

## Supporting Information

# Electrochromic Properties and Electrochemical Behavior of Marennin, a Bioactive Blue-Green Pigment Produced by the Marine Diatom *Haslea ostrearia*

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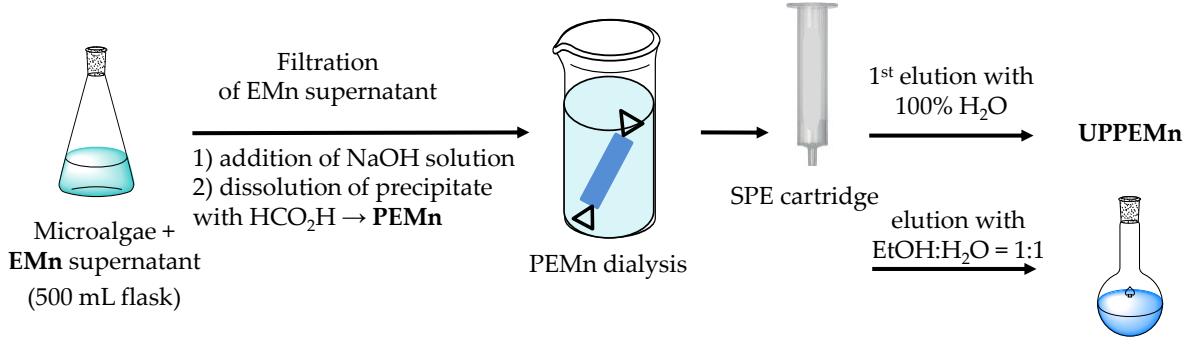
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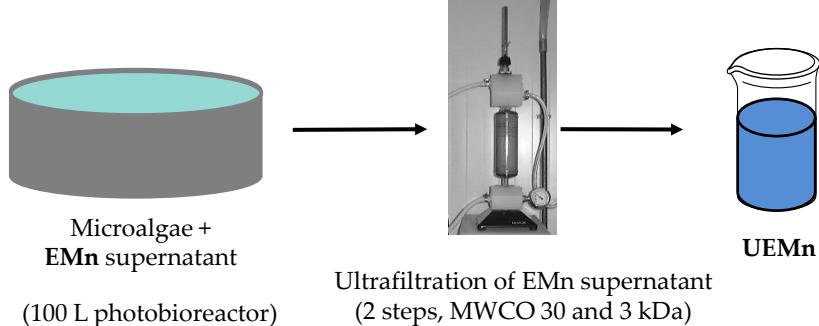
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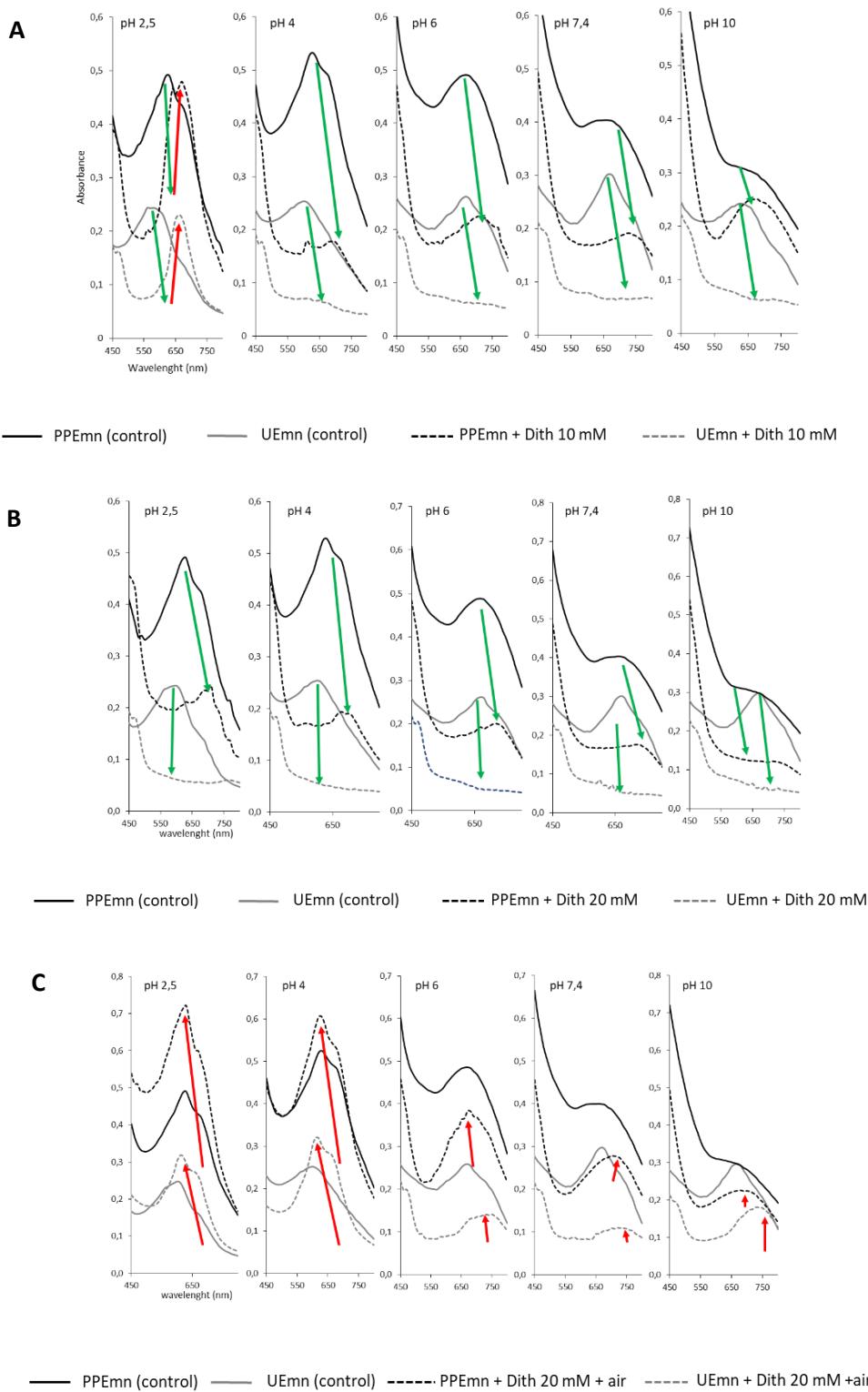
### 1) Small-scale marennin production



