

Supporting Information

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Improved Atopic Dermatitis of *H. macrophylla* by Microwave Processing through the Generation of Hydrangenol

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Bioassay

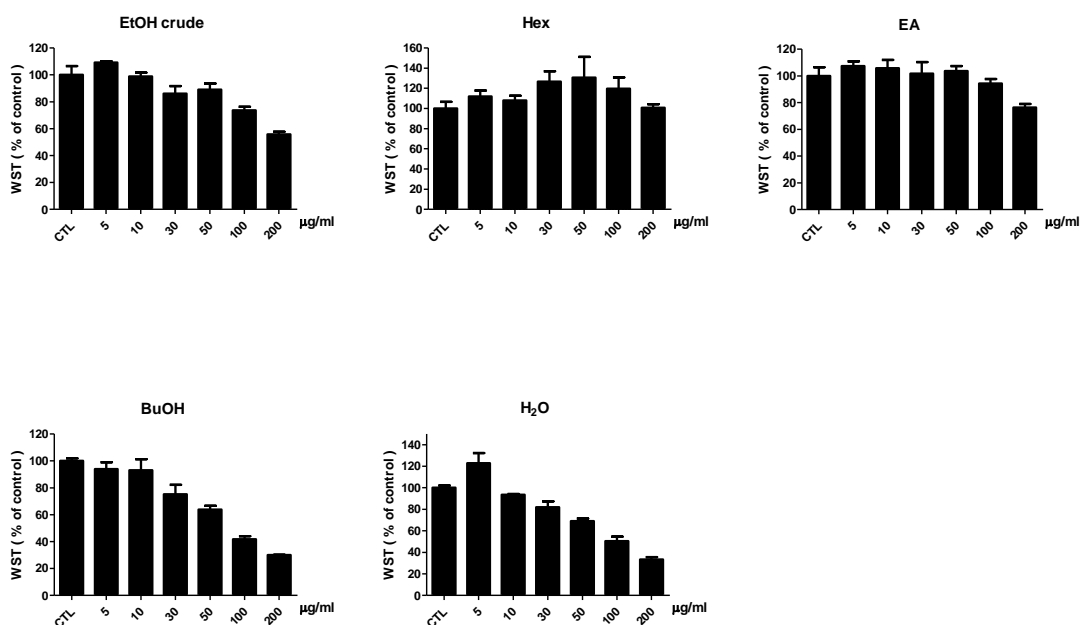


Figure S1: Cell cytotoxicities of *H. macrophylla* extract and its fractions in RBL-2H3 cells. The percent cell viability was calculated relative to the nontreated cells. Cells were measured 24 hours after the sample treatment. Each bar presented as mean \pm S.D. (n = 3)

