

A comparative study between Onion Peel Extracts, free and complexed with β -cyclodextrin, as a natural UV filter to cosmetic formulations

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Supplementary Material

HPLC-DAD Chromatograms

Equations (S1) and (S2) exhibit the validated calibration curves obtained in the HPLC-DAD for quercetin and resveratrol, respectively, with R values of 0.9994 and 0.9999. These curves were validated by the research group [1]. The curves were calculated in the same laboratory, HPLC equipment and conditions.

$$A = 73700 \times C_{\text{quercetin}} - 268000 \quad (\text{S1})$$

$$A = 142000 \times C_{\text{resveratrol}} + 279000 \quad (\text{S2})$$

Where $C_{\text{quercetin}}$ (mg L^{-1}) and $C_{\text{resveratrol}}$ (mg L^{-1}) represent the concentration of quercetin and resveratrol in the sample, respectively and A represents the area under the peak.

Figure S1 and Figure S2 illustrate the chromatograms obtained by HPLC-DAD for OP extract and OP extract spiked with quercetin, in order to identify and quantify quercetin in the sample. Quercetin was identified at a retention time of 49.98 min and wavelength 365 nm.

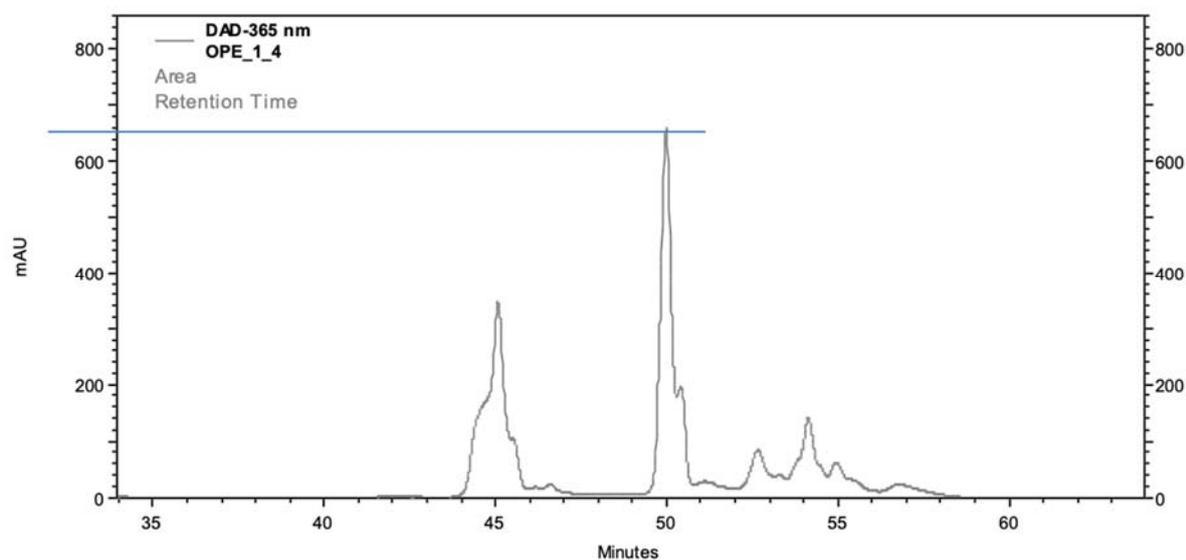


Figure S1 - Zoomed in chromatogram of the OP sample at $\lambda = 365 \text{ nm}$.

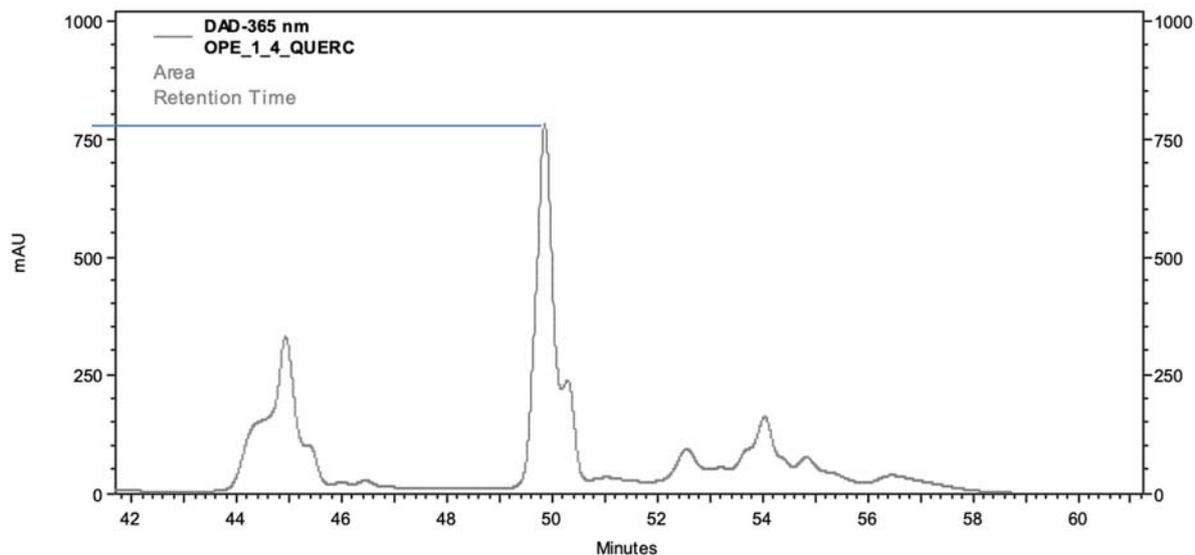


Figure S2 - Zoomed in chromatogram of the quercetin standard + OP extract sample at $\lambda = 365$ nm.

