

Development of ready-to-use oxyresveratrol-enriched extract from *Artocarpus lakoocha* Roxb. using greener solvents, deep eutectic solvents for whitening agent

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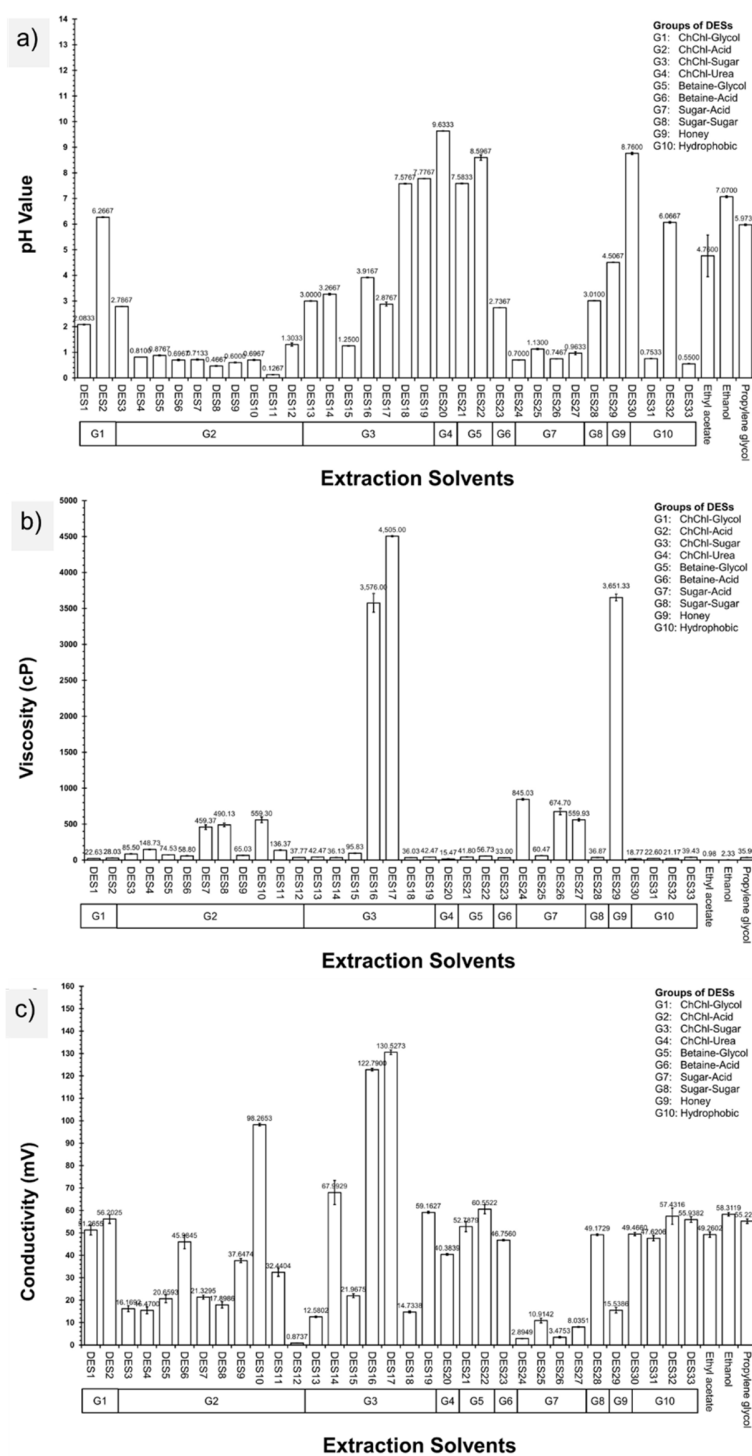


Figure S1. Physicochemical Properties of DESs show as The pH value (a), Viscosity (b), and the Conductivity (c) of DESs