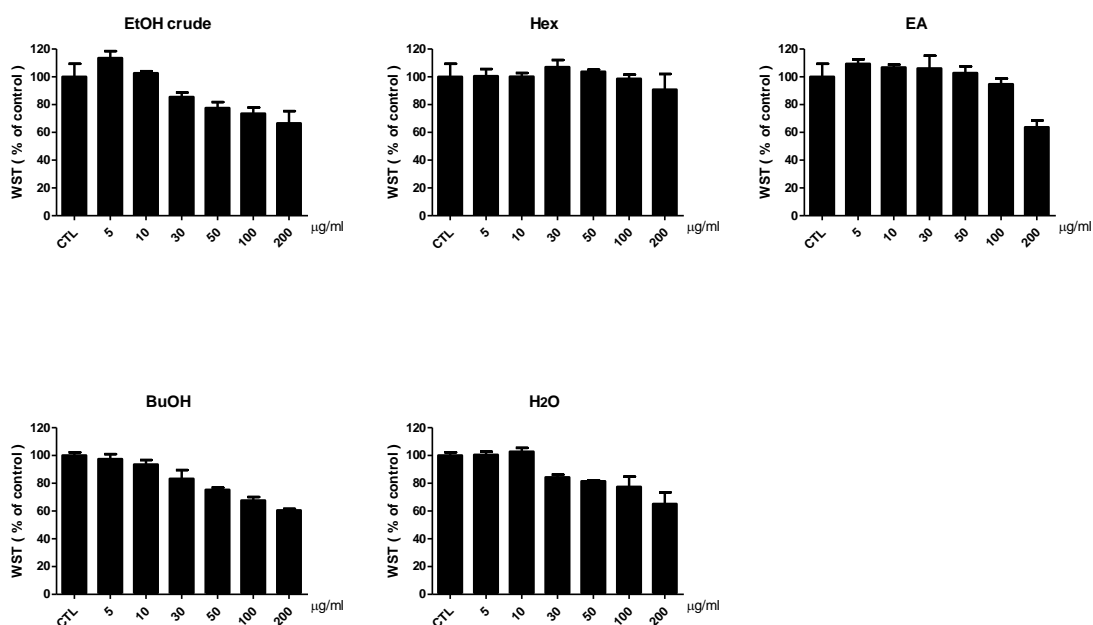


Figure S2: Cell cytotoxicities of *H. macrophylla* extract and its fractions in HaCaT cells. The percent cell viability was calculated relative to the nontreated cells. Cells were measured 24 hours after the sample treatment. Each bar presented as mean \pm S.D. (n = 3)

Conversion of *H. macrophylla* by Microwave Irradiation

General Information. Comparison in the contents of components in *H. macrophylla* extracts. The 70% ethanol extract of *H. macrophylla* (crude) was processed using microwave. Each of 200 mg of the dry extracts was added to 1 mL of 50% ethanol in a 10 mL container of a microwave irradiator (model no. 908005) manufactured by CEM company (Matthews, NC, USA).

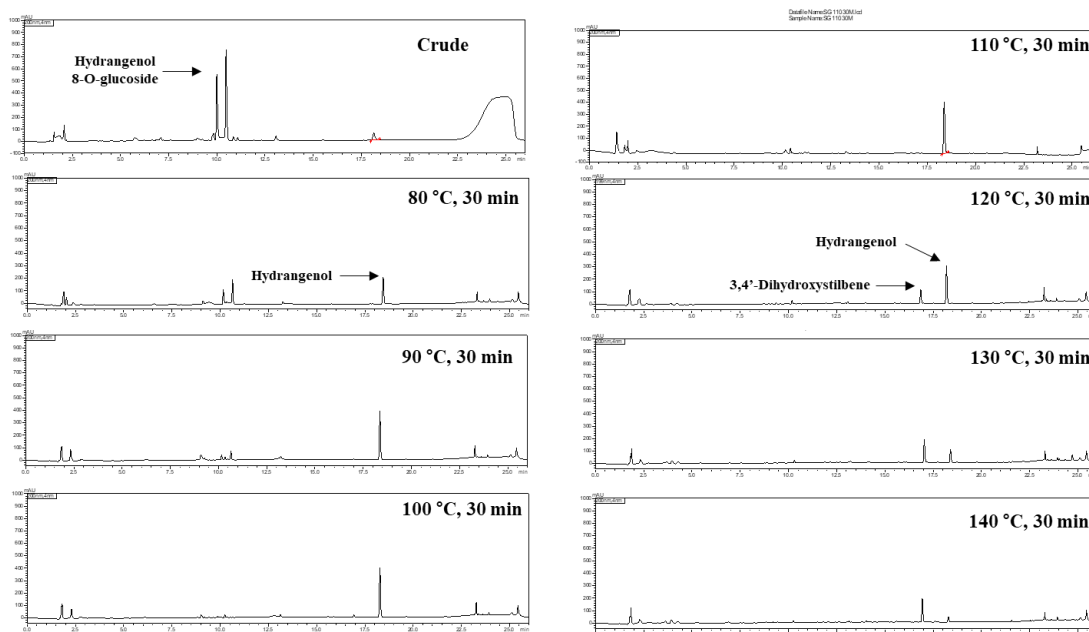


Figure S3: The dry extract was irradiated with microwaves in a sealed container for 30 min at a power of 100 W and a temperature of 80, 90, 100, 110, 120, 130 and 140 °C.

