

T3.5-6-12

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES
REPORT SHEET

DATE March 4, 1959

CHARGE 1219-26

MAIN LAB. NUMBER SSR 275-883

YOUR NUMBER As listed.

DESCRIPTION Rabbit Blood Oxalated

Sample	Milligrams of Bromide per 100 ml.	
965A	0.52	} <i>Pre-oxalated</i> $Ave = 0.49$
966A	0.39	
967A	0.53	
968A	0.53	
965B	3.29	} <i>1-oxalated</i> $Ave = 2.95$ below
966B	2.75	
967B	2.78	
968B	3.00	
965C	5.00	} <i>2-oxalated</i> $Ave = 4.91$
966C	4.83	
967C	4.91	
965D	8.30	} <i>4-oxalated</i> $Ave = 9.07$
966D	9.15	
967D	9.77	
970D	3.17	} <i>1-oxalated</i>

2722
9.07

18 hrs.
15 det.

3.29
2.75
2.78
3.66
3.17

3.14.99
2.99 3.60

DO 130604
CONFIDENTIAL

BY E. T. Wagoner

can

SIGNED

Phone 6-5900
S. A. Shrader

S.A.S.
574 Bldg.

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES

REPORT SHEET

DATE March 20, 1959

CHARGE 1219-26

MAIN LAB. NUMBER ALS 2026

YOUR NUMBER As listed.

DESCRIPTION Oxalated Rabbit Blood

<u>Sample No.</u>	<u>Milligrams of Bromide per 100 ml.</u>
965 F	13.3
966 F	12.6
967 F	10.8
970 F	13.0

Handwritten calculations:
49.7
12.4
38.3
9.6
Signature: E. T. Wagoner

2 hrs.
4 det.

DO 130605
CONFIDENTIAL

BY E. T. Wagoner

can

Phone 6-5900
S. A. Shrader

SIGNED

Signature: S. A. Shrader
574 Bldg.

SPECIES Rabbit
SEX Male
K NO. 1715-9
MATERIAL Ethylene Dibromide

BIOCHEMICAL RESEARCH LABORATORY
WEIGHT RECORD

FILE NO. 3.5-6-12
EXPT. NO. 1
RUN NO. 1
PROBLEM NO.

CAGE AND DOSE	DATE			ACCT. NO.											
	→			4/23			5/6	3/12	3/19	3/26	4/2	4/9	4/16	5/30	
	→			0				13	18	23	28	33	38		
	→			0				17	24	31	38	45	52		
↓	BIRTH DATE	EAR MARK	ANIMAL NO.												
3291	14/12	965	9	1.95			207	219	2.28	2.38	2.45	2.51	2.56	2.54	
92		966		219			216	226	2.25	2.36	2.47	2.48	2.54	2.58	
93		967		1.61			1.25	1.90	1.84	1.89	1.81	1.76	1.71	1.96	
94		968		1.98	970	2.15	2.24	2.37	2.48	2.57	2.62	2.79	2.74	2.89	
MON 2/23/59 Sample A heart puncture, pericardium 3/6															
Tues 3/14/59 Sample B heart puncture 8 AM 3cc 1/1															
WED 3/15/59 Sample C heart puncture 8 AM (968 omitted) 3cc 1/1															
THU 3/17/59 Sample D heart puncture 8 AM 3cc 1/1															
FRI 3/18/59 Sample E heart puncture 8 AM 3cc 9/11															
FRI 3/19/59 Sample F heart puncture 8 AM 3cc 1/1															
SAT 3/20/59 Sample G heart puncture 8 PM 15cc 4/14															
FRI 4-3-59 Sample H heart puncture 3:15 PM 3cc 24 days 38 days															
Mon 4-6-59 Sample I heart puncture 8:15 AM 3cc 29 days 41 days															
4-10-59 Sample J heart puncture 8:15 PM 6cc 34 days 45 days															
4-13-59 Sample K heart puncture 8:15 AM 5cc 34 days 48 days															
5-05-59 Sample L heart puncture 3:15 PM 12cc 59 days 80 days															
5-18-59 Sample M heart puncture 3:15 PM 5cc 58 days 83 days															
5-28-59 Sample N heart puncture 3:15 PM 3cc 57 days 93 days															
5/7 5/14 5/18															
53 58 59															
72 79 93															
3291		965		2.52	2.47	Killed 5/28/59 After last bleeding J. H. Williams									
92		966		2.60	2.67										
93		967		2.00	2.05										
94		968		2.90	3.06										
These rabbits received 59 exposure during the 3 months period they were in experiment															
DO 130606 CONFIDENTIAL															