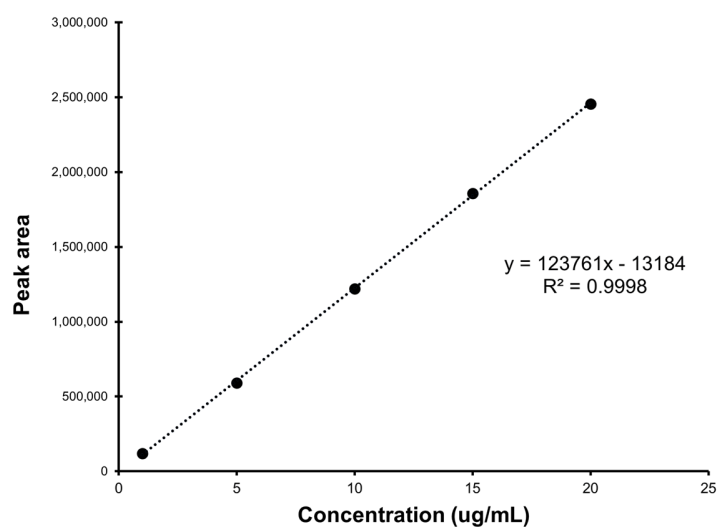


Figure S2. Calibration curves of ORV in the concentration range of 1–20 µg/mL

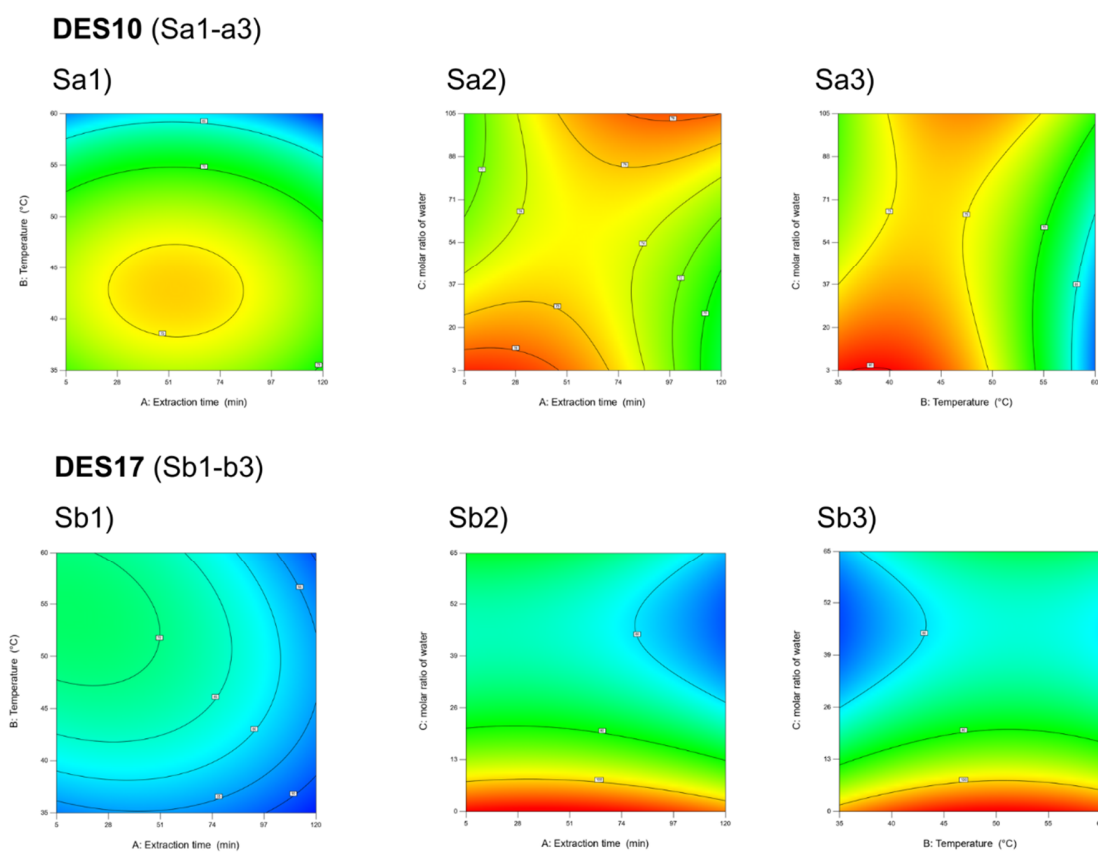


Figure S3. Contour plots showing the influences of independent variables on the DES10 (Sa1-a3) and DES17 (Sb1-b3).

