

Heat Stress Mitigation by *Haematococcus lacustris* extract: Evidence from HaCaT keratinocytes and *Caenorhabditis elegans*

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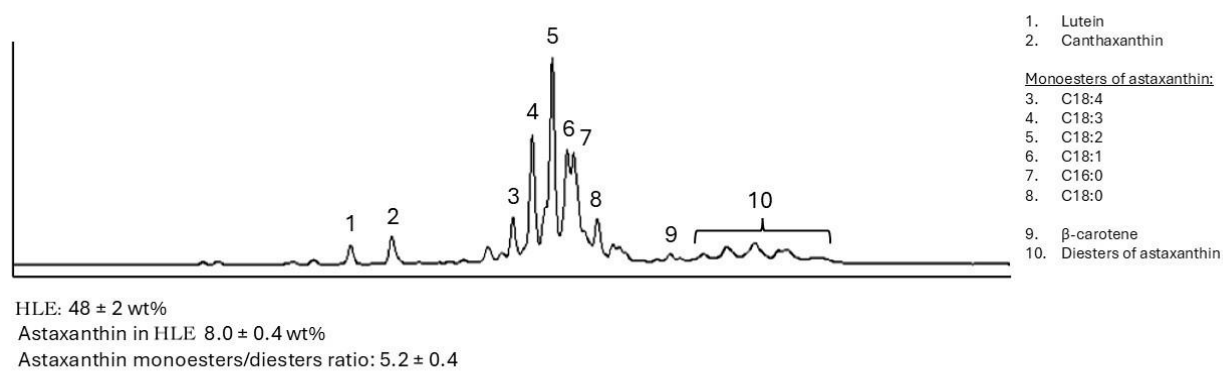


Figure S1. Composition of HLE as determined by HPLC. Lutein, canthaxanthin, and β -carotene were identified as free carotenoids, while AST monoesters and diesters were assigned by LC-MS based on molecular weight.

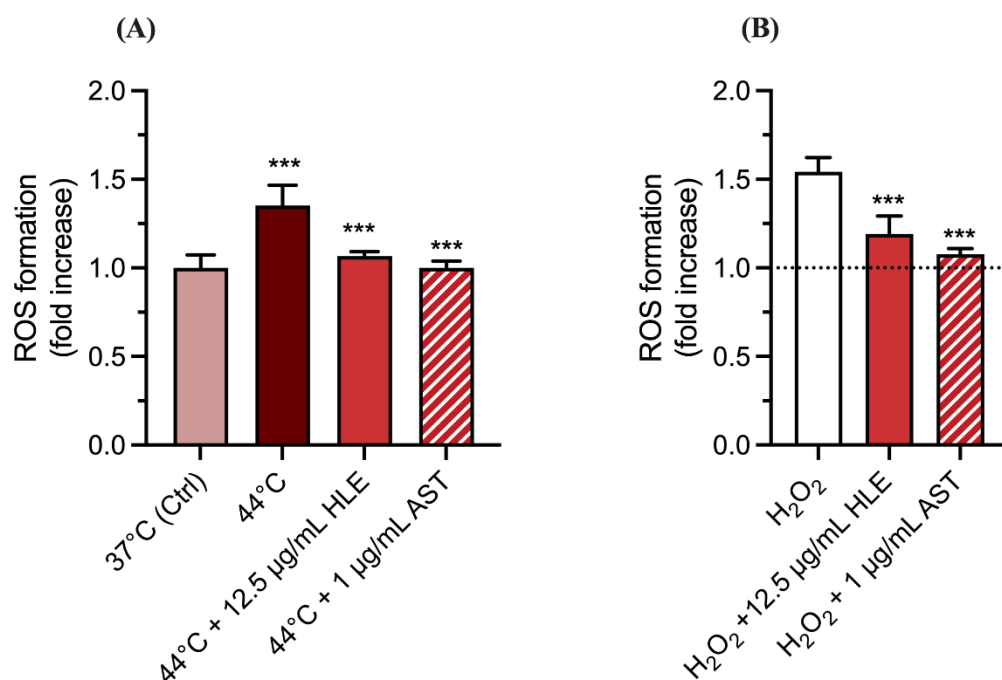


Figure S2. Effects of HLE and AST on the reduction of oxidative damage induced by hyperthermia in cells. (A) Cells simultaneously exposed to HLE (12.5 µg mL⁻¹) or AST (1 µg mL⁻¹) and 44 °C for 30 min; (B) Cells simultaneously exposed to HLE (12.5 µg mL⁻¹) or AST (1 µg mL⁻¹) and H₂O₂ (100 µM) for 30 min. After these exposures, the ROS formation was evaluated using the H₂DCF-DA assay. Data are expressed as mean ± SD (n. 4). *** p < 0.001 vs. cells exposed to either 44 °C or H₂O₂; one-way ANOVA followed by Bonferroni's post hoc test.

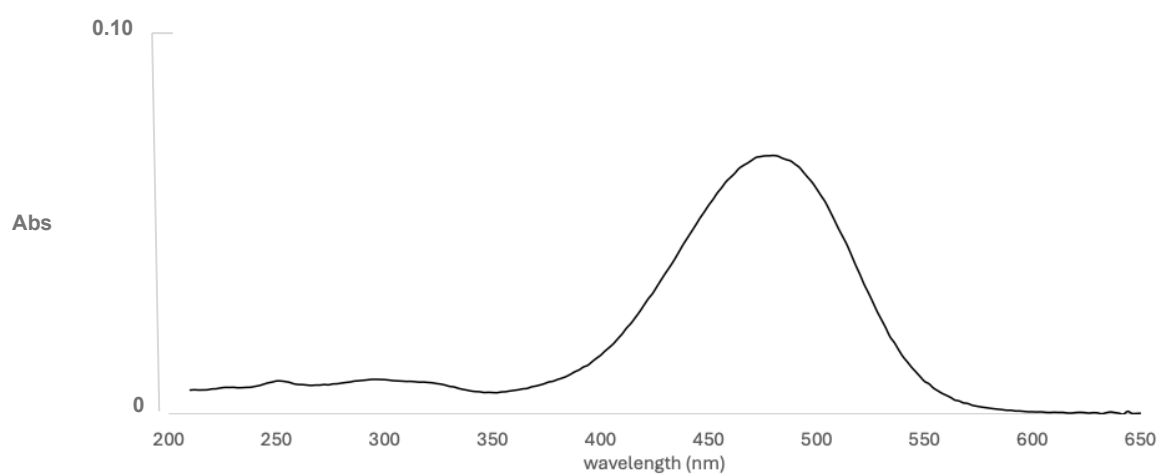


Figure S3. UV–Vis absorption spectrum of HLE shows negligible absorption in the UVA region (320–400 nm).