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES
REPORT SHEET

DATE March 12, 1959

CHARGE 1219-26

MAIN LAB. NUMBER SSR 275-964

YOUR NUMBER As listed.

DESCRIPTION Oxalated Rabbit Blood

<u>Sample No.</u>	<u>Milligrams of Bromide Per 100 ml.</u>
-------------------	--

965E

12.4

966E

12.9

967E

10.7

970E

11.0

47.0

11.7 Ave

9
Ex 20000
11 days

4 hrs.
4 det.

1
11

DO 130607
CONFIDENTIAL

by E. T. Wagoner

Phone 6-5900

S. A. Shrader

can

SIGNED

SAS
574 Bldg.

TO: T. R. Tork lson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES
REPORT SHEET

DATE April 23, 1959

CHARGE 1219-26

MAIN LAB. NUMBER ALS 2125

YOUR NUMBER As listed.

DESCRIPTION Rabbit Blood

<u>Sample No.</u>	<u>Milligrams of Bromide per 100 ml.</u>
965 G	8.3
966 G	8.2
967 G	11.8
970 G	10.2

LANGDON

19.5
21.0
24.0

8 hrs.
5 det.

DO 130608
CONFIDENTIAL

BY E. T. Wagoner

Phone 6-5900
S. A. Shrader

can

SIGNED

AAS.
514 Bldg.

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES

REPORT SHEET

DATE April 10, 1959

CHARGE 1219-26

MAIN LAB. NUMBER ALS 2175

YOUR NUMBER As listed.

DESCRIPTION Rabbit Blood

Sample No. Milligrams of
 Bromide per 100 ml.

965 H
966 H
967 H
970 H
965 I
966 I
967 I
970 I

14.1
13.7
14.5
16.8
8.5
9.1
9.2
12.4

(Friday)
29x/38 days
459.1
14.8 ave for H
439.2
9.8 ave for I (Monday)
29x/41 days

9 hrs.
8 det.

DO 130609
CONFIDENTIAL

BY E. T. Wagoner

Phone 6-5900

S. A. Shrader

can

SIGNED

ALS
574 Bldg.

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES

REPORT SHEET

DATE April 17, 1959

CHARGE 1219-26

MAIN LAB. NUMBER ALS 2277

YOUR NUMBER As listed.

DESCRIPTION Rabbit Blood

Sample No.	Milligrams of Bromide per 100 ml. (By Reflux Method with ethanolamine)	Milligrams of Bromide per 100 ml. (By Usual Method- caustic treatment)
965 J	16.1	15.9
966 J	15.8	13.7
967 J	14.8	16.4
970 J	18.0	16.4
965 K	8.7	
966 K	9.5	
970 K	10.4	
	<u>3/286</u>	
	9.5	

10 hrs.
10 det.

BY E. T. Wagoner

can

Phone 6-5900

S. A. Sprader

SIGNED

S.A.S.
574 Bldg.

DO 130610
CONFIDENTIAL

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY

MIDLAND MICHIGAN

ANALYTICAL LABORATORIES

REPORT SHEET

DATE June 2, 1959

CHARGE 1219-26

AL NUMBER ALS 2473

PROBLEM _____

YOUR NUMBER As listed.

DESCRIPTION Rabbit blood oxalated

Sample No.

Milligrams of
Bromide per 100 ml.