Oxyresveratrol characterization

Oxyresveratrol (**Figure S4**), yellow solid; R_f 0.38 (n-hexane:EtOAc, 3:7); Purity $99.16 \pm 0.07\%$ (HPLC) (**Figure S5**); $^1\text{H-NMR}$ (Acetone- d_6 , 400 MHz) δ ppm : 7.42 (1H, d, $J = 8.4$ Hz, H-6), 7.35 (1H, d, $J = 16.4$ Hz, H- β), 6.91 (1H, d, $J = 16.4$ Hz, H- α), 6.52 (1H, d, $J = 2.0$ Hz, H-2' and H-6'), 6.44 (1H, d, $J = 2.4$ Hz, H-3), 6.39 (1H, dd, $J = 8.4, 2.4$ Hz, H-5), 6.24 (1H, t, $J = 2.0$ Hz, H-4') (**Figure S6a, S6b**); IR (ATR) ν_{max} cm^{-1} : 3209 (OH), 2921 (sp^3 CH), 1589 ($\text{C}=\text{C}$ aromatic) (**Figure S7**); -ESI-MS m/z (% rel. int.): 243.0654 $[\text{M}]^-$, $\text{C}_{14}\text{H}_{12}\text{O}_4$ (**Figure S8**). The characterization information of the isolated compound was confirmed by all spectra as oxyresveratrol, which was consistent with previous report by Arriffin, N. et al (2017). (Arriffin, N.; Jamil, Sh.; Basar, N.; Khamis, S.; Abdullah, A. S.; Lathiff S. M. Phytochemical Studies and Antioxidant Activities of *Artocarpus scortechinii* King. Records of Natural Products 2017, 10, 299-303.)

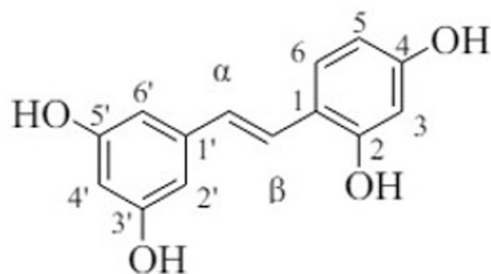
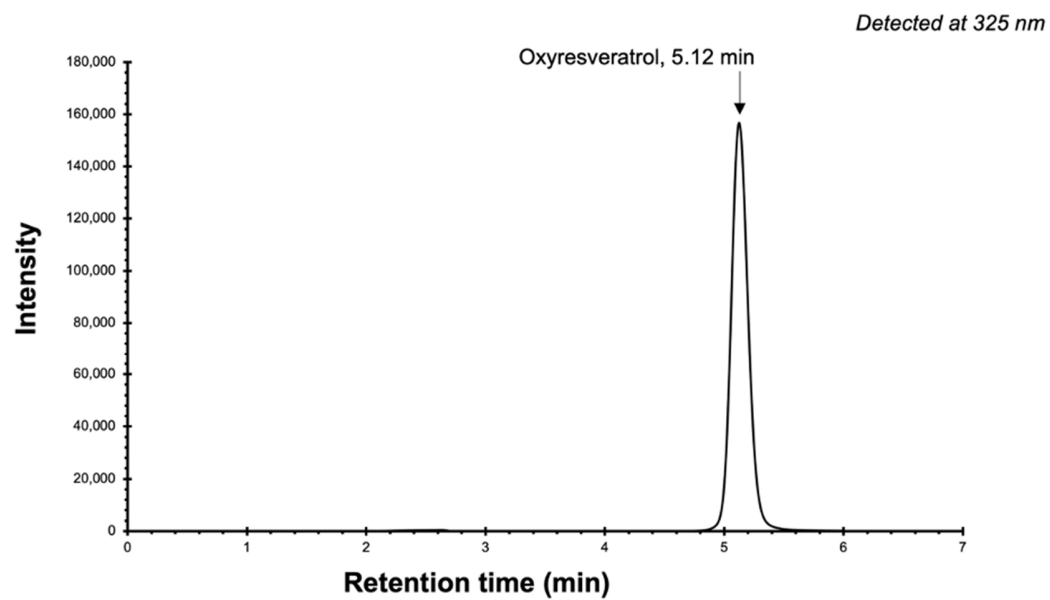


