

BIO-MEDICAL RESEARCH
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R&S 112377

Author(s), as Last Name FS (No Punctuation) and
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Title of Report; end with space-hyphen-hyphen-space. Follow with Index Terms,
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Brief Summary

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CENTRAAL INSTITUUT VOOR VOEDINGSONDERZOEK



Utrechtseweg 48
Zeist

CENTRAL INSTITUTE FOR NUTRITION AND FOOD RESEARCH
INSTITUT CENTRAL DE LA NUTRITION ET DE L'ALIMENTATION
ZENTRALINSTITUT FÜR ERNÄHRUNGSFORSCHUNG

Time sequence inhalation toxicity study with vinyl chloride in rats Short preliminary summary

(Interim Information III)

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R&S 112378

1. Conduct of the study

See interim information of 15th December 1976.

2. Results available at the end of the test period of 52 weeks

2.1. Body weights

VCM in the atmosphere (ppm)	Body weights (g) at the end of week				
	0	1	12	28	52
males					
0	37	129	386	472	523
5000	37	117***	349***	414***	441***
females					
0	77	103	215	251	291
5000	77	96***	204***	239*	257**

2.2. Mortality

VCM in the atmosphere (ppm)	Number of deaths at week			
	28	32	44	52
males				
0	0	0	0	1
5000	0	0	11	23
females				
0	0	0	0	0
5000	0	1	7	22

Initial number of rats: 62 males and 52 females/group.

After 4, 13, 26 and 52 weeks 10/sex group were killed.

Since after the last interim kill at week 52 all test animals were dead, the remaining controls were killed and autopsied in week 53.

2.3. Haematology

Slightly decreased haemoglobin content and packed cell volume in both sexes at week 52.

2.4. Blood biochemistry

Blood urea nitrogen was slightly increased in females at week 26 and in both sexes at week 52. Albumin content of the blood serum was clearly decreased in males and females at week 52 only.

2.5. Serum electrolytes

The potassium content in blood serum was slightly increased in females after 4, 13 and 26 weeks. (Results obtained at week 52 not yet available).

2.6. Urine analyses

Volume and GOT-activity were increased, specific gravity was decreased in both sexes at week 52 only.

2.7. Liver function

BSP retention was slightly decreased in both sexes after 13 and 26 weeks, but not after 4 and 52 weeks.

2.8. Organ weights

Relative weights of liver and kidneys were slightly increased in both sexes at 13, 26 and 52 weeks, but not at week 4. Relative spleen weights were increased in females after 26 weeks and in both sexes after 52 weeks.

2.9. Pathology

Foci of "clear" hepatocytes and small hepatocytes with basophilic cytoplasm were seen in the liver after 26 and 52 weeks. Some of the most striking changes seen in the liver after 52 weeks were: pronounced variation in the morphology of hepatocytes, extensive focal necrosis, focal proliferation of sinusoidal cells (Kuffer cells, endothelial cells, reserve-cells?), large blood filled spaces often surrounded by reactive changes, "neoplastic nodules", tumours varying from hepato-

cellular carcinomas to Kupffer cell sarcomas (angiosarcomas?) and very anaplastic tumours.

Tumours found outside the liver in test animals that died, were killed in extremis or at week 52 included among others adenomas and anaplastic lung tumours, well-differentiated, highly keratinized squamous cell carcinomas of the external ear duct (Glands of Zymbal?) and highly malignant brain tumours.

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