

# Absorption Properties of the Carotenoids after Alkaline Denaturation of the Light-Harvesting Complex II from *Ectothiorhodospira sp.*

André Buche\* and Rafael Picorel

Estación Experimental de Aula Dei (CSIC), Apartado 202, E-50080 Zaragoza, Spain.  
Fax: 34–976–575620. E-mail: abuche@eead.csic.es

\* Author for correspondence and reprint requests

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Carotenoid, Soret, Shift, Spirilloxanthin

Alkaline treatment of the *Ectothiorhodospira sp.* light harvesting system II induces monomerisation of the bacteriochlorophylls and a bleaching of the carotenoid absorption bands in the visible region. Concomitantly, the maximum of absorption observed around 373 nm shifts towards 354 nm. This shift does not result from the Soret band but from a change of the absorption properties of the carotenoids. Furthermore, these pigments are not modified chemically but the spectral conversion results from environmental changes. It is assumed that the dissociation of the bacteriochlorophylls in alkaline medium is accompanied by a structural reorganisation of the complex which reinforces the interactions between the polypeptides and the carotenoids.