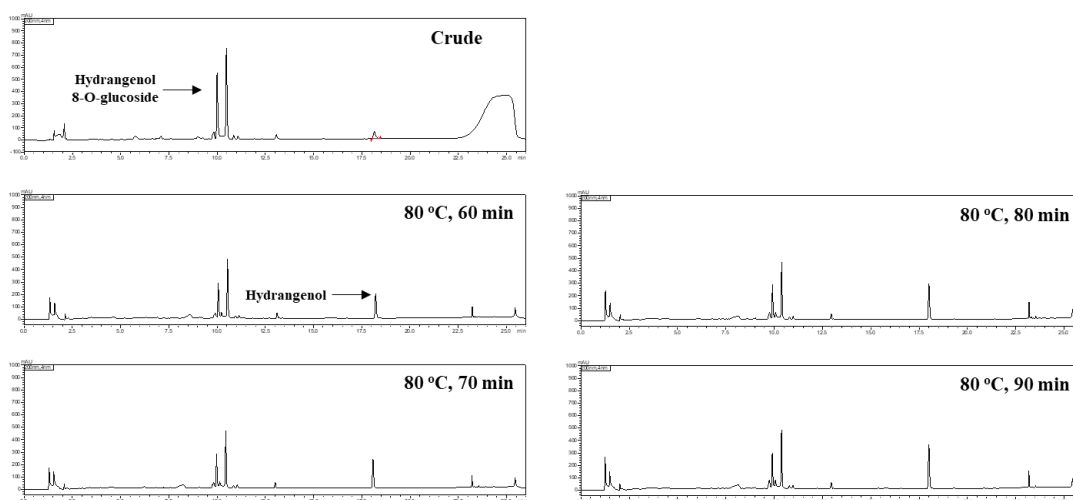


Figure S4: The dry extract was irradiated with microwaves in a sealed container at a temperature of 80 °C and a power of 100W for 60, 70, 80 and 90 min.

