Electronic Supplementary Material (ESI) for Photochemical & Photobiological Sciences

Microwave discharge electrodeless lamps (MDEL). VII. Photo-isomerization of *trans*-urocanic acid in aqueous media driven by UV light from a novel Hg-free Dewar-like microwave discharge thermally-insulated electrodeless lamp (MDTIEL). Performance evaluation

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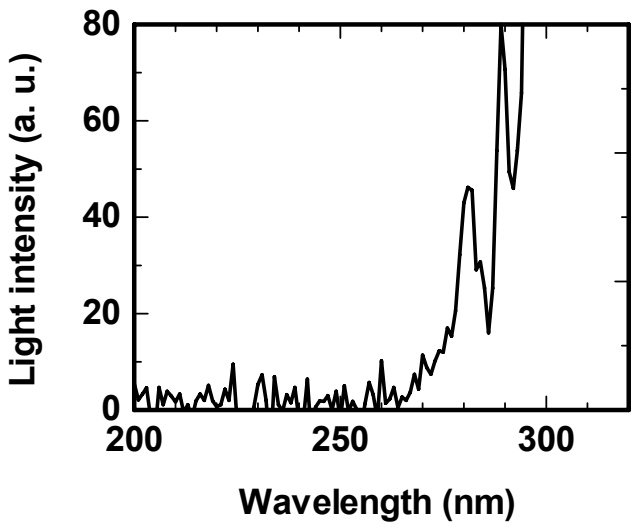
Supplementary Information



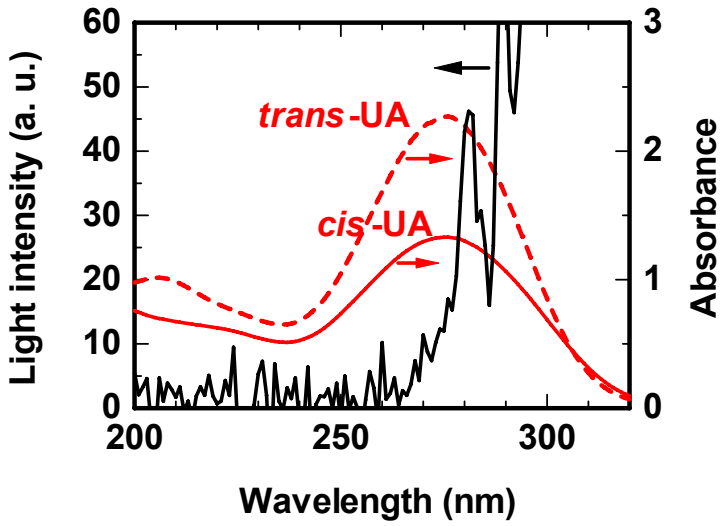


Figure S1. – Graphics illustrating the emitted wavelengths by the Ushio super high pressure Hg lamp use in the experiments for the trans-urocanic acid → cis-urocanic acid photoisomerzation. Also note no other wavelengths were emitted beow the very weak 281 and 289 nm; except for the very strong line at 313 nm that was responsible for the photoisomerization.

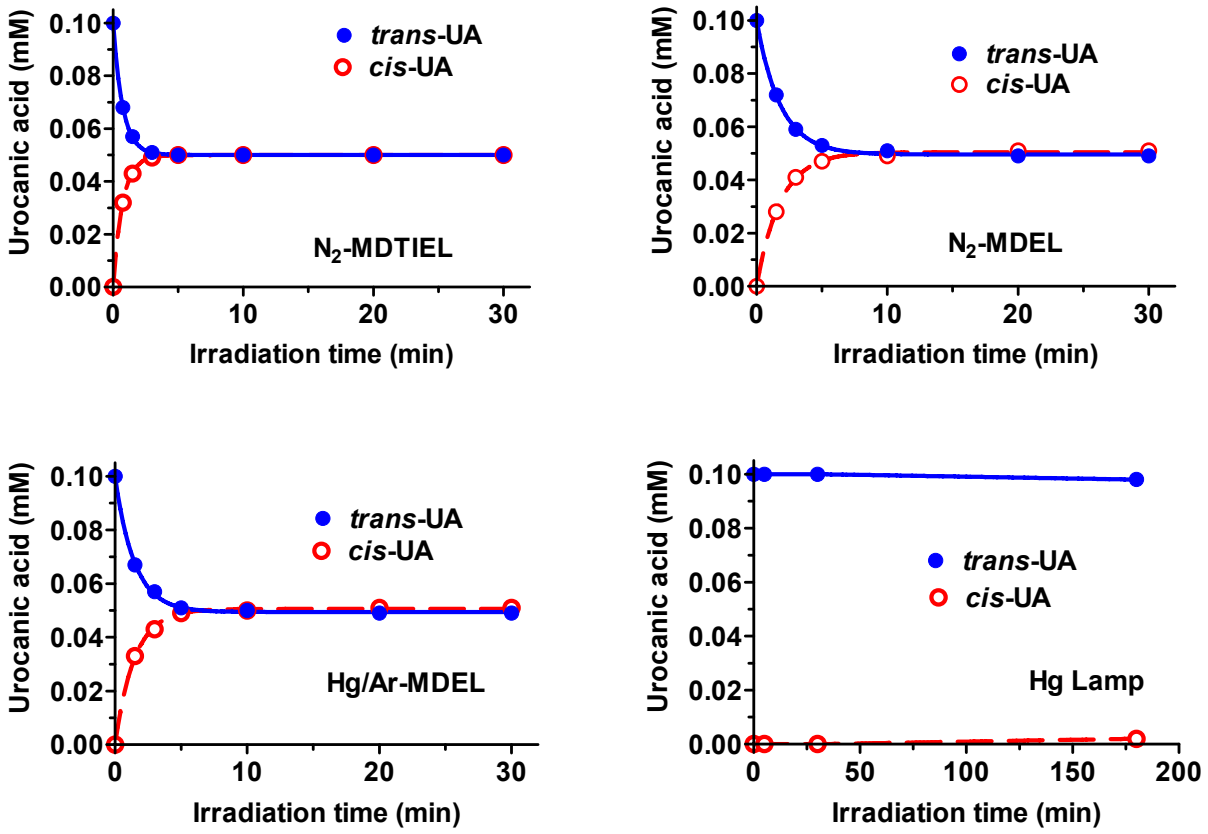


Figure S2. – Influence of the nature of the light source, namely the double-walled N_2-MDTIEL, and the single-walled N_2-MDELand Hg/Ar-MDEL, together with the commercial 250-Watt super high-pressure Hg lamp on the photo-isomerization dynamics of *trans*-urocanic acid to *cis*-urocanic acid (initial concentration of *trans*-UA, 0.10 mM, pH = 7.6; microwave power of the electrodeless lamps, 180 Watts). Note the UV light from the Hg lamp irradiated the photoreactor located in the wave-guide of the microwave apparatus through a fiber optic cable.