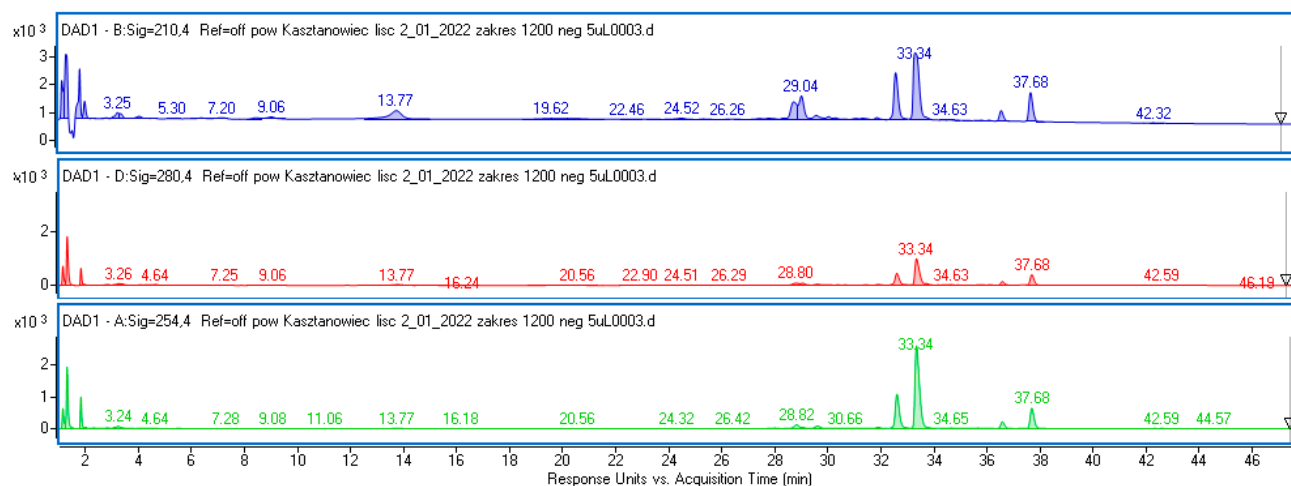


Figure S2. Representative chromatograms of *A. hippocastanum* control leaves recorded at 210 nm (blue), 280 (red) and 254 nm (green).