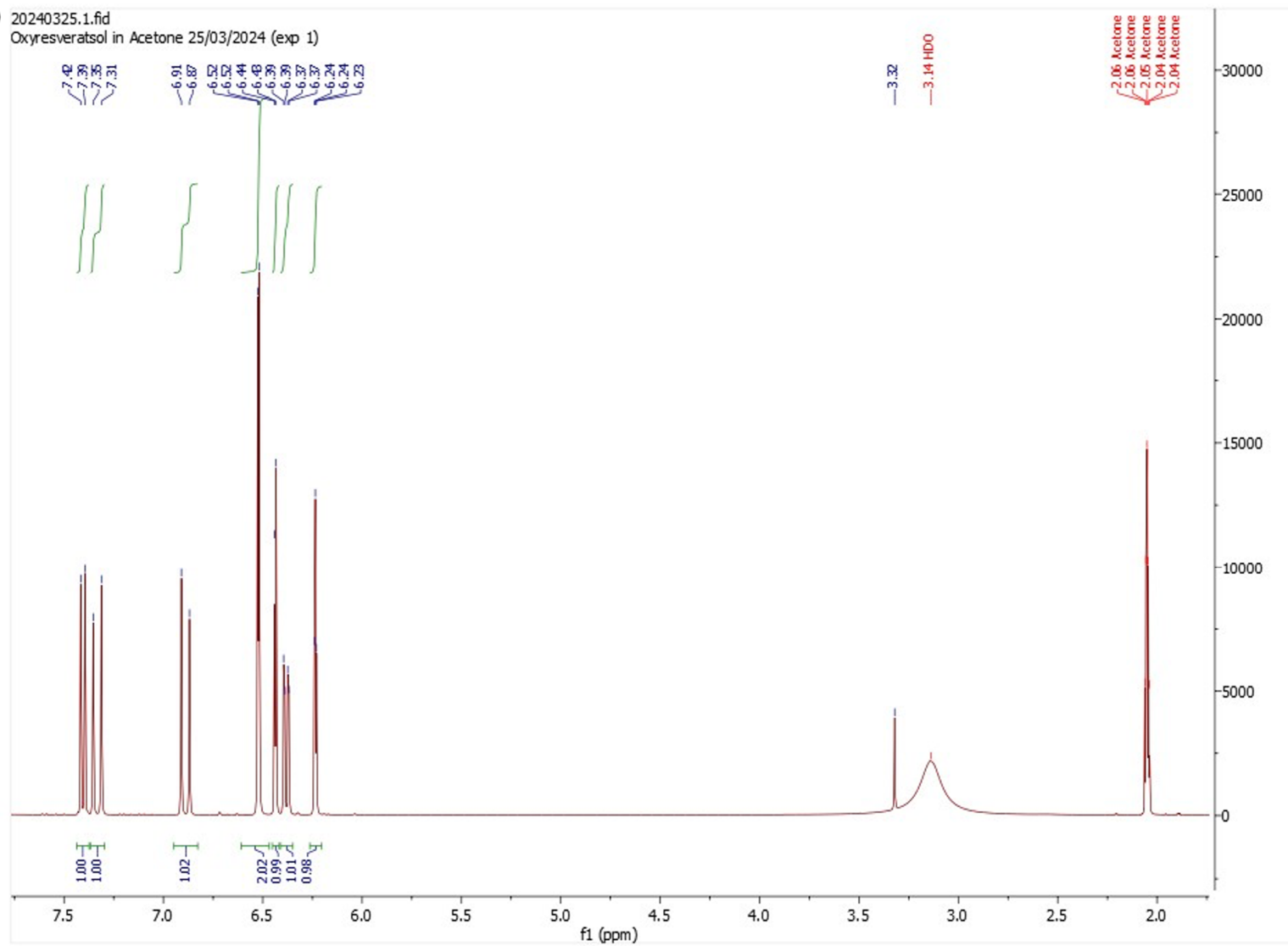
Figure S4 Chemical structure of oxyresveratrol



