

Wavelength Shifts Correlation between Near Infrared and Ultraviolet Regions of the LHII Bacteriochlorophyll Spectrum from *Ectothiorhodospira sp.*

André Buche

Estación Experimental de Aula Dei (CSIC), Apartado 202, E-50080 Zaragoza, Spain.
Fax: 34-976-716145. E-mail: abuche@eead.csic.es

Z. Naturforsch. **56c**, 363–368 (2001); received December 11, 2000/January 23, 2001

Bacteriochlorophyll, *Ectothiorhodospira*, Light-Harvesting Complex

Bacteriochlorophyll *a* has a maximum at 258 nm previously related to the ring E ester system interacting with the π -system of the macrocycle. In this work, we compared the effect of lauryldimethylamine-N-oxide (LDAO) and alkaline pH on both the near infrared and the ultraviolet region of the LHII spectrum from *Ectothiorhodospira sp.* While LDAO induces only a shift of the 850 nm band arising from the Q_y transition of the bacteriochlorophyll *a*, alkaline pH also causes a concomitant and reversible 10-nm shift from 258 to 248 nm. Both shifts have similar apparent pKs (12.3 and 12.6, respectively). Interestingly, the presence of NaCl reduces these pKs values to 11.4 and 11.7.