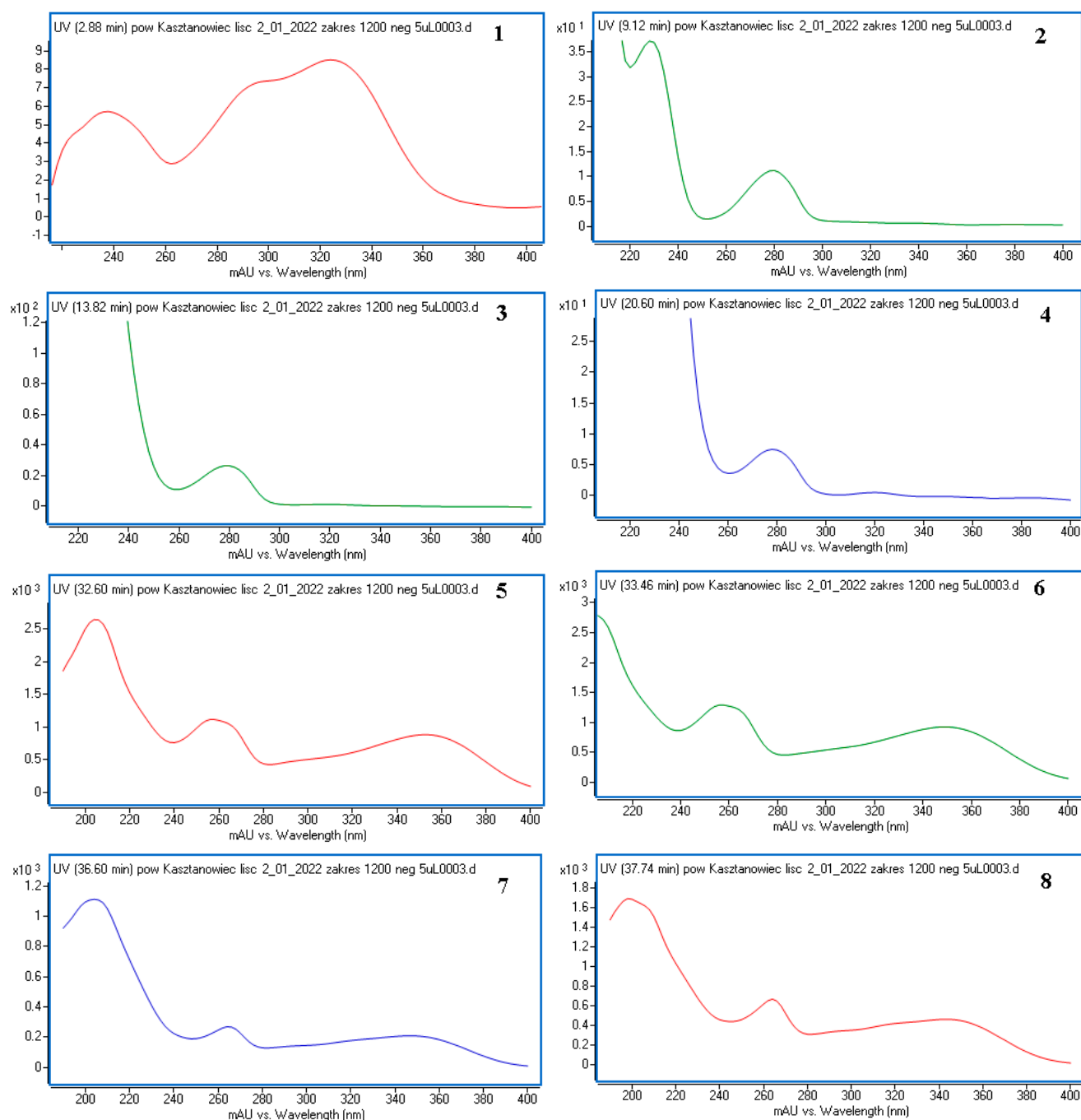


Figure S3. UV-Vis spectra of compounds identified in *A. hippocastanum* leaves. 1 - neochlorogenic acid, 2 - (-)-epicatechin, 3 - procyanidin trimer A-type, 4 - procyanidin tetramer A-type, 5 - quercetin-3-*O*-arabinoside, 6 - quercetin-3-*O*-rhamnoside, 7 - kaempferol-3-*O*-arabinoside, and 8 - kaempferol-3-*O*-rhamnoside.