Figure S3 and Figure S4 illustrate the chromatograms obtained by HPLC-DAD for OP extract and OP extract spiked with resveratrol, in order to identify and quantify resveratrol in the sample. Resveratrol was identified at a retention time of 44.44 min and wavelength 305 nm.

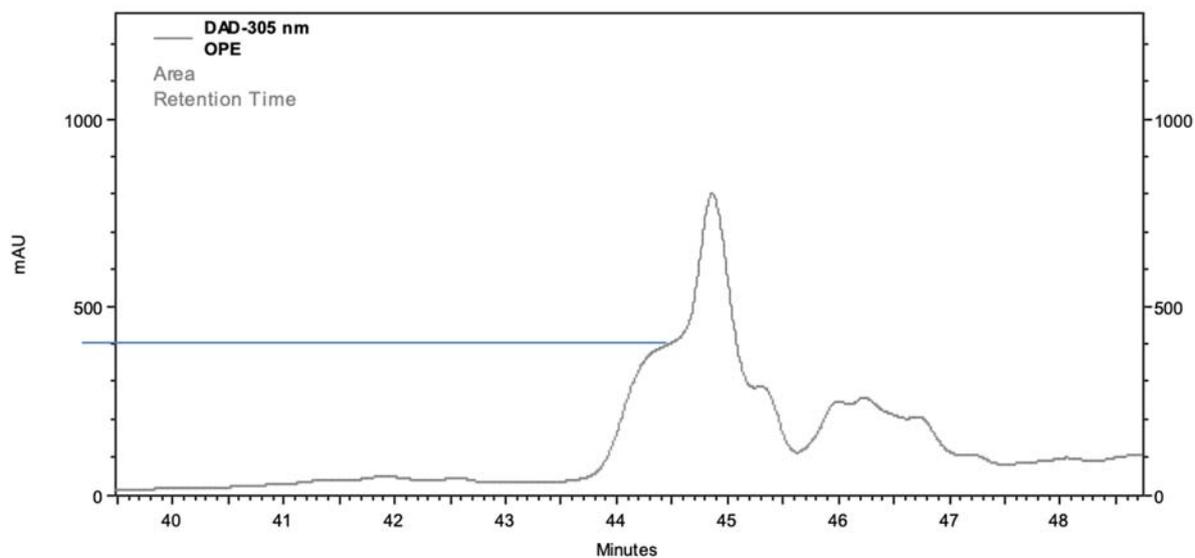


Figure S3 - Zoomed in chromatogram of the OP extract sample at $\lambda = 305$ nm.

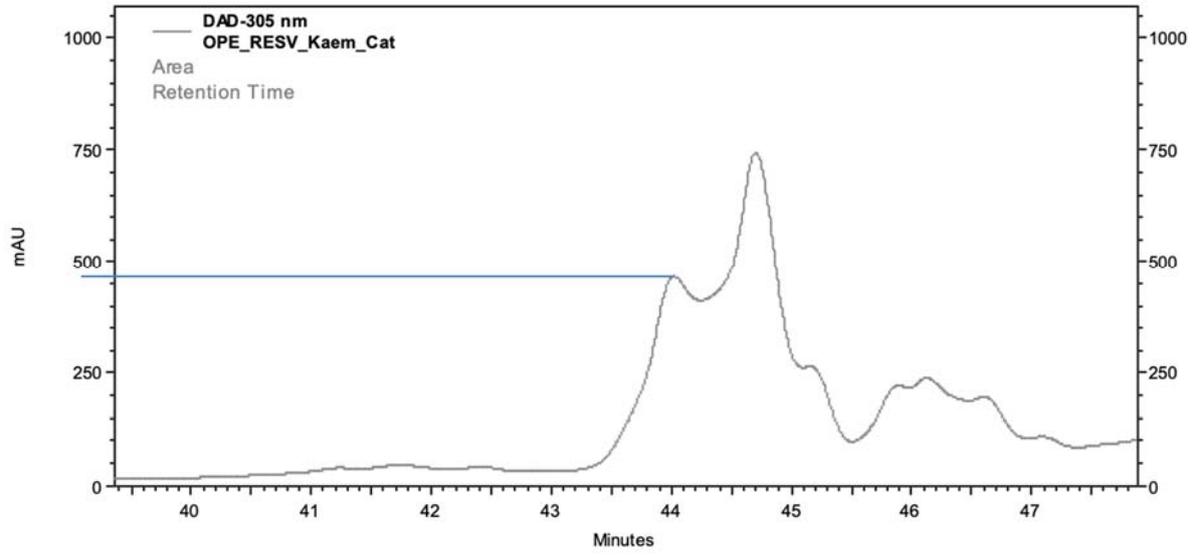


Figure S4 - Zoomed in chromatogram of resveratrol standard + OP extract sample at $\lambda = 305$ nm.