Report ORF 66-1

APPENDIX

Detail data on GLC analysis of smoke condensate for endrin residues

1. INSTRUMENT AND OPERATING CONDITIONS

Aerograph HY-FI 600D with electron capture detector

a. Column: 5' x 1/8" Pyrex, 6% QF-1 (4% SE-30(on Chromosorb W

b. Column temperature: ~ 195°C

c. Carrier gas flow rate: ~ 85 mls/minute

d. Chart speed: 1/2" per minute

2. STANDARD ENDRIN SOLUTION

8 µg endrin diluted → 5 mls with hexane

5 µl injected and run at attenuation 16X; this gave:

a. Peak area (1st peak) = 11.22 cm^2.

b. Total area (both peaks) = 19.92 cm^2.

3. SAMPLE RL-183A (Endrin treated)

One ampoule containing condensate from 195.5 cigarettes carried through cleanup scheme and made to 5 mls with hexane; 5 µl injected and sample run at attenuation 16X.

a. Peak area (1st peak) = 35.8 cm^2.

b. Total area (both peaks) = 72.9 cm^2.

4. CALCULATIONS

a. Area 1st peak: 5 mls soln contain $\frac{8 \times 35.8}{11.22}$ = 25.6 µg endrin

$\therefore$ p.p.m. = 25.6/195.5 = 0.13.

The p.p.m. based on the first peak is considered the more reliable in view of the unsymmetrical nature of the second peak for the sample. However, calculations using total area agreed reasonably well as

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APPENDIX Cont'd

4 a. cont'd
shown below:

b. Total area: 5 mls sol^{n} contain $\frac{8 \times 72.9}{19.92}$ = 29.2 µg endrin

$\therefore$ p.p.m. = 29.2/195.5 = 0.15.

NOTE: One half of the sample RL-183A remains intact and is available if any further check is necessary.

LMR
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