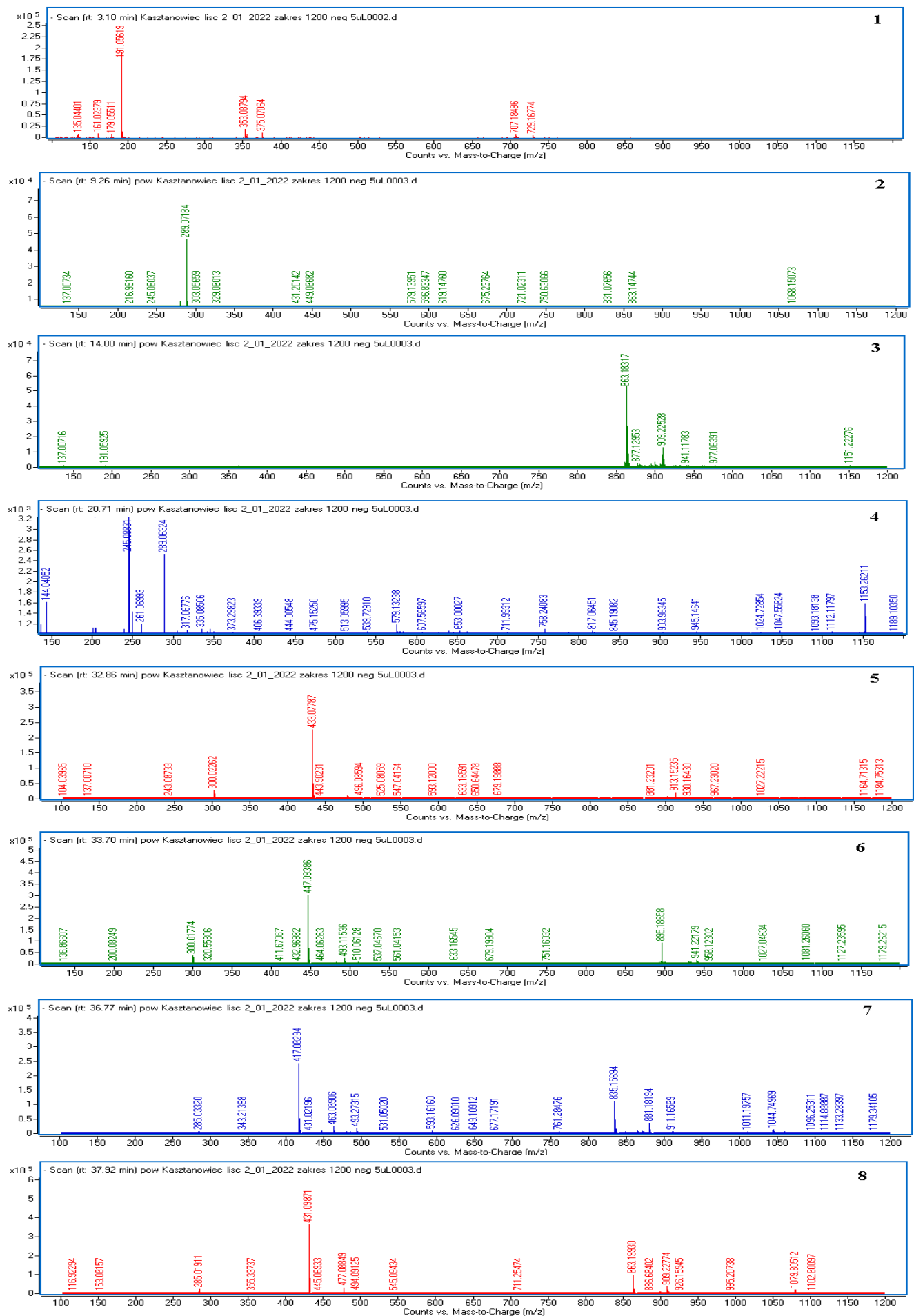


Figure S4. MS spectra of compounds identified in *A. hippocastanum* leaves (in the negative ionization mode). 1 - neochlorogenic acid, 2 - (-)-epicatechin, 3 - procyanidin trimer A-type, 4 - procyanidin tetramer A-type, 5 - quercetin-3-O-arabinoside, 6 - quercetin-3-O-rhamnoside, 7 - kaempferol-3-O-arabinoside, and 8 - kaempferol-3-O-rhamnoside.

