

Effect of Some Psychotropic Drugs on Luminol – Dependent Chemiluminescence Induced by O_2^- , $\bullet OH$, HOCl

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We studied antioxidant activity of six neuroleptics (chlorpromazine, levomepromazine, promethazine, trifluoperazine and thioridazine) and two antidepressants (imipramine and amitriptyline) in the range of concentration of 10^{-7} – 10^{-4} M. We applied luminol-dependent chemiluminescence to test the ability of these drugs to scavenge the biologically relevant oxygen-derived species: hydroxyl radical, superoxide radical, hypochlorous acid *in vitro*. We found that the phenothiazines were powerful scavengers of hydroxyl and superoxide radicals. Chlorprothixene, amitriptyline and imipramine had no scavenge activity to the superoxide radical. All drugs showed a moderate scavenger effect on hypochloric anion.