%Purity report by HPLC analysis			
Peak	Retention time	Peak area	%Peak area
1	2.563	35183	0.50
2	5.126	7020991	99.50
Total		7056174	100.00

Figure S5. HPLC chromatogram of isolated oxyresveratrol

a) 20240325.1.fid
Oxyresveratrol in Acetone 25/03/2024 (exp 1)



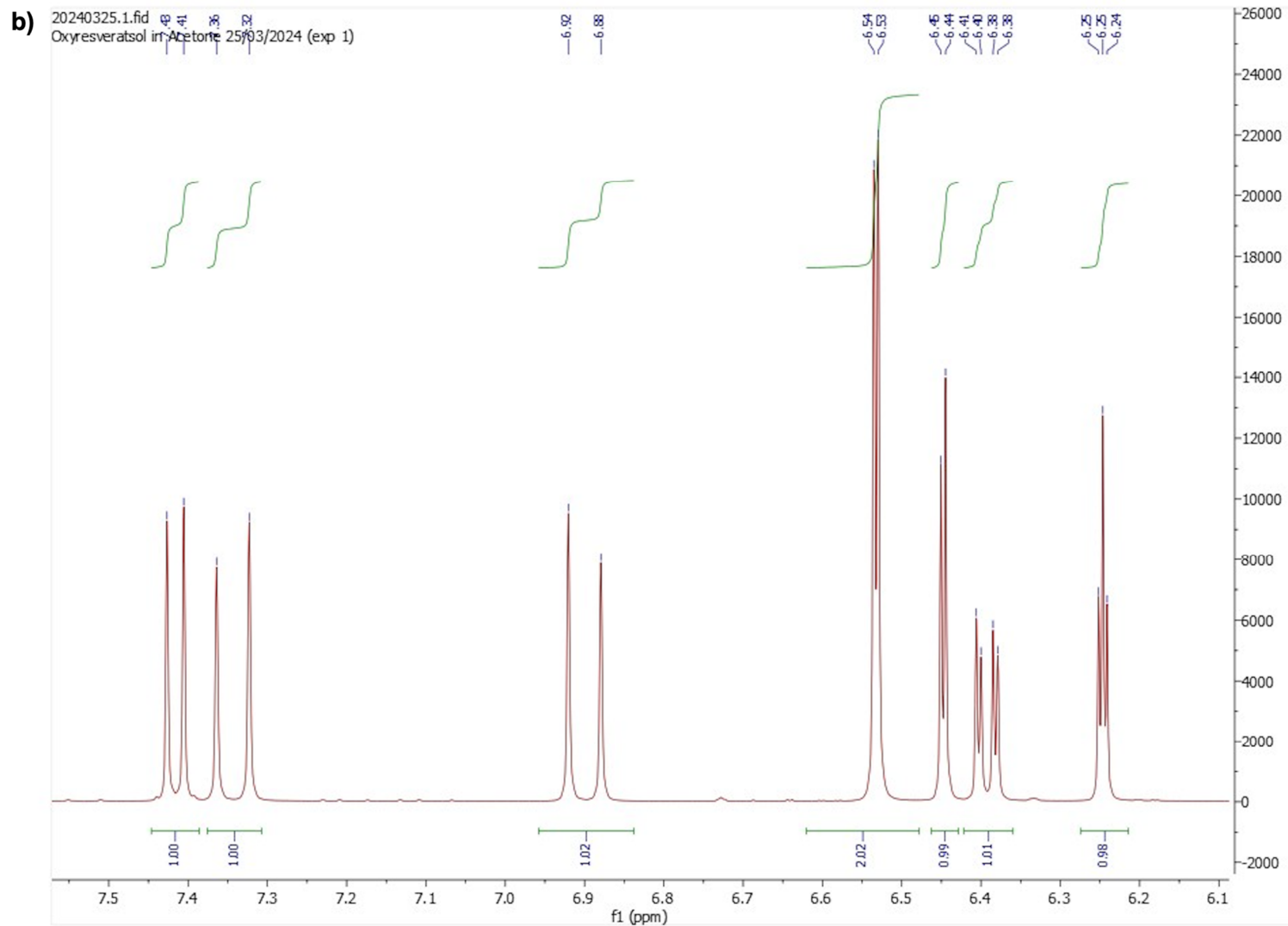


Figure S6. (a) ^1H -NMR spectrum (1.00-8.00 ppm scan) of oxyresveratrol (Acetone-d_6 , 400 MHz); (b) ^1H -NMR spectrum (6.00-8.00 ppm scan) of oxyresveratrol (Acetone-d_6 , 400 MHz).

