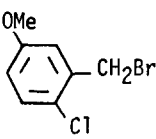




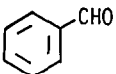
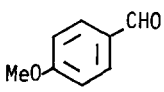
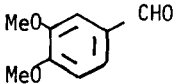
saturated ammonium chloride and the product was isolated with chloroform. The results are summarized in Tables I and II.

Table I

<u>1</u> , Halides	<u>3</u> , Products %	<u>4</u> , Products %
$\text{CH}_3(\text{CH}_2)_6\text{CH}_2\text{I}$	97	67
$\text{CH}_3(\text{CH}_2)_8\text{CH}_2\text{I}$	94	80
$\text{CH}_3(\text{CH}_2)_{10}\text{CH}_2\text{I}$	98	83
	66	76

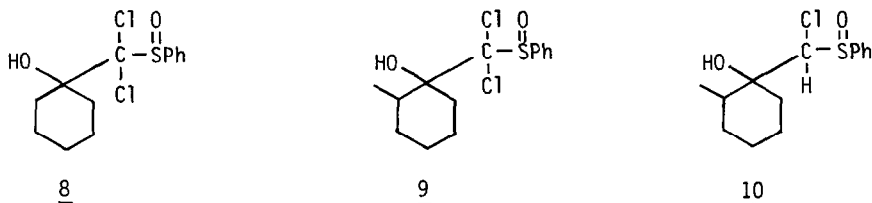
Pyrolysis, under nitrogen, of compound 3 in the presence of a catalytic amount of hydroquinone<sup>1b</sup> in xylene gave the vinyl dichlorides<sup>4</sup> in excellent yields.

Table II

<u>5</u> , Aldehydes	<u>6</u> , Products %	<u>7</u> , Products %
$\text{C}_2\text{H}_5\text{CHO}$	74	-
$\text{C}_7\text{H}_{15}\text{CHO}$	64	-
	94	80
	83	98
	94	87

The neat pyrolysis of compound 6 was carried out at 150°C for 5 minutes under reduced pressure (1.0 mm/Hg). In the cases of octanaldehyde and propanaldehyde, no corresponding dichloroketones<sup>5</sup> could be isolated upon pyrolysis of product 6.

The carbanion 2 also added to ketones; its reaction with cyclohexanone gave the expected hydroxy compound 8 in 57% yield. No adduct 9 could be isolated in the case of the reaction of compound 2 with 2-methylcyclohexanone. Apparently the second chlorine atom on the carbon alpha to



the sulfinyl group provides considerable steric hindrance in the reaction. The reaction of  $\alpha$ -lithio chloromethyl phenyl sulfoxide with 2-methylcyclohexanone gave compound 10 in 26% yield.

The products,  $\beta$ -hydroxy- $\alpha$ -dichlorosulfoxides 3, are quite sensitive to basic conditions. When compounds 6 ( $R = C_6H_5-$ ) and 8 were separately treated with base (5% KOH-CH<sub>3</sub>OH), the reaction gave complex mixtures, from which a small quantity of  $\alpha$ -dichloromethyl phenyl sulfoxide could be isolated but no corresponding epoxide could be detected.<sup>6</sup> This property of 6 and 8 is quite in contrast to that of  $\beta$ -hydroxy- $\alpha$ -chlorosulfoxide<sup>1a</sup>, whose epoxide could be isolated in high yields.

Our results provide a highly convenient method for the preparations of terminal dichlorovinyl compounds and dichloromethylketones. Further exploratory work is in progress.

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