2-Arylamino-5-(2-naphthyloxymethyl)-1,3,4-oxadiazoles (XII-XVI)

To a methanolic solution of thiosemicarbazide (II), 3.5 g (0.01 mol) was added mercuric oxide 2.6 g (0.012 mol). The mixture was refluxed for 3 hr and filtered. Distilling off the solvent from the filtrate gave a solid compound (XII) which was recrystallized from ethanol, yield 1.8 g. Other compounds of the series were similarly prepared (table 2).

BIO-ASSAY

The hypoglycemic activity of ten compounds was determined according to the method of Somagyi[9]. From the results recorded in tables 1 and 2, it is difficult to arrive at a definite trend in SAR of compounds synthesized. Nevertheless, in case of thiosemicarbazides (table 1) an increasing trend in the reduction of blood glucose was found in the following order of phenyl substituents (R): $H < Cl < OCH_3 < CH_3$. Moreover, in a series of thiodiazoles and oxadiazoles, a maximum reduction of 21 % blood glucose was shown by compound No. VIII with $R = CH_3$.

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