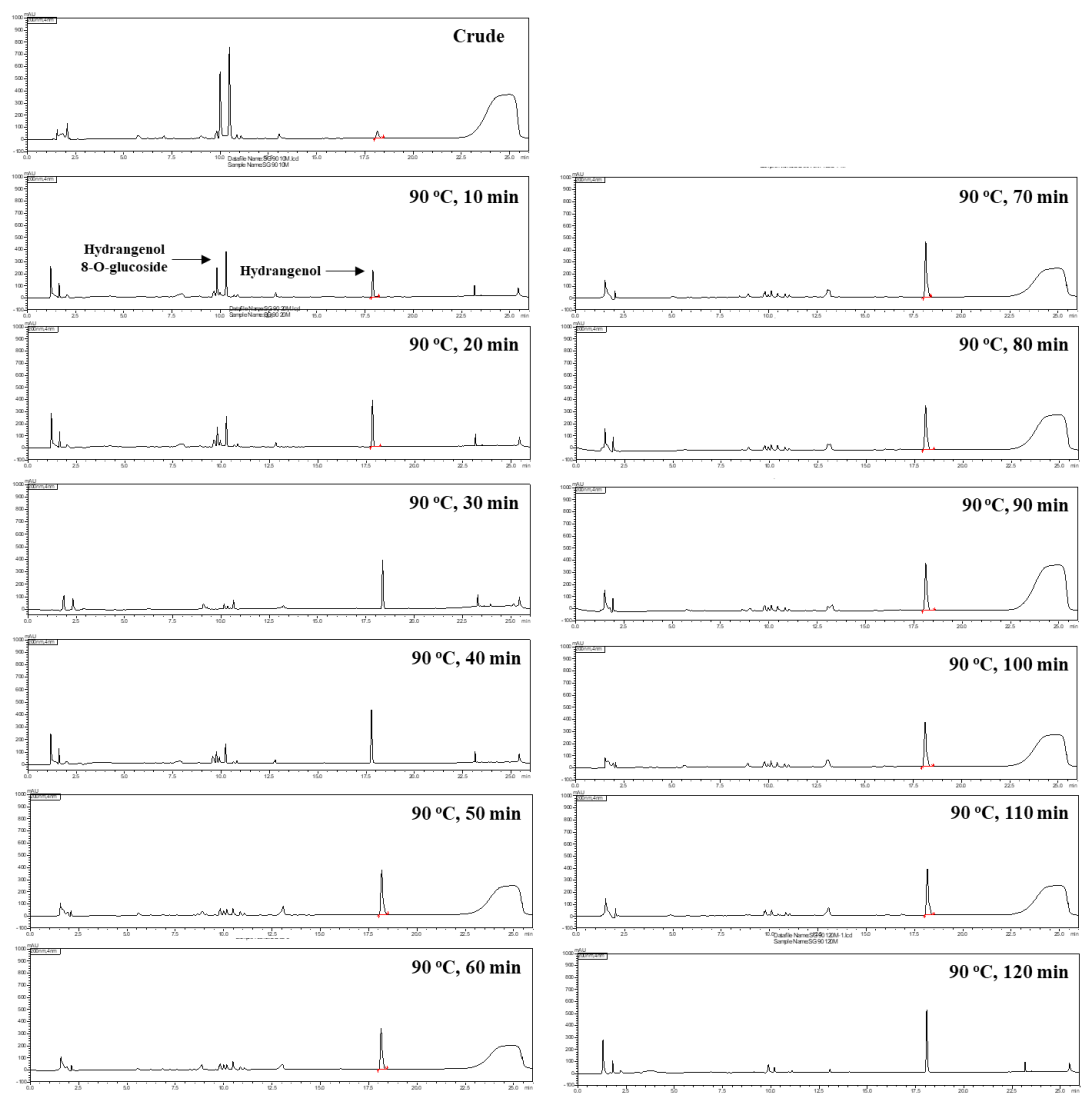


Figure S5: The dry extract was irradiated with microwaves in a sealed container at a temperature of 90 °C and a power of 100W for 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110 and 120 min.

