ml of this solution was sealed in ampules in vacuum upon liquid nitrogen cooling. The ampules were maintained at the given temperature maintained to  $\pm 0.1^{\circ}$ C and periodically opened. The contents were analyzed by gas—liquid chromatography.

Thermolysis of EAF in 1-Hexene and 1-Heptene. Analysis of the aziridines formed in the thermolysis was carried out by gas-liquid chromatography with cetane as the internal standard. The column temperature was 175°C, and the injector temperature was 200°C. The helium flow rate was 30 ml/min. Samples of 2-3 g EAF were placed in 50-ml calibrated flasks, 1.5-1.8 g cetane was added and brought to the mark by the addition of olefin. Then, 2-3 ml of this solution was sealed in ampules and maintained at constant temperature. The reaction time was calculated on the basis of the results for the EAF decomposition kinetics.

## CONCLUSIONS

The mechanism for the thermolysis of ethyl azidoformate in olefins may be regulated by altering the reaction temperature.

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### REACTIVITY OF TRIMETHYLSILYLATED DERIVATIVES OF CYSTEINE

AND 2-MERCAPTOETHYLAMINE RELATIVE TO AROMATIC ALDEHYDES

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The present work is a continuation of a study of the application of trimethylsilylated (TMS) derivatives of amino acids in organic synthesis [1]. We studied the reaction of  $(TMS)_3$ -cysteine with several aromatic aldehydes [2]. Both  $(TMS)_3$ -cysteine and  $(TMS)_2$ -2-mercaptoethylamine react under mild conditions with aromatic aldehydes such as benzaldehyde, anisaldehyde, and 4-pyridinaldehyde to form the corresponding 2,4-di- and 2-substituted thiazolidines

 $\begin{array}{c} \text{Me}_{3}\text{SiNHCHCH}_{2}\text{SSiMe}_{3} \div \text{R}^{2}\text{CHO} \rightarrow \text{R}^{1}-\text{CH}-\text{CH}_{2} + (\text{Me}_{3}\text{Si})_{2}\text{O}\\ \\ \text{R}^{1} & \text{HN} & \text{S}\\ \text{CH} & \text{CH}\\ \\ \text{R}^{2} \\ \text{DOSiMe}_{3}, \ \text{R}^{2} = \text{Ph}, \ p\text{-MeOC}_{6}\text{H}_{4}, \qquad \text{N} \\ \end{array}$  $R^1 = H$ , COOSiMe<sub>3</sub>,  $R^2 = Ph$ , p-MeOC<sub>6</sub>H<sub>4</sub>,

This reaction is exothermic and is complete after several hours in the case of  $(TMS)_{2}$ -2-mercaptoethylamine. The reaction in the case of  $(TMS)_{3}$ -cysteine proceeds somewhat more slowly. The readiness with which TMS-alkylaminothiols react with aldehydes is apparently a result of the greater nucleophilicity of the N,S-bis(TMS) reagents than the corresponding alkylaminothiols. In addition, the reaction becomes irreversible since hexamethyldisiloxane is formed along with the thiazolidine instead of water.

This method gives a good yield of previously described 2-phenyl-1,3-thiazolidine (I) [3], 2-phenyl-1,3-thiazolidine-4-carboxylic acid (II) [4], 2-p-methoxyphenyl-1,3-thiazolidine-4-carboxylic acid (III) [4] and a new compound, 2-(4-pyridyl)-1,3-thiazolidine (IV).

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#### EXPERIMENTAL

Thin-layer chromatography was carried out on Silufol plates.

The compounds obtained were identified by elemental analysis, and IR spectroscopy as well as by thin-layer chromatographic comparison with samples obtained by reported methods [3, 4] and correlation with the data reported for described compounds.

General Method for the Preparation of Thiazolidines. A sample of 1.1 mmoles aldehyde was added to 1 mmole  $(TMS)_3$ -cysteine or  $(TMS)_2$ -2-mercaptoethylamine. The reaction mixture was stirred and left at about 20°C until fully crystallized. Then, a small amount of anhydrous acetone was added and the crystals were filtered off. The product was washed with acetone and dried in vacuum to obtain a 91% yield of (I), mp 108-109°C; 91% yield of (II), mp 161-162°C C; 88% yield of (III), mp 152-153°C; and 90% yield of (IV) as colorless crystals with mp 75-76°C (from ethyl acetate-hexane), R<sub>f</sub> 0.5 (85:10:5 chloroform-methanolbenzene). Found: C 57.55; H 5.95; N 16.96; S 19.28%. Calculated for C<sub>0</sub>H<sub>10</sub>N<sub>2</sub>S: C 57.80; H 6.06; N 16.86; S 19.28%. IR spectrum ( $\nu$ , cm<sup>-1</sup>): 3220 (NH), 1600 (C=C), 820 (N).

# CONCLUSIONS

Trimethylsilyl derivatives of alkylaminothiols are convenient reagents for the synthesis of thiazolidines from aromatic aldehydes.

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# REACTION OF 2,5-DIPHENYL-1,2,3-DIAZAARSOLE WITH 2-DIAZOPROPANE

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In our previous work [1-6], we showed that 2-phenyl-5-methyl-1,2,3-diazaphosphole reacts with 2-diazopropane to form a complex mixture of products. We might have expected that 2,5diphenyl-1,2,3-diazaarsone (I) would react analogously, but the reaction of this compound with 2-diazopropane leads only to 2,4-diphenyl-6,6-dimethyl-1-arsa-2,3-diazabicyclo[3.1.0]hex-3-ene (III)



The formation of the analogous arsirane-containing bicyclic adduct occurs upon the reaction of (I) with diphenyldiazomethane [7-9].

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