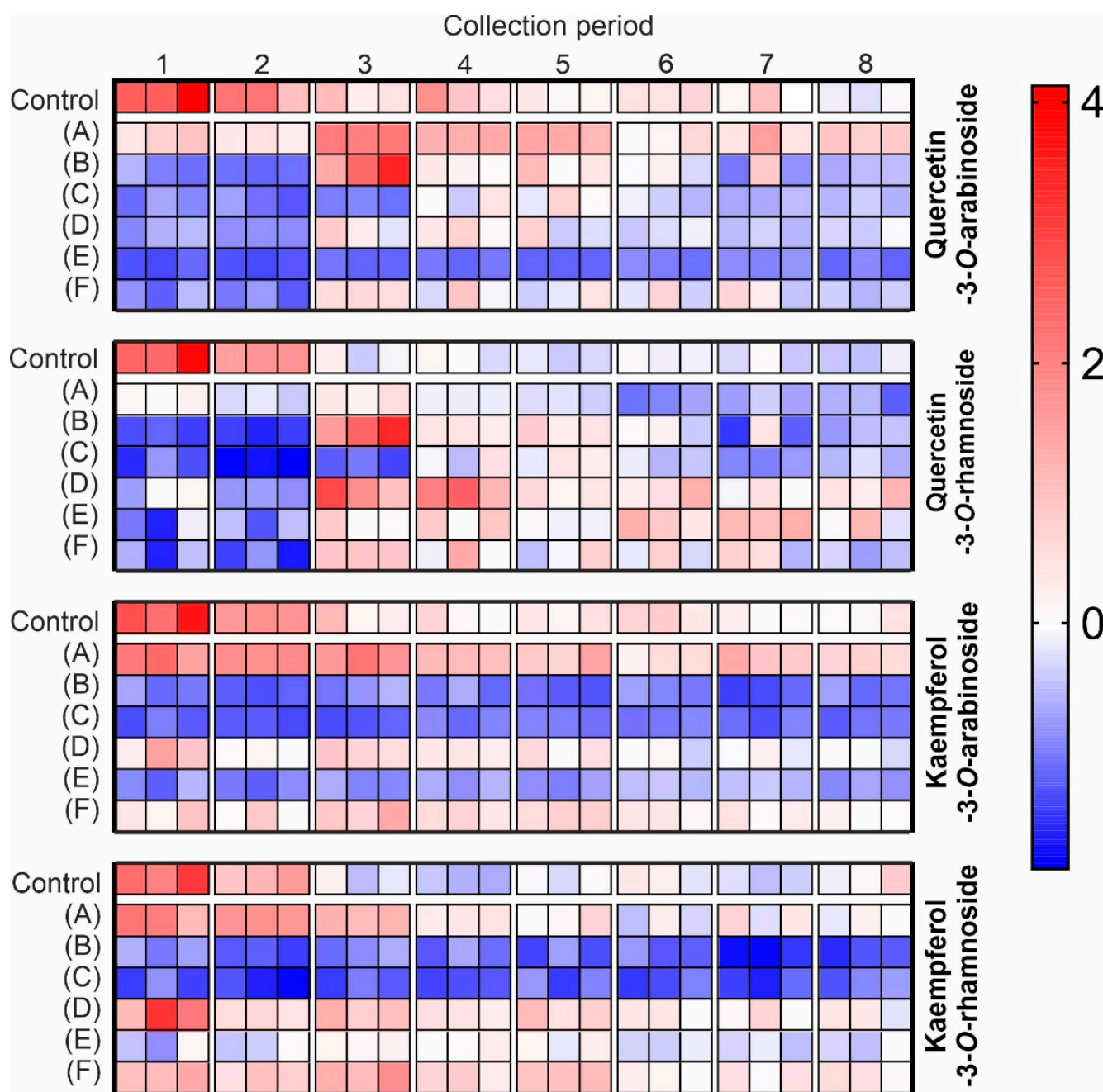


Figure S5. Heat map of quercetin and kaempferol derivative contents in the leaves of *A. hippocastanum* trees (control and symptomatic A-F) measured at the seventh collection period. The higher the level of the measured compound, the more intense the red color. The lower the level of the compound, the more intense the blue color.

