

Article

# Solubility and Permeability Enhancement of Oleanolic Acid by Solid Dispersion in Poloxamers and $\gamma$ -CD

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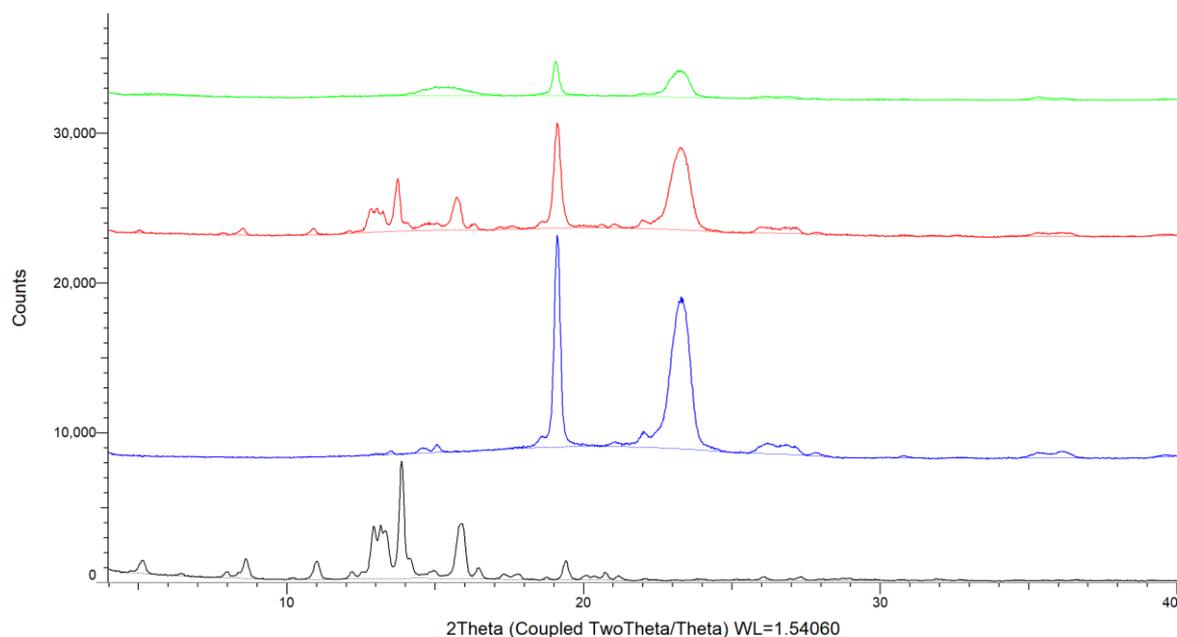
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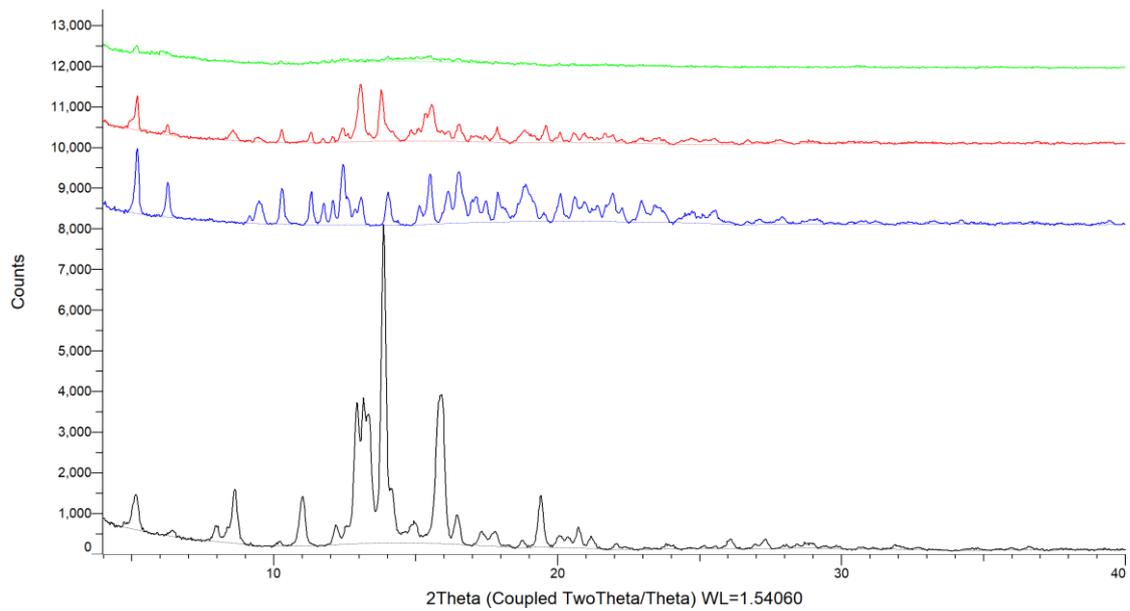
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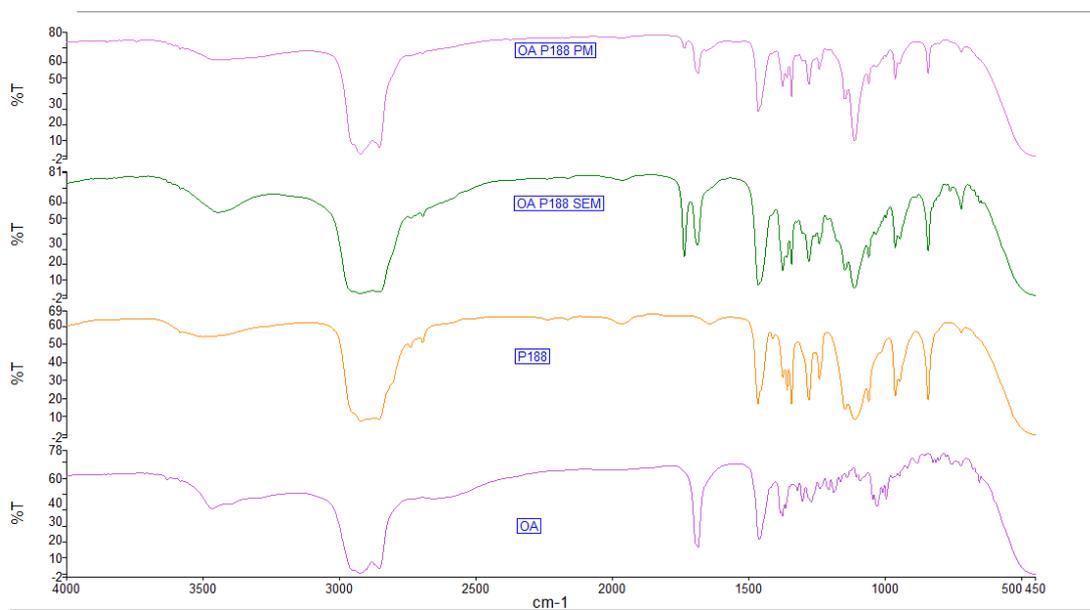
† These authors contributed equally to this study.