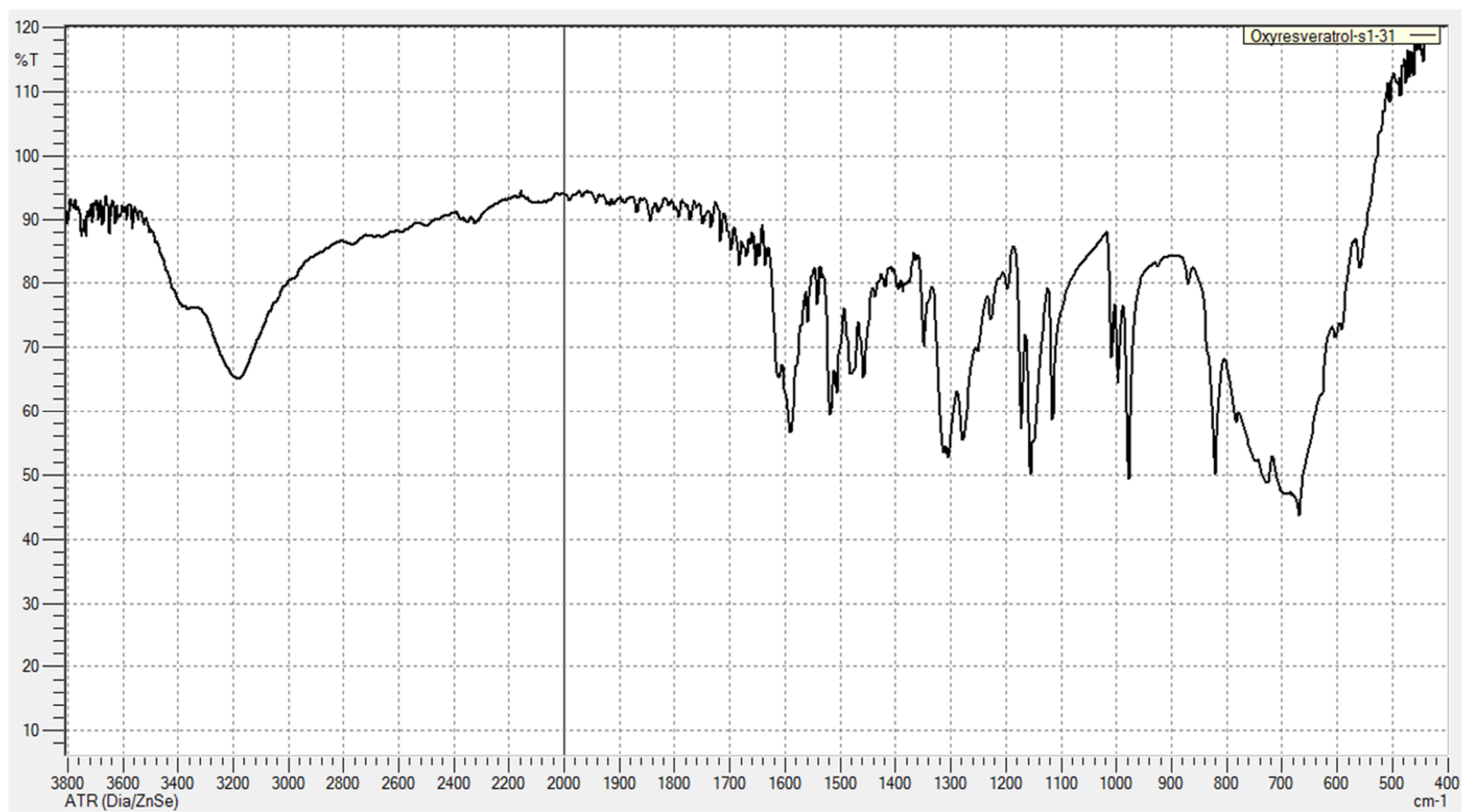


Figure S7. IR-spectrum of oxyresveratrol (ATR)