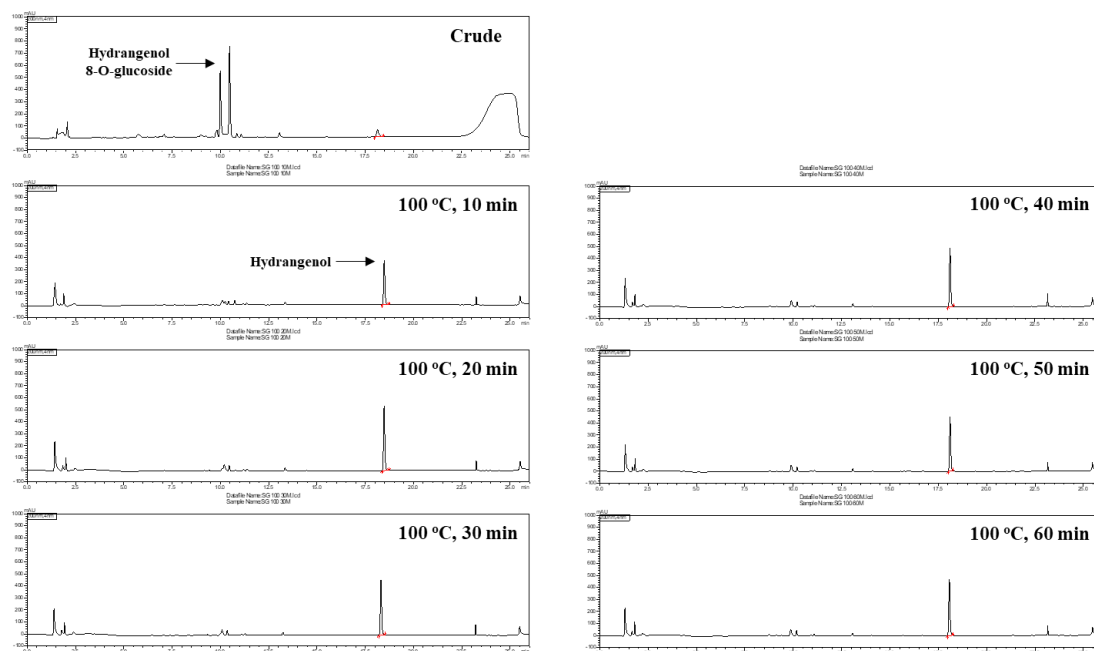


Figure S6: The dry extract was irradiated with microwaves in a sealed container at a temperature of 100 °C and a power of 100W for 10, 20, 30, 40, 50 and 60 min.

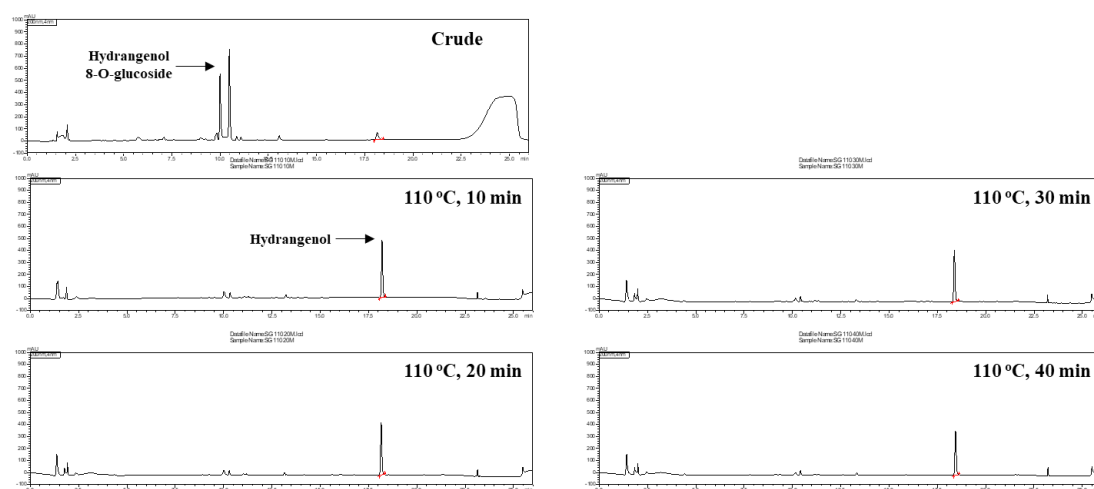


Figure S7: The dry extract was irradiated with microwaves in a sealed container at a temperature of 110 °C and a power of 100W for 10, 20, 30 and 40 min.