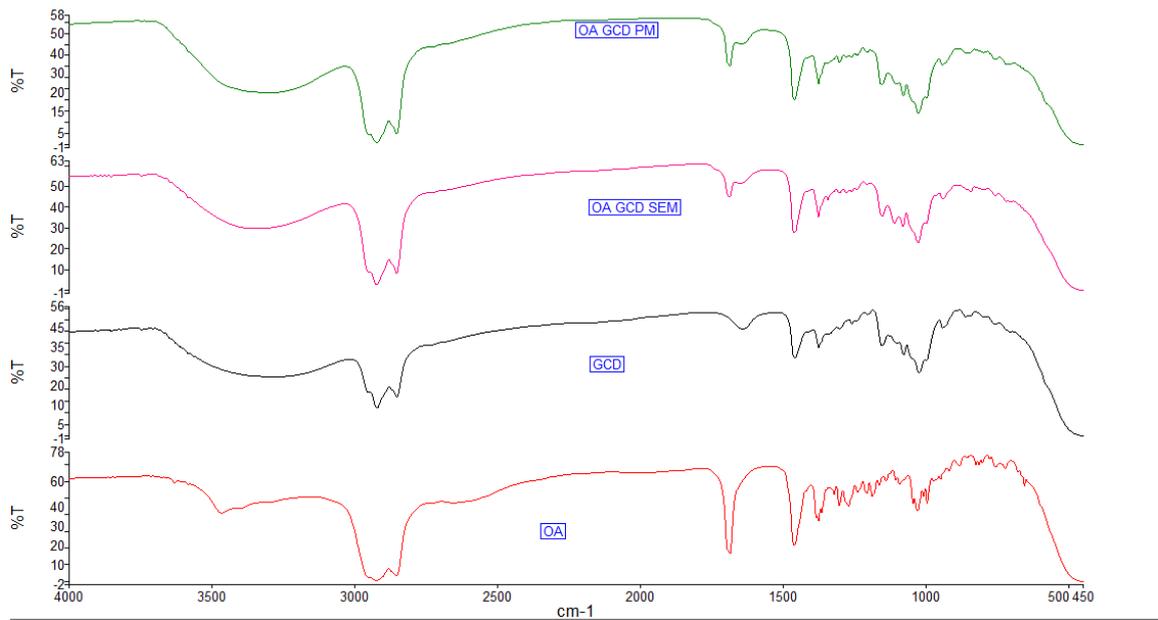
**Figure S1.** X-ray diffraction patterns of OA (black), Poloxamer 188 (blue), PM 1:2 (red) and SEM 1:2 (green).



