

Reactions of Polyfluoroalkanethioamides with Tris(diethylamino)phosphine

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Abstract—Structure of reaction products obtained from tris(diethylamino)phosphine with *N,N*-dialkylpolyfluoroalkanethioamides depends on the length of the polyfluoroalkyl substituent in the latter. In the case of morpholides of perfluorothiopropionic and perfluorothiobutyric acids the main reaction products are fluoro-containing aminoacetylenes: 4-(perfluoroalkan-1-yn-1-yl)morpholines, and also tris(diethylamino)phosphine sulfide and tris(diethylamino)difluorophosphorane. From morpholides or piperidides of ω -*H*-perfluorothiovaleric acid with a longer perfluoroalkyl substituents amides of *cis*- and *trans*-perfluoropent-2-enethiocarboxylic acids were obtained.

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