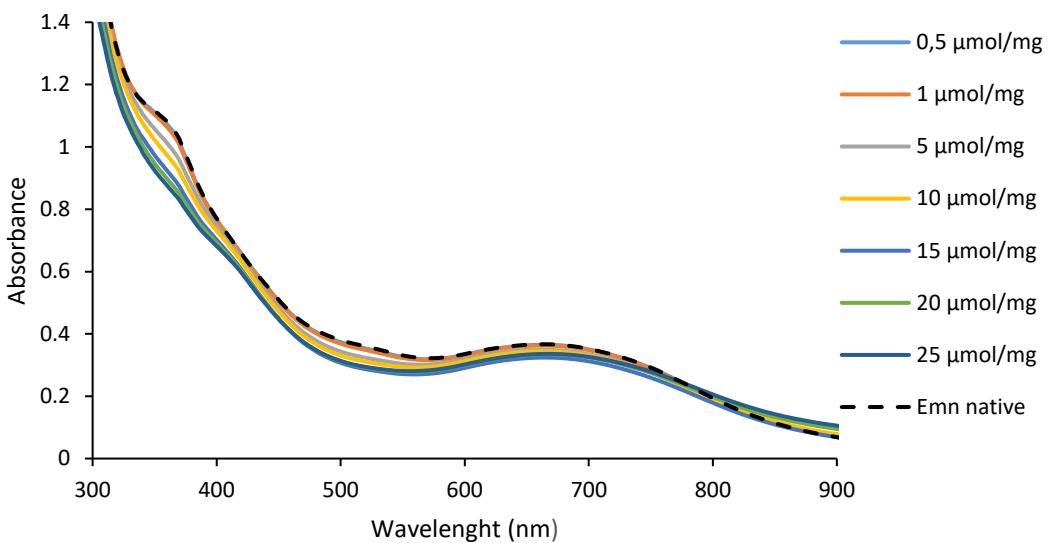
### 2) Scale-up marennin production



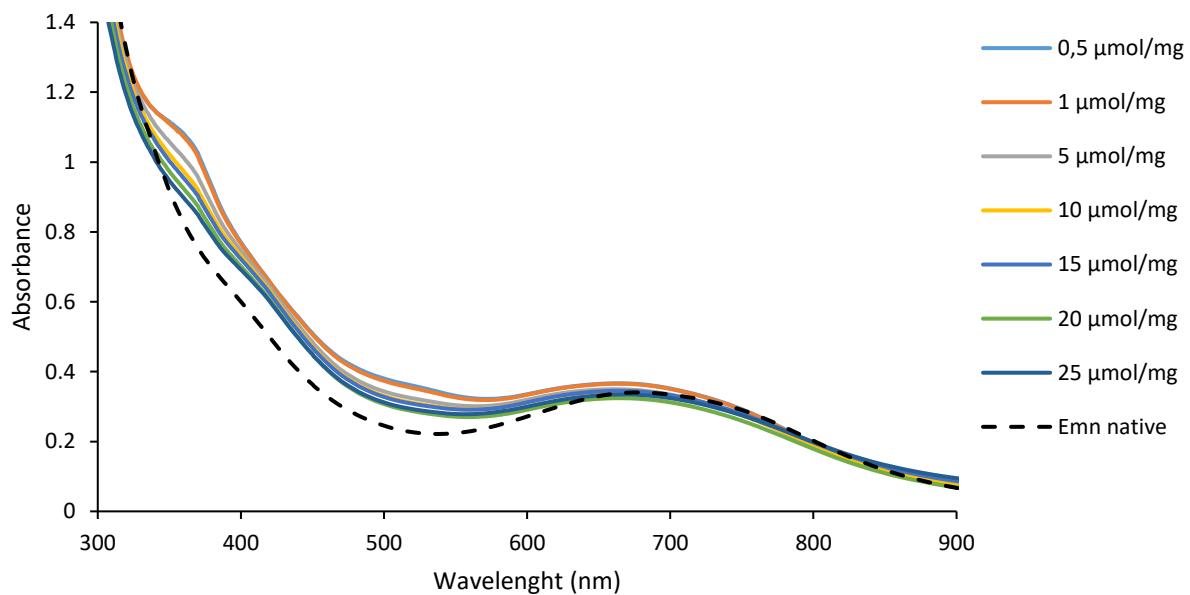
**Figure S1.** Scheme representing the two procedures used to purify extracellular marennin (EMn) from the supernatant of the microalgae culture medium.