965L
966L
967L
970L
965M
966M
967M
970M

59/80
59/80

20.9
15.6
10.6
18.1
15.1
10.2
8.7
12.7
46.7
11.7

DO 130611
CONFIDENTIAL

SPLE. 8 HRS. 6 DET. 8

BY E. T. Wagoner
can

SIGNED S. A. Shrader

PHONE ME 6- 5900 BLDG. 574

735-6-12

TO: T. R. Torkelson

THE DOW CHEMICAL COMPANY
MIDLAND MICHIGAN

ANALYTICAL LABORATORIES
REPORT SHEET

DATE June 4, 1959

CHARGE 1219-26

AL NUMBER ALS 2604

PROBLEM _____

YOUR NUMBER As listed.

DESCRIPTION Rabbit Blood Oxalated

Sample No.	Milligrams of Bromide per 100 ml.
963N * 965N	4.1
966N	3.1
967N	5.6
970N	3.2

Last Sample

59 / Friday
16.0
2.8

*The number on the sample bottle is 963N.

The samples of this series were analyzed
by Analytical Method MLS.54.6, May 13, 1954.

DO 130612
CONFIDENTIAL

SPL. 4 HRS. 6 DET. 4

BY E. T. Wagoner
can

SIGNED *EAS*
S. A. Shrader

PHONE ME 6. 5900 BLDG. 574

MATERIAL Ethylene dibromide 23 ppm Normal 3.5-6-12
ANALYTICAL METHOD Direct combustion 175-9

FACTOR: ppm/mg/liter / ppm/mg / liter / 2450 ppm/ml. 0.02 N Ag NO₃ 5 ml. ALIQUOT
DATE 2/18/59
TIME: START 302
STOP 315
TOTAL TIME 13 MINUTES
RATE OF SAMPLE FLOW 1.2 LITERS/MINUTE
SCRUBBER NUMBER 35-45
COMB. (ANALYZER READING 22.5 ON SCALE) 2
OR IR (ANALYZER ZERO)
COMMENTS:
SPEED 15 130m
CHAMBER NO. 6 ☐ Yes ☒ No
ANIMALS IN CHAMBER
ANALYSIS 2.0 ml. 0.02 N Ag NO₃
1.58 ml. 0.02 N NH₄ SCN
0.42 ml. NET (SSR
Report No. (SPEC. 17.5 P.P.M.
0.92 ml. X 2450 FACTOR 17.5 P.P.M.
49 min. X 1.2 LITER MINS.
0.53 = 22.5 ppm

DATE 2/18/59
TIME: START 400
STOP 500
TOTAL TIME 60 MINUTES
RATE OF SAMPLE FLOW 1.2 LITERS/MINUTE
SCRUBBER NUMBER 40-35
COMB. (ANALYZER READING 40-35 ON SCALE) 2
OR IR (ANALYZER ZERO)
COMMENTS:
SPEED 15 130m
CHAMBER NO. 6 ☐ Yes ☒ No
ANIMALS IN CHAMBER
ANALYSIS 1.99 ml. 0.02 N Ag NO₃
1.38 ml. 0.02 N NH₄ SCN
0.61 ml. NET (SSR
Report No. (SPEC. 22.8 P.P.M.
0.61 ml. X 2450 FACTOR 22.8 P.P.M.
60 min. X 1.2 LITER MINS.
0.73 = 24.8

DATE 2/18/59
TIME: START 125
STOP 156
TOTAL TIME 31 MINUTES
RATE OF SAMPLE FLOW 1.2 LITERS/MINUTE
SCRUBBER NUMBER 31-40
COMB. (ANALYZER READING 31-40 ON SCALE) 2
OR IR (ANALYZER ZERO)
COMMENTS:
SPEED 15 125m
CHAMBER NO. 6 ☐ Yes ☒ No
ANIMALS IN CHAMBER
ANALYSIS 1.98 ml. 0.02 N Ag NO₃
1.73 ml. 0.02 N NH₄ SCN
0.26 ml. NET (SSR
Report No. (SPEC. 12.1 P.P.M.
0.16 ml. X 2450 FACTOR 12.1 P.P.M.
31 min. X 1.2 LITER MINS.
0.34 = 22.3