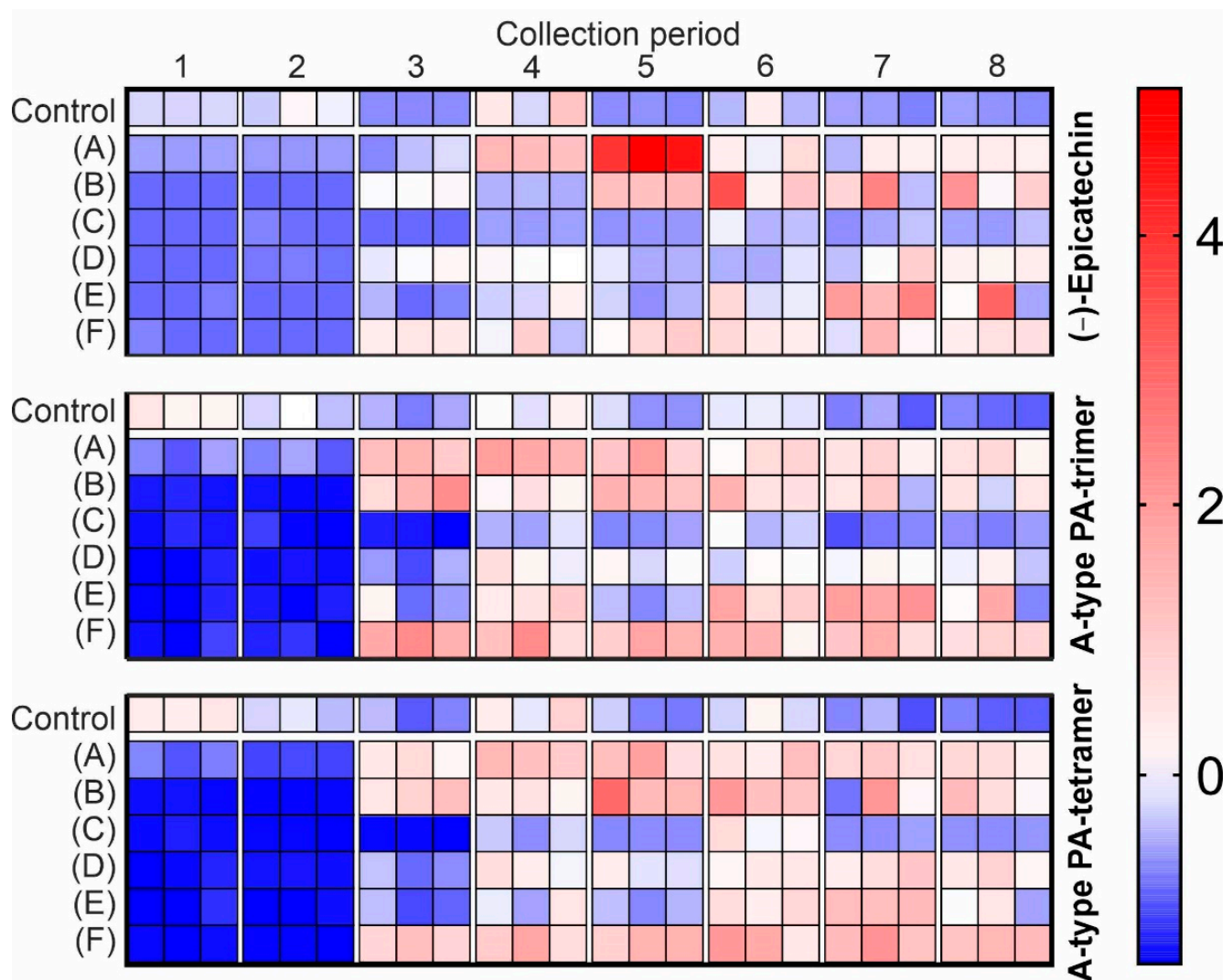


Figure S6. Heat map of epicatechin and procyanidin contents in the leaves of *A. hippocastanum* trees (control and symptomatic A-F) measured at the seventh collection period. The higher the level of measured compound, the more intense the red color. The lower the level of the compound, the more intense the blue color.

