

A STUDY ON THE OXIDATIVE DEGRADATION OF DIBENZ[b,f]OXEPIN-
11(10H)-ONE BY FIELD DESORPTION MASS SPECTROMETRY

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2-(8-Methyl-10,11-dihydro-11-oxodibenz[b,f]oxepin-2-yl)propionic acid(I)
is a potent antiinflammatory agent. We have been interested in oxidative and/or
photo-induced oxidative degradation of the novel ring system of dibenz[b,f]-
oxepin-11(10H)-one in various solutions.

In aqueous solution on alkaline condition I underwent oxidative degra-
dation by sun-light to give II - IV which were isolated and identified. To
study the process more extensively, field desorption mass spectrometry(FDMS)
was tentatively used together with conventional GC/MS method. Since FDMS is a
powerful tool for the molecular weight determination of non-volatile and un-
stable compounds, and degradative process often involved products too unstable
to be detected by conventional method, the use of FDMS to estimate the degra-
dative profile of compounds is very rapid and successful.

