Recent development and use of free radical scavengers

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Among the methods available for assessing free radical formation in biological milieu, ESR spin- trapping appears one of the most appropriate. Many analogs of 5-(diethoxyphosphoryl)-5-methyl-1- pyrroline N-oxyde (DEPMPO) have been synthesized and their ability to spin trap oxyl and peroxyl radicals in biological milieu has been addressed. Compared to DMPO, the use of DEPMPO and its derivatives present many advantages that will be discussed. The origin of the chemical exchange and the factors which influence the half-life of superoxide spin adducts will be discussed.