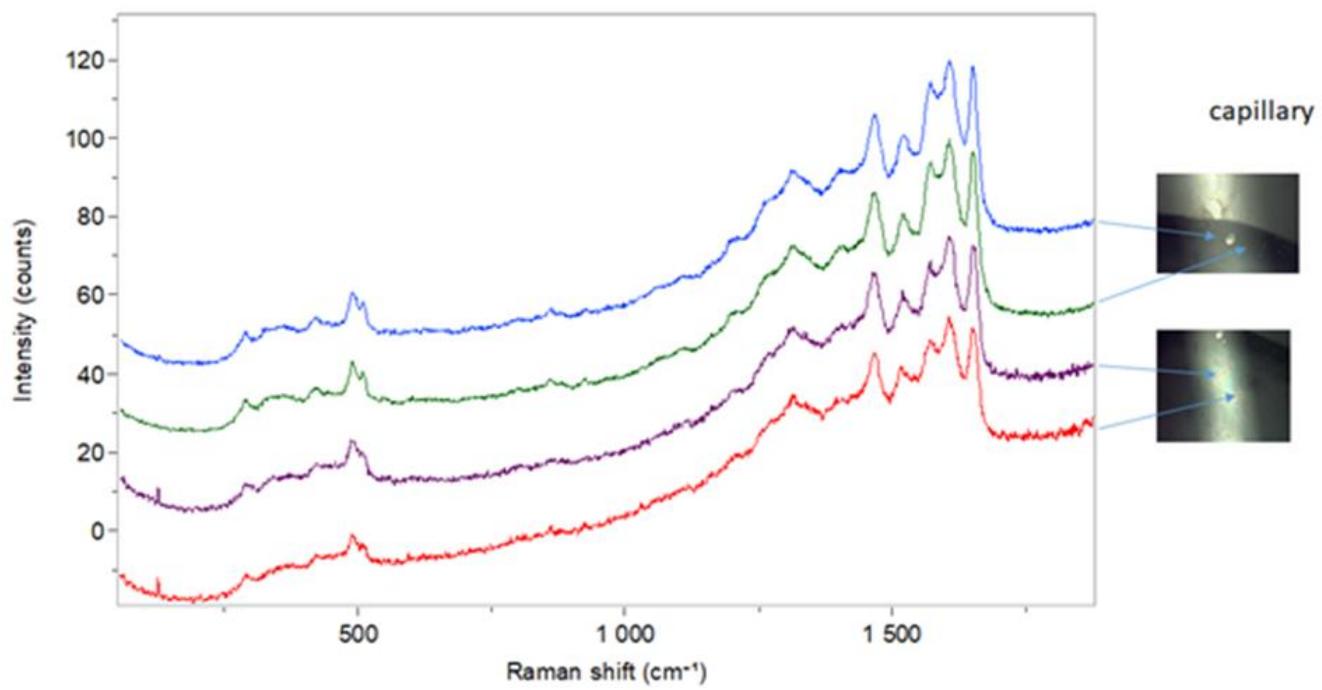
**Figure S2.** Monitoring of sodium dithionite reduction absorption spectra of mareninine UEMn and PPEMn at different pH values (2.5, 4, 6, 7.4 and 10). Green arrows represent reductions and red arrows reoxidations. (A) Reduction profiles of mareninine with 10 mM sodium dithionite; (B) Reduction profiles of mareninine with 20 mM sodium dithionite; (C) Reoxidation profile of reduced mareninine, exposed to the ambient air.



**Figure S3.** Marennine PPEMn reduction with sodium sulfite, monitored by spectrophotometry. The amount of sodium sulfite reacting is expressed in  $\mu\text{mol}$  per mg of marennine.



**Figure S4.** Marennine PPEMn reduction with ascorbic acid, monitored by spectrophotometry. The amount of ascorbic acid reacting is expressed in  $\mu\text{mol}$  per mg of marennine.



**Figure S5:** Raman spectra of marenine (UEMn) recorded on a film covering a glass capillary.  $\lambda=532$  nm