QUENCHING OF TRIPLET BENZOPHENONE BY VITAMINS E and C and BY SULFUR CONTAINING AMINO ACIDS and PEPTIDES

Encinas, M. V.

Lissi, E. A.

Olea, A. F.

Abstract? The quenching rate of triplet benzophenone in water and/or water mixtures has been determined employing vitamin C, vitamin E, cystine, cysteine, reduced and oxidized glutathione, methionine and DL?penicillamine. In these systems, the ketyl radical quantum yield and the benzophenone photoreduction yield have also been measured. The ketyl quantum yield is 1.0 in presence of vitamin C and smaller than 0.3 in presence of glutathione, cysteine and cystine. The data imply that quenching by thiols and disulfides takes place, at least in very polar solvents, mainly by a mechanism involving charge transfer intermediates. Copyright © 1985, Wiley Blackwell. All rights reserved