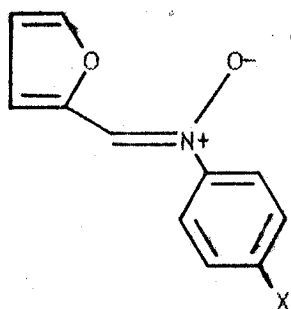


SYNTHESIS OF C-(2-FURANYL)-N-ARYL-NITRONES

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Nitrones are highly versatile synthetic intermediates. Aryl nitrones have been used efficiently as spin-traps in the study of lipid peroxidation and in the detection of hydroxyl and superoxide radicals¹.

C-N-Diaryl nitrones are prepared by insitu reduction of the nitro compounds according to Wiemann-Glacet method². This method was unsatisfactory for the preparation of C-(2-Furanyl)-N-Aryl nitrones as the furfural polymerises under the reaction conditions. Therefore a method was developed to synthesise title compounds in which the aryl nitro compound was reduced with Zn/HOAc in a buffered medium of KOH/HOAc/MeOH/H₂O in the presence of furfural at -10°C. C-(2-Furanyl)-N-Aryl nitrones (1a-c), were obtained in good yields and characterised by elemental analysis and spectroscopic methods (IR, MS, ¹H NMR).



yield

1a	X = H	84%
1b	X = CH ₃	87%
1c	X = Cl	70%

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 b. Kalyanaraman B, (1982) Rev. Biochem. Toxcol
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 2. Wiemann J. Glacet C, (1950) Bull. Soc. Chim. France, 976.