Monsanto
COMPANY

ORGANIC CHEMICALS DIVISION

1700 South Second Street
St. Louis, Missouri 63177
(314) MAin 1-4000

May 12, 1970

Dr. Ron Jezerc
Appleton Coated Paper Company
825 E. Wisconsin
P. O. Box 348
Appleton, Wisconsin 54911

Dear Dr. Jezerc:

The EC/GC analysis of the two air samples and the reference sample sent have been completed. The results are expressed in terms of grams of Aroclor 1242 per microliter of solution, as received, so that you may calculate the actual grams of Aroclor 1242 per cubic meter of air samples. The results were as follows:

O.R.Log No.	Appleton Sample Number	g/ul Aroclor 1242
247	11	$1.74\text{-}3.23 \times 10^{-9}$
248	12	$2.07\text{-}3.79 \times 10^{-9}$
249	13	6.78×10^{-6}
		6.87×10^{-6}

The reference sample #13 contained (per Goetz's letter 4-21-70) 0.5 ml Aroclor 1242 per 100 ml of toluene which is equivalent to $6.90 - 6.96 \times 10^{-6}$ g/ul of Aroclor 1242 (specific gravity of Aroclor 1242, 1.381 - 1.392 @ 25°C). Although these numbers agree well with what we found, the concentration used was much too high to check contamination as intended. A simple toluene blank would probably have been more meaningful.

I have chosen to report a range on sample numbers 11 & 12. The minimum value represents only those PCB isomers that elude in the same region as the Aroclor 1242. The maximum value includes the earlier eluding PCB isomers (probably the mono- and di-chloro biphenyls) which are apparent in the air samples (see example chromatograms). It is reasonable, I think, that the lighter chlorinated biphenyls build up in air samples such as these.

Assuming that 6 cu. ft. of air was scrubbed through 500 ml of toluene and that the efficiency of the scrubber was 100% then the calculated amounts of Aroclor 1242 present in air samples 11 & 12 are 4.1 - 7.5 and 4.8 - 8.8 mg per cubic meter, respectively.

If we can be of any more help to you in the future, feel free to contact us.