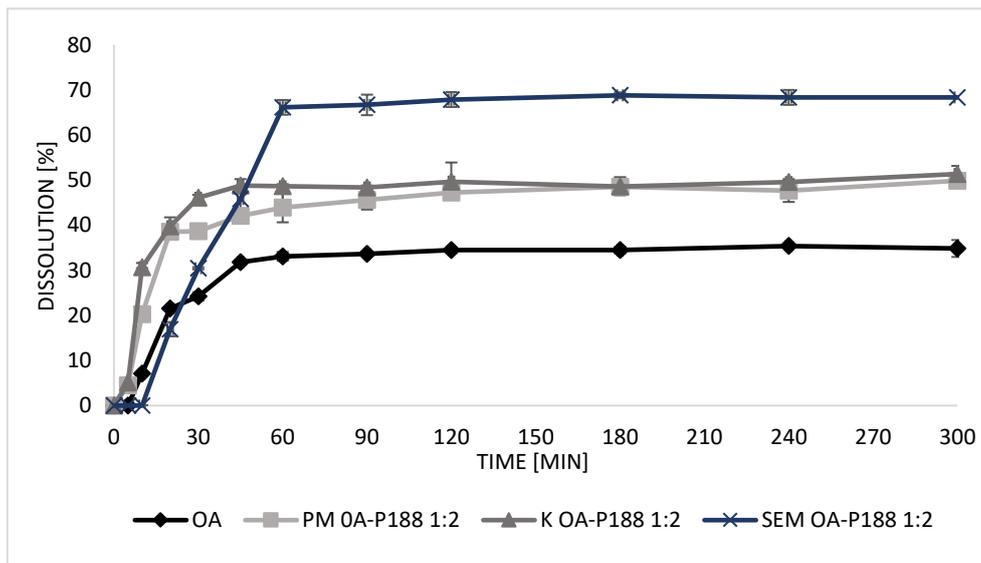
**Figure S2.** X-ray diffraction patterns of OA (black),  $\gamma$ -CD (blue), PM 1:1 (red) and SEM 1:1 (green).



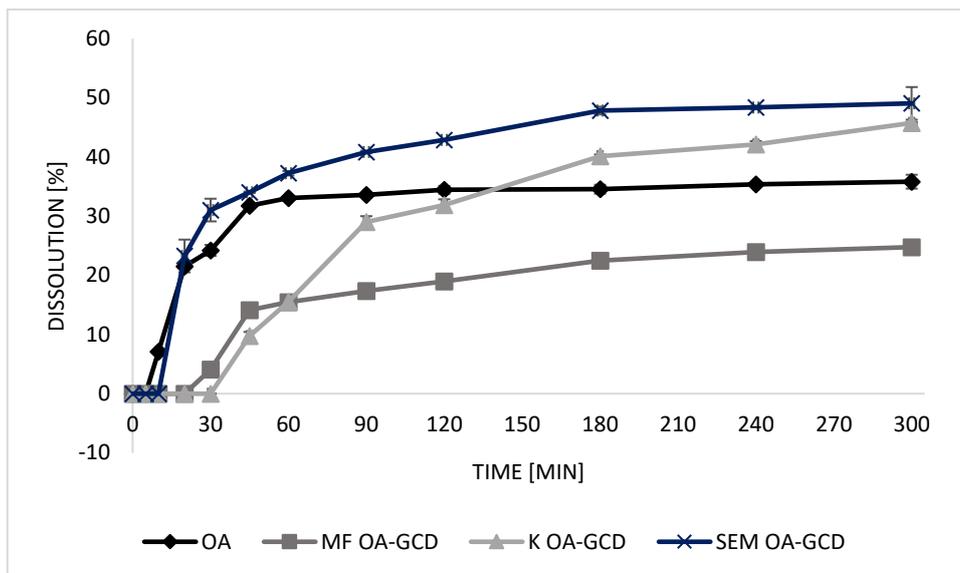
**Figure S3.** FTIR spectra of OA, P188, physical mixture (PM), and solid dispersion (SEM).



**Figure S4.** FTIR spectra of OA,  $\gamma$ -CD, physical mixture (PM), and solid dispersion (SEM).



**Figure S5.** Dissolution profiles of OA, PM OA-P188 1:2, K OA-P188 1:2 and SEM OA-P188 1:2.



**Figure S6.** Dissolution profiles of OA, PM OA- $\gamma$ CD 1:2, K OA- $\gamma$ CD 1:2 and SEM OA- $\gamma$ CD 1:2.