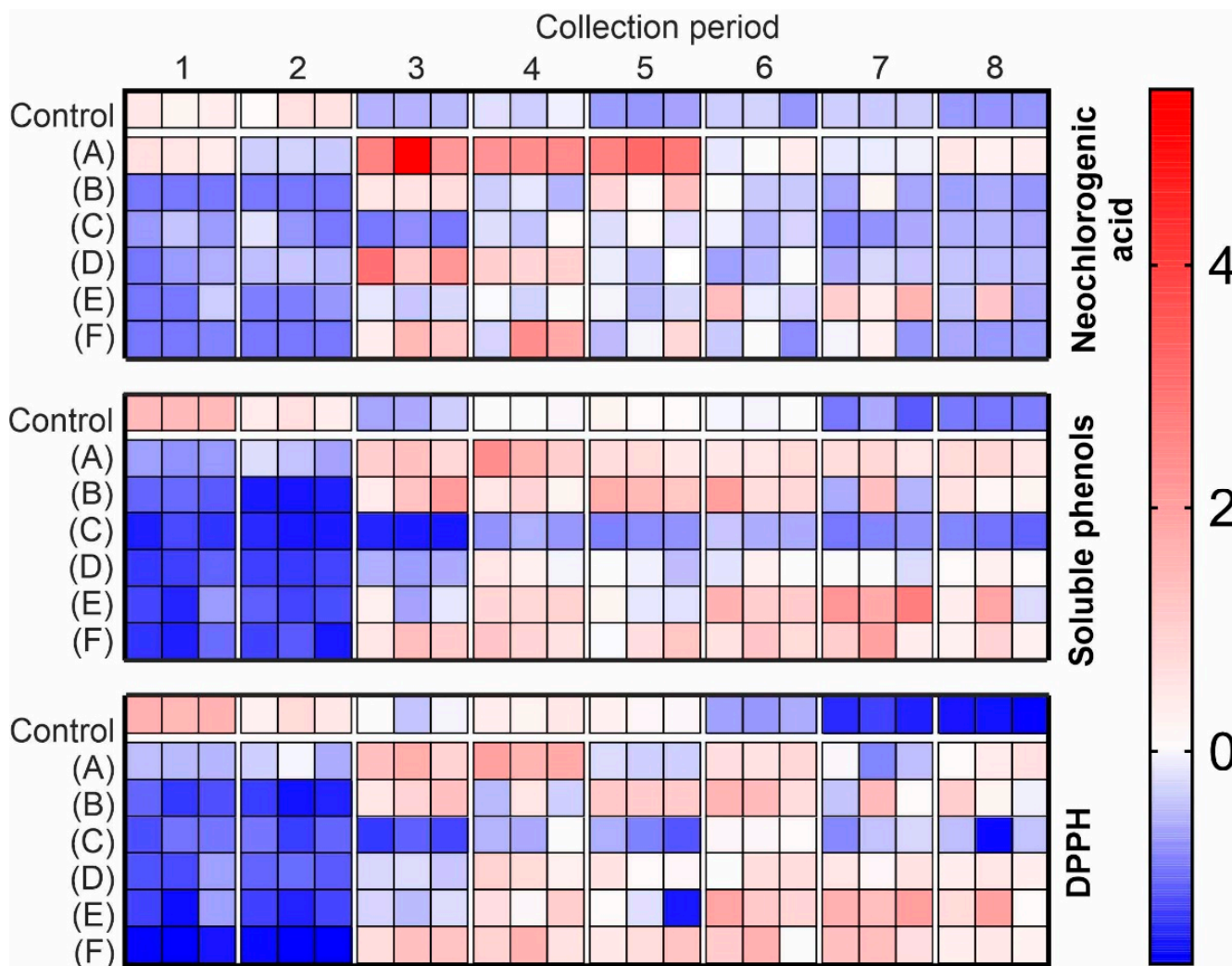


Figure S7. Heat map of the contents of neochlorogenic acid and soluble phenols and the DPPH level in the leaves of *A. hippocastanum* trees (control and symptomatic A-F) measured at the seventh collection period. The higher the level of measured compound, the more intense the red color. The lower the level of the compound, the more intense the blue color.

Table S1. Selected meteorological parameters in Lublin: mean temperature and precipitation from April to August [37].

Parameters	April	May	June	July	August
Mean T [°C]	9.4	12.8	21.3	18.3	19.7
Mean Max T [°C]	14.8	17.7	27.3	24.5	26.0
Mean Min T [°C]	4.2	8.8	15.2	12.9	14.1
Precipitation days					
≥ 0.1 mm	8	16	4	11	9
≥ 1 mm	6	11	2	6	8
≥ 5 mm	2	7	1	2	6
≥ 10 mm	1	2	1	0	2
≥ 20 mm	0	2	0	0	1

Table S2. Formulas of the calibration curves for neochlorogenic acid, (-)-epicatechin and the corresponding flavonoid aglycones (quercetin and kaempferol).

Compound	Formula
neochlorogenic acid	$y = 47789109.3 x + 3028.5; R^2 = 0.9998$
epicatechin	$y = 244926385.4 x - 11887.0; R^2 = 0.9999$
quercetin	$y = 40258231.2 x - 975653.5; R^2 = 0.9979$
kaempferol	$y = 45051376.1 x - 923586.9; R^2 = 0.9922$