DATE 2/18/59
TIME: START 1019
STOP 1152
TOTAL TIME 133 MINUTES
RATE OF SAMPLE FLOW 1.2 LITERS/MINUTE
SCRUBBER NUMBER Not running
COMB. (ANALYZER READING Not running ON SCALE)
OR IR (ANALYZER ZERO)
COMMENTS:
SPEED 15 180m
CHAMBER NO. 6 ☒ Yes ☐ No
ANIMALS IN CHAMBER
ANALYSIS 108 ml. 0.02 N Ag NO₃
108 ml. 0.02 N NH₄ SCN
1.08 ml. NET (SSR
Report No. (SPEC. 23.7 P.P.M.
93 min. X 1.2 LITER MINS.
93 = 23.7

DATE 2/18/59
TIME: START 1156
STOP 1304
TOTAL TIME 108 MINUTES
RATE OF SAMPLE FLOW 1.2 LITERS/MINUTE
SCRUBBER NUMBER Not running
COMB. (ANALYZER READING Not running ON SCALE)
OR IR (ANALYZER ZERO)
COMMENTS:
SPEED 15 180m
CHAMBER NO. 6 ☒ Yes ☐ No
ANIMALS IN CHAMBER
ANALYSIS 2.12 ml. 0.02 N Ag NO₃
1.88 ml. 0.02 N NH₄ SCN
2.12 ml. NET (SSR
Report No. (SPEC. 22.0 P.P.M.
1.88 min. X 1.2 LITER MINS.
1.88 = 22.0

DO 130613
CONFIDENTIAL

MATERIAL

ANALYTICAL METHOD

Ethylene dibromide
Direct Combustion

T

3.5-6-12

K

1715-9

FACTOR:

ppm / mg / liter /

ppm / mg

/ liter /

4546

ppm / ml. 0.02 N Ag NO₃ 5 ml. ALIQUOT

DATE

3/31/59

TIME: START

8:11

STOP

3:06

TOTAL TIME

55

MINUTES

RATE OF SAMPLE FLOW

1.2

LITERS / MINUTE

SCRUBBER NUMBER

COMB. (ANALYZER READING

35-43

ON SCALE)

2

OR IR (ANALYZER ZERO

6

)

COMMENTS:

SPEED

CHAMBER NO.

ANIMALS IN CHAMBER

☒ Yes ☐ No

ANALYSIS

ml. 0.02 N

Ag NO₃

ml. 0.02 N

NH₄ SCN

ml. NET

(SSR)

Report No. (SPEC.

0.65

ml. X

2450

FACTOR

24.2

P.P.M.

35

min. X

1.2

LITER MINS.

DATE

4-1-59

TIME: START

8:15

STOP

11:46

TOTAL TIME

151

MINUTES

RATE OF SAMPLE FLOW

1.2

LITERS / MINUTE

SCRUBBER NUMBER

COMB. (ANALYZER READING

35-40

ON SCALE)

2

OR IR (ANALYZER ZERO

)

COMMENTS:

SPEED

CHAMBER NO.

ANIMALS IN CHAMBER

☒ Yes ☐ No

ANALYSIS

ml. 0.02 N

Ag NO₃

ml. 0.02 N

NH₄ SCN

ml. NET

(SSR)

Report No. (SPEC.

1.78

ml. X

2450

FACTOR

24.1

P.P.M.

151

min. X

1.2

LITER MINS.

DATE

4-10-59

TIME: START

8:15

STOP

1:23

TOTAL TIME

17

23

MINUTES

RATE OF SAMPLE FLOW

1.2

LITERS / MINUTE

SCRUBBER NUMBER

COMB. (ANALYZER READING

ON SCALE)

)

OR IR (ANALYZER ZERO

)

COMMENTS:

SPEED

CHAMBER NO.

ANIMALS IN CHAMBER

☒ Yes ☐ No

ANALYSIS

ml. 0.02 N

Ag NO₃

ml. 0.02 N

NH₄ SCN

ml. NET

(SSR)

Report No. (SPEC.

202

ml. X

2450

FACTOR

25.8

P.P.M.

160

min. X

1.2

LITER MINS.

DATE

4/10/59

TIME: START

1:26

STOP

3:06

TOTAL TIME

1:40

MINUTES

RATE OF SAMPLE FLOW

1.2

LITERS / MINUTE

SCRUBBER NUMBER

COMB. (ANALYZER READING

ON SCALE)

)

OR IR (ANALYZER ZERO

)

COMMENTS:

SPEED

CHAMBER NO.