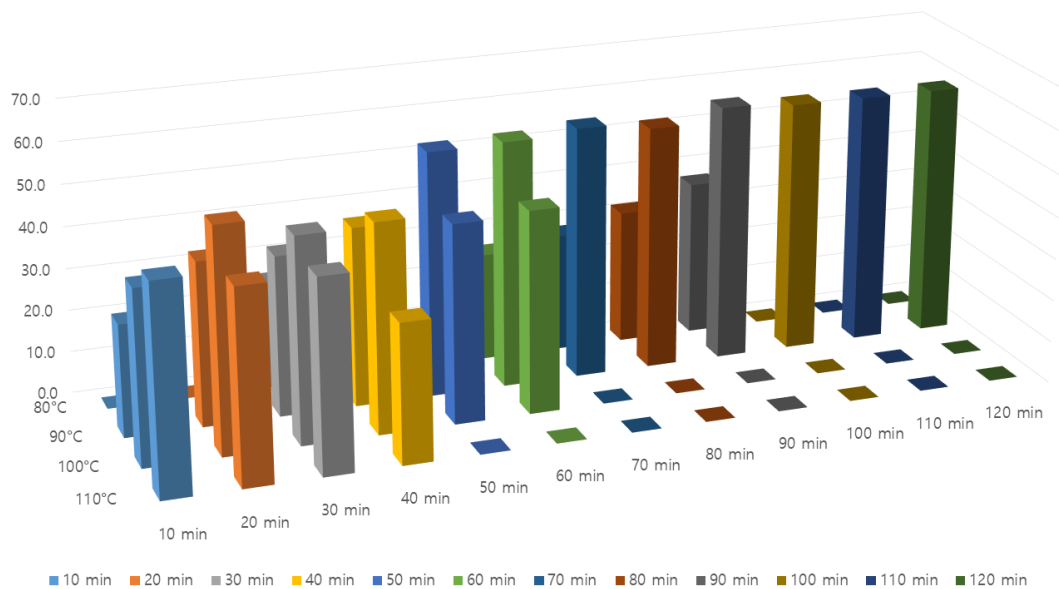


Figure S8: Comparison in the effects of treatment time and temperature on the contents of hydrangenol (mg/g) after microwave assisted heat-processing of *H. macrophylla* extracts. Content of hydrangenol of *H. macrophylla* ethanolic extract is 16.4 mg/g.

