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

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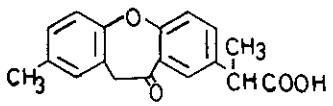
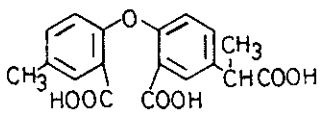
2-(8-Methyl-10,11-dihydro-11-oxodibenz[b,f]oxepin-2-yl)propionic acid(I) is a potent antiinflammatory agent. We have been interested in oxidative and/or photo-induced oxidative degradation of the novel ring system of dibenz[b,f]-oxepin-11(10H)-one in various solutions.

In aqueous solution on alkaline condition I underwent oxidative degradation 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 unstable compounds, and degradative process often involved products too unstable to be detected by conventional method, the use of FDMS to estimate the degradative profile of compounds is very rapid and successful.

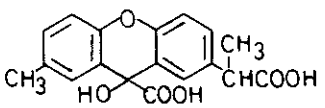
(I)



(II)



(III)



(IV)