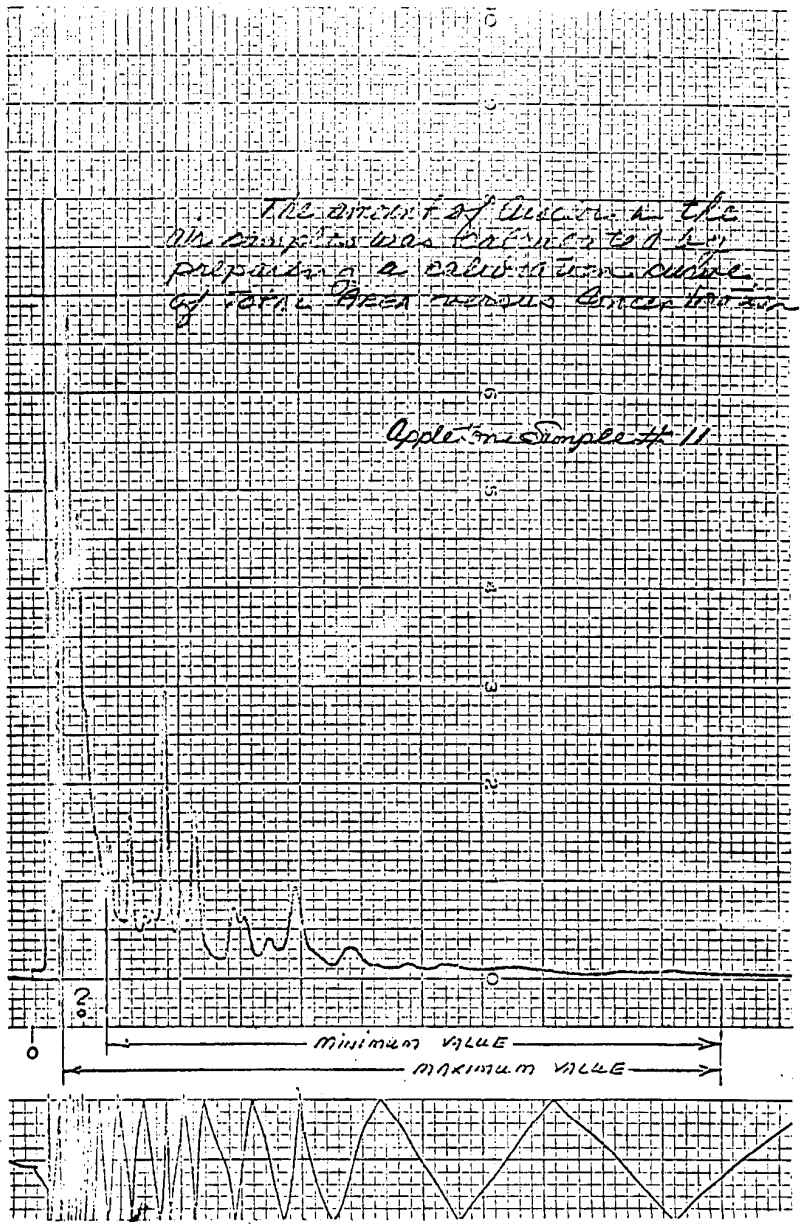
Sincerely,

Scott Tucker

E. S. Tucker
Senior Research Chemist
Applied Sciences Section

EST:db
Enclosures - 2

cc: W. B. Papageorge
R. E. Keller
M. W. Farrar
W. S. Clark
Gordon Taylor, NCR


The amount of Ascorbic in the air samples was calculated by preparing a calibration curve of Total Area versus Concentration.
Appleton Sample # 11
0
1
2
3
4
5
6
?
0
MINIMUM VALUE
MAXIMUM VALUE

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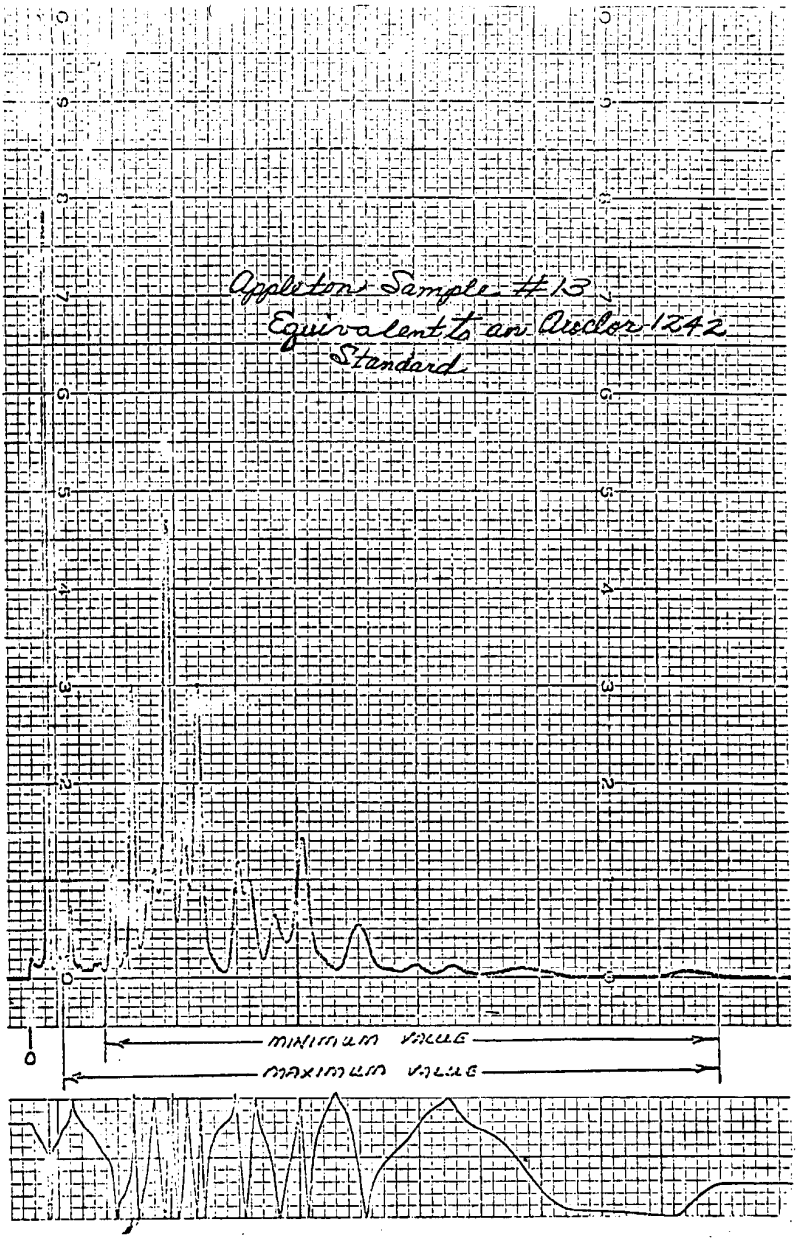

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