N-Arylsulfonyl-α-arylglycines from N-(2,2,2-Trichloro-1-arylethyl)arenesulfonamides

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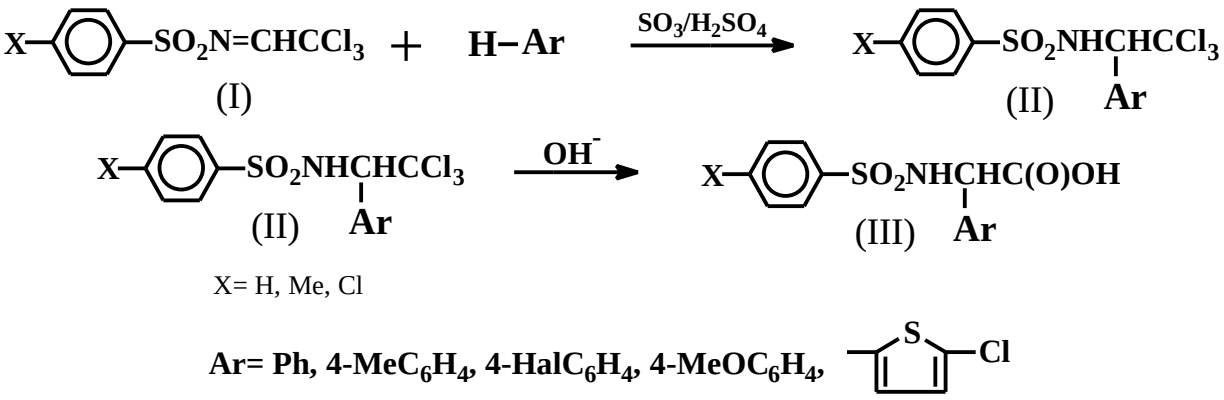
Arenesulfonylimines of polygalogenaldegydes are known to interact with electron-enriched aromatics to lead to the products of C-arylsulfonamidoalkylation. The process is activated by Lewis acids. But benzene, its alkyl and haloderivatives are passive under these conditions.

N-(2,2,2-Trichloroethylidene)arenesulfonamides (I) were found to react with all of the above aromatics and 2-chlorothiophene in the presence of oleum to give corresponding N-(2,2,2-trichloro-1-arylethyl)amides (II) with high or quantitative yields. C-Amidoalkylation was shown by NMR-spectroscopy to occur to para-position in the benzene rings and to position-5 in the thiophene.

The synthesized aromatic derivatives (II) are susceptible to hydrolysis in hot alkali to form N-arylsulfonyl-α-arylglycines (III):



The sodium salts of acids (III) were appeared to be active growth stimulators of bifido-bacteria, *Adolescentic MC-42* strain. Addition of the salts to the bifido-bacteria cultivation medium in amounts of 10^{-2}, 10^{-4} weight % was found to increase the quantity of the viable cells to 10^{10} in 1 ml of the medium in comparison with 10^{7} in 1 ml in the control.

Improvement of the synthesis and investigation of the biological activity are in progress.