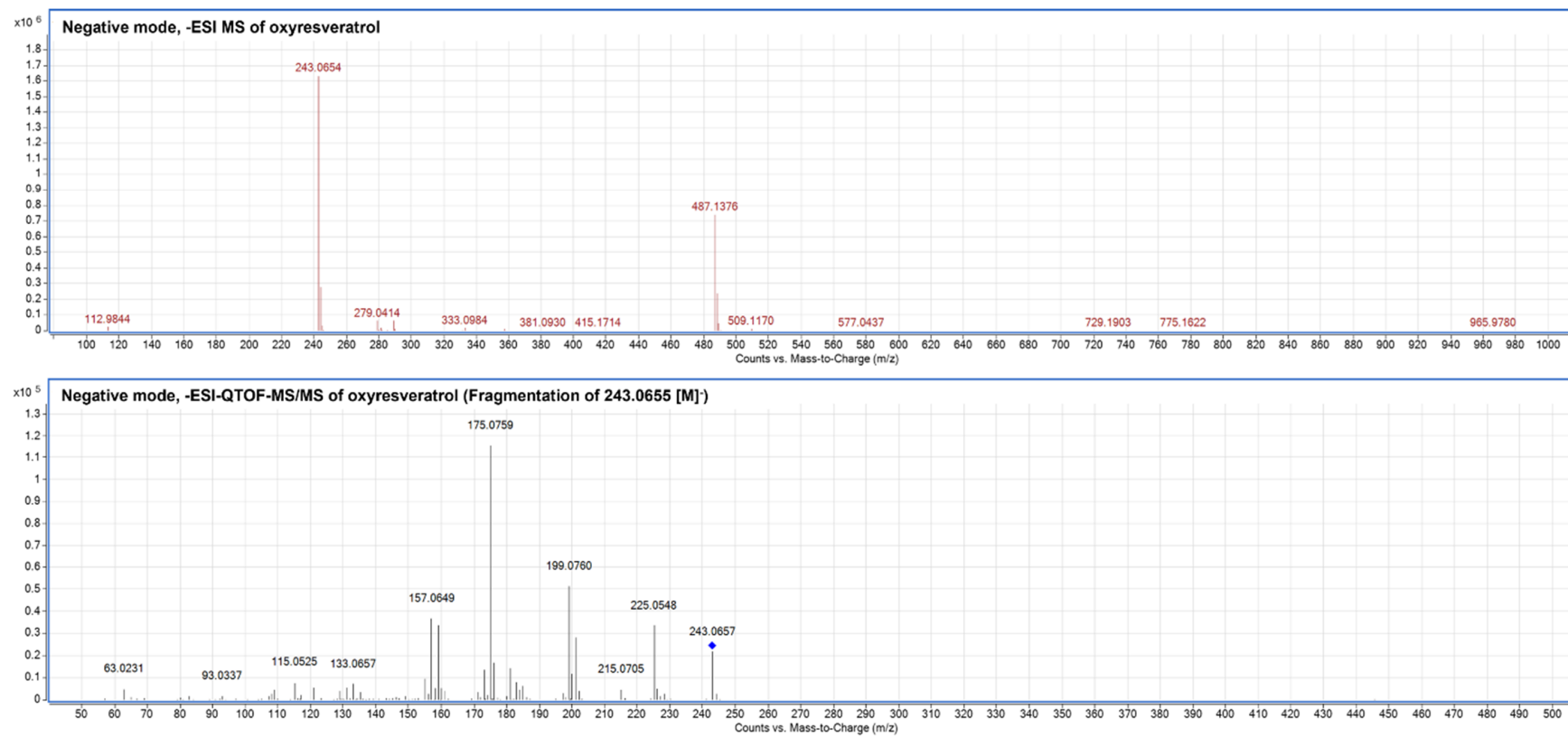


Figure S8. Mass spectrum of oxyresveratrol (ESI-MS with negative mode)