ANIMALS IN CHAMBER

☐ Yes ☐ No

ANALYSIS

ml. 0.02 N

Ag NO₃

ml. 0.02 N

NH₄ SCN

ml. NET

(SSR)

Report No. (SPEC.

1.27

ml. X

2450

FACTOR

25.9

P.P.M.

1:00

min. X

1.2

LITER MINS.

DATE

3/12/58

TIME: START

1:17

STOP

3:03

TOTAL TIME

1:45

MINUTES

RATE OF SAMPLE FLOW

1.2

LITERS / MINUTE

SCRUBBER NUMBER

COMB. (ANALYZER READING

16-18

ON SCALE)

3

OR IR (ANALYZER ZERO

)

COMMENTS:

SPEED

CHAMBER NO.

ANIMALS IN CHAMBER

☒ Yes ☐ No

ANALYSIS

ml. 0.02 N

Ag NO₃

ml. 0.02 N

NH₄ SCN

ml. NET

(SSR)

Report No. (SPEC.

1.11

ml. X

2450

FACTOR

24.9

P.P.M.

1:00

min. X

1.2

LITER MINS.

DO 130614

CONFIDENTIAL

BIOCHEMICAL RESEARCH LABORATORY

FUME CHAMBER EXPOSURE RECORD

ANIMALS: RATS ~~==~~ CAGES ~~==~~PROBLEM NO. T 3-56-12CAVIES ~~==~~ CAGES ~~==~~EXPERIMENT NO. 1RABBITS ~~724~~ CAGES 3291-92-93-94RUN NO. 1

VAPOR CONC: _____ mg./l.

p.p.m.

Ch. #6

EXP. NO.	NO. DAYS	DATE	HOUR IN	BY	HOUR OUT	BY	HOURS EXPOSED	REMARKS
31	42	4-7-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
32	43	4-8-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
33	44	4-9-59	8 15	R _{un} .	3 15	R _{un} .	7.0	O.K.
34	45	4-10-59	8 05	ER	3 05	ER	7.0	O.K.
35	48	4-13-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
36	49	4-14-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
37	50	4-15-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
38	51	4-16-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
39	52	4-17-59	8 12	R _{un} .	3 12	R _{un} .	7.0	O.K.
40	55	4-20-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
42	56	4-21-59	8 15	R _{un} .	3 15	R _{un} .	7.0	O.K.
43	57	4-22-59	7 55	R _{un} .	2 55	R _{un} .	7.0	O.K.
44	58	4-23-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
45	59	4-24-59	7 55	R _{un} .	2 55	R _{un} .	7.0	O.K.
46	62	4-27-59	7 45	R _{un} .	2 45	R _{un} .	7.0	O.K.
47	63	4-28-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
48	64	4-29-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
49	65	4-30-59	8 14	R _{un} .	3 14	R _{un} .	7.0	O.K.
50	66	5-1-59	7 45	R _{un} .	2 45	R _{un} .	7.0	O.K.
51	69	5-4-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
52	70	5-5-59	7 51	ER	1 01	ER	5 1/2	Too Hot
53	71	5-6-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
54	72	5-7-59	8 02	R _{un} .	3 02	R _{un} .	7.0	O.K.
55	73	5-8-59	7 48	R _{un} .	2 48	R _{un} .	7.0	O.K.
56	76	5-11-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
57	77	5-12-59	7 50	R _{un} .	2 50	R _{un} .	7.0	O.K.
58	78	5-13-59	7 45	R _{un} .	2 45	R _{un} .	7.0	O.K.
59	79	5-14-59	7 50	ER	2 57	ER	7.0	O.K.
60	80	5-15-59	7 48	R _{un} .	2 48	R _{un} .	7.0	O.K.
61	83	5-18-59						

DO 130615
CONFIDENTIAL

BIOCHEMICAL RESEARCH LABORATORY
FUME CHAMBER EXPOSURE RECORD

ANIMALS: RATS- - - CAGES _____

PROBLEM NO. T _____

CAVIES- - - CAGES _____

EXPERIMENT NO. _____

RABBITS- - - CAGES 3291-92-93-94

RUN NO. _____

VAPOR CONC: _____ mg./l.

