

Inter-Office Memo

TENNECO CHEMICALS, INC.

To	M. W. Williams	At	Piscataway	Date	June 5, 1969
From	H. B. Carr	At	Burlington	Copy to	P. F. Albanese E. Farber J. C. Fisher F. W. Kanzler G. W. Leach File
Subject	MVC - Gas Chromatography Correlation				

Attached is a table of gas chromatography results on vinyl chloride monomer from Burlington, PPG, Dow, and Allied laboratories. Only 1,3 butadiene and methyl chloride are tabulated since they are the only light end impurities that have been found to be of significance from the oxychlorination based suppliers in this study.

A "t test" of significance at 95% confidence revealed the following:

1. The data shown for PPG and Burlington on methyl chloride and 1,3 butadiene are statistically similar.
2. The data from Dow and Burlington on methyl chloride are statistically similar.

The indication based on this excellent correlation of methyl chloride and 1,3 butadiene is that the Burlington method of sampling and gas chromatographic analysis is analytically sound. The correlation on other light end impurities has, for the most part, been good with the Houston laboratory. However, since Tenneco Hydrocarbons does not run standards on a daily basis but rely on factors for calculation, their results have been variable at times. We have found that this practice, alone, can introduce $\pm 33\%$ variation to results. The importance of running periodic standards has been mentioned to Houston. Further, a copy of our method has been forwarded to their laboratory for review. A report on correlation of results with Tenneco Hydrocarbons will be issued in the near future.

H. B. Carr
H. B. Carr

HBC/rjl

Attachment

COLORITE 016048

PPG

Tank Car (Date)	<u>1,3 Butadiene</u>			<u>Methyl Chloride</u>		
	<u>PPG</u>	<u>Houston</u>	<u>Burlington</u>	<u>PPG</u>	<u>Houston</u>	<u>Burlington</u>
SACX 9902 2/20/69	5	-	6	52	-	49
SACX 9034 4/24/69	3.4	-	6	25	-	33
SACX 9036 4/24/69	6	3	6	34	51	32
*SACX 9036			(6)			(39)
SACX 9055 4/24/69	4.2	10	7	28	41	25
*SACX 9055			(7)			(33)
SACX 9072 4/28/69	4.5	5	6	15	36	39
SACX 9044 5/1/69	4.6	-	4	38	-	40
SACX 9045 5/1/69	3.8	-	5	50	-	37
NATX 17178 5/5/69	5.2		5	36		44
SACX 9074 5/5/69	3.6		6	28		34
SACX 9050 5/5/69	3.9		5	35		36

DOW

	<u>Dow</u>	<u>Burlington</u>	<u>Dow</u>	<u>Burlington</u>
NATX 38034 5/26/69	ND	< 1	16	18
NATX 38005 5/26/69	Tr	< 1	16	18
NATX 38015 6/2/69	ND	< 1	9	11
NATX 38048 6/2/69	ND	ND	9	12

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Allied

<u>Tank Car</u> <u>(Date)</u>	<u>1,3 Butadiene</u>			<u>Methyl Chloride</u>		
	<u>Allied</u>	<u>Houston</u>	<u>Burlington</u>	<u>Allied</u>	<u>Houston</u>	<u>Burlington</u>
GCX 714601 2/20/69	3.1	1	2	**	151	146

*Sampled by PPG and forwarded to Houston and then forwarded by Houston, to Burlington. These samples were analyzed by the three laboratories to eliminate any analysis variation from sampling.

**Allied did not report methyl chloride. Upon contacting them it was learned that they have not developed the gas chromatographic conditions for methyl chloride.