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REACTION OF HYDROGEN FLUORIDE IN PYRIDINE SOLUTION WITH CIS-CYANO-2 AND CIS-AMIDO-2-AZIRIDINES. PREPARATION OF β -FLUORO α -AMINO ACIDS AND ESTERS BY MEANS OF ACIDIC HYDROLYSIS AND ALCOHOLYSIS OF β -FLUORO- α -AMINONITRILES AND/OR β -FLUORO- α -AMINO ACID AMIDES

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The addition of hydrogen fluoride generated from pyridinium poly(hydrogen fluoride) (i.e. Olah's reagent) to some cis-2-cyano and cis-2-amido-aziridines has been examined.

The reaction led to fluoroamine derivatives which upon acidic hydrolysis and alcoholysis gave 3-fluoro-2-aminoacids and esters in good yields.

The addition of hydrogen fluoride is highly regio-selective for both substrates. It was found to be stereospecific for cis-2-amido-aziridines since threo- β -fluoro α -aminoacid amides were exclusively obtained from the ring-opening with Olah's reagent. Cis-2-cyanoaziridines gave in all cases studied, mixtures (i.e. 57:43) of the threo- and erythro-2-amino-3-fluoronitriles.