_____ p.p.m.

cb. # 6

EXP. NO.	NO. DAYS	DATE	HOUR IN	BY	HOUR OUT	BY	HOURS EXPOSED	REMARKS
1	0	2-23-59	9 00	R _{un} .	4 00	R _{un} .	7.0	C.K.
2	1	2-24-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
3	2	2-25-59	8 12	R _{un} .	3 12	R _{un} .	7.0	O.K.
4	3	2-26-59	8 05	R _{un} .	3 05	R _{un} .	7.0	<u>Added Rabbit 970</u>
5	4	2-27-59	8 25	R _{un} .	3 25	R _{un} .	7.0	O.K.
6	7	3-2-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
7	8	3-3-59	8 15	R _{un} .	3 15	R _{un} .	7.0	O.K.
8	9	3-4-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
9	10	3-5-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
10	11	3-6-59	8 15	R _{un} .	3 15	R _{un} .	7.0	O.K.
11	14	3-9-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
12	15	3-10-59	8 12	R _{un} .	3 12	R _{un} .	7.0	O.K.
13	16	3-11-59	8 00	R _{un} .	3 00	R _{un} .	7.0	O.K.
14	17	3-12-59	8 08	R _{un} .	3 08	R _{un} .	7.0	O.K.
15	18	3-13-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
16	21	3-16-59	8 12	ER	3 12	ER	7.0	O.K.
17	22	3-17-59	7 52	ER	2 52	ER	7.0	O.K.
18	23	3-18-59	8 07	ER	3 07	ER	7.0	O.K.
19	23	3-19-59	7 49	ER	2 49	ER	7.0	O.K.
20	24	3-20-59	7 49	ER	2 49	ER	7.0	O.K.
21	27	3-23-59	8 00	R _{un} .	3 00	R _{un} .	7.0	O.K.
22	28	3-24-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
23	29	3-25-59	8 05	R _{un} .	3 05	R _{un} .	7.0	O.K.
24	30	3-26-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
25	34	3-30-59	8 10	R _{un} .	3 10	R _{un} .	7.0	O.K.
26	35	3-31-59	8 05	R _{un} .	3 05	R _{un} .	7.0	C.K.
27	36	4-1-59	8 13	R _{un} .	3 03	R _{un} .	7.0	C.K.
28	37	4-2-59	8 15	R _{un} .	3 15	R _{un} .	7.0	O.K.
29	38	4-3-59	8 06	R _{un} .	3 06	R _{un} .	7.0	O.K.
30	41	4-6-59	8 20	R _{un} .	3 20	R _{un} .	7.0	O.K.

DO 130616
CONFIDENTIAL

File No. 3.5-C-12

K No. 1715-9

SET UP FOR VAPOR EXPOSURE TO
ETHYLENE DICHLORIDE
25 ppm
Chamber #C

MW = 188
 DENSITY = 2035 mg./ml
 BP = 108-110 °C

130 ppm = 1 mg/lit
1 ppm = 0.0769 mg/lit
25 ppm = 0.192 mg/lit

Assuming an airflow of 15 lit/min

15 lit/min x 0.192 mg/lit = 288 mg/min

288 mg/min $\times \frac{0.001402 \text{ mg/lit}}{2035 \text{ mg/ml}}$ = 0.001402 mg/min

0.58.9 ml/day (7hr)

1:45 PM 0.64

1:58 PM 1.00cc Using 1 ml Syringe #3432 Speed B 15

$\frac{0.31cc}{240min} =$

The delivery is 0.00148 ml/min

$\frac{0.00148 \text{ ml/min}}{0.001402 \text{ mg/lit}} = \frac{V}{15 \text{ lit air/min}}$

$V = \underline{13.6} \text{ lit air/min}$

13.6 lit air/min x 0.035316 ft³/lit = 0.55 ft³/min

Using Flowmeter PC-2023 a setting
 of 13.5 gives the required airflow.

By [Signature]
 Date 2/8/59

FBI/DOJ

[Signature] 4:30-8 am
 18.0 L/min.