Characterization data

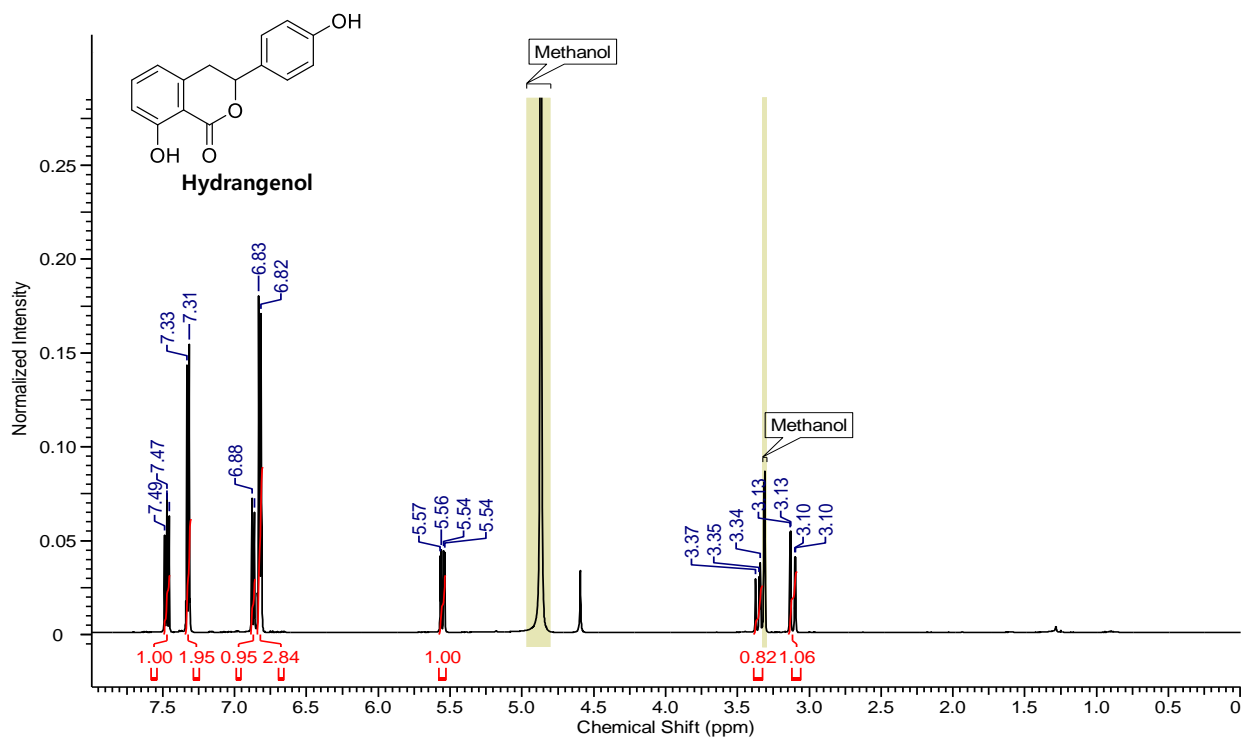


Figure S9: ¹H NMR (500MHz, MeOD) spectrum of Hydrangenol

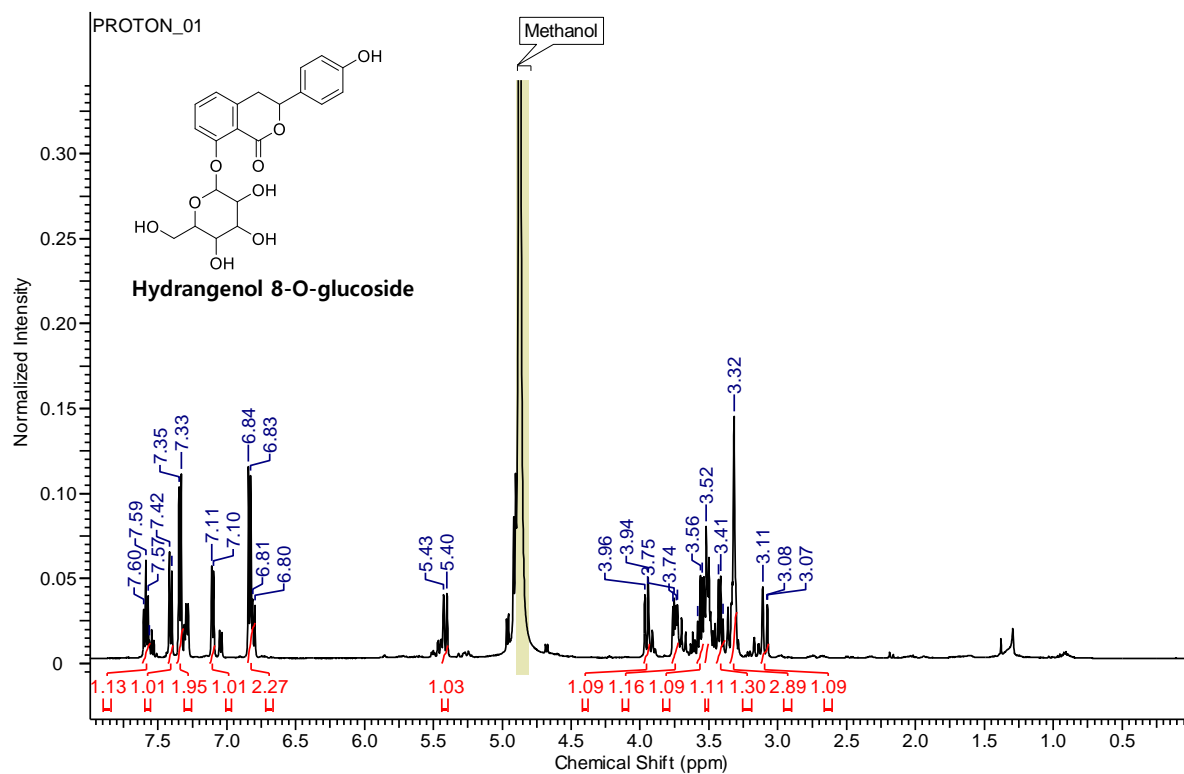


Figure S10: $^1\text{H-NMR}$ (500MHz, MeOD) spectrum of Hydrangenol 8-O-glucoside