

Review

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Proposed 1,2,3-Trichloropropane PHG

To
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By

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The review will follow Attachment 2. Description of Work.

1. The accuracy of the information presented was evaluated by reviewing the following references: Johannsen et al., 1988, Volp et al., 1984, Weber 1992 and the NTP report. In each case the essence of the original authors material was well presented by the authors of the 1,2,3-Trichloropropane PHG. Some question of clarity are described in Notes A- H below that are related to statement 1.

A) P3. Production and Uses

1 Last line - The pesticides that produce 1,2,3-Trichloropropane should be named.

B) P. 5/6 Exposure

End of Para. 1. If any of the data presented in the paragraph is from actual exposure, it should be stated as such. If the data is only from modeling, it should be stated as such.

2 Last Para of section, last line. Why the calculation of PHG should be based on 4L per day should be explained. It is not intuitive.

C) P. 6/7 Adsorption/Distribution/Elimination

3 Para 1. Sentence 2 makes no sense. Clarify - If you sacrifice an animal, how can you collect samples of excreta at various times.

Para 2. English. First I would add a sentence - TCP is quickly transferred within the rat and 92% is eliminated in 24 hrs.

4 Secondly, If I interpret this correctly, the second sentence should read - TCP, (upon injection) was..... in the liver was > 70% in the initial tissues. Instead of larger the aforementioned tissues.

Para 3. Sentence 2. Add to end of sentence a total of 92% removal.

5 Para 3 end of paragraph should have a reference or is its also from Voep et al., 1984?

6 D) Metabolism P. 7-9

P. 9 end of top paragraph. A sentence – These data support the S-glutathione and the P450 activity hypothesis.

P10. A summary short paragraph would be helpful to place the section in perspective.

E) Acute Toxicity

7 Is not sentence 2 a subacute toxicity and does it belong in the section below?

8 P11, Para 2. Male and female.... Isn't this paragraph about acute effects?

F) Chronic Toxicity/Carcinogenicity

9 Para. 1. P. 15. A reference should be placed before the last sentence.

G) Toxicological Effect on Humans

10 P.10. Acute Toxicity

Are these subacute effects? Acute effects means death to me? Is this correct?

H) Evidence for Carcinogenicity – Animal Studies.

11 A reference or a Figure that shows the increase in tumors relationship to dose is recommended to be included for clarity.

2. The appropriate data was defined to develop the final recommendation. The metabolic mechanisms are important as they appear to lead to the carcinogenic findings. The data supports the conclusions by the calculations chosen.

3. The data supports the conclusions of the key studies about the use of animal and human data in dose-response assessment.

4. Not appropriate for my review. Not my direct expertise.

12 5. The only other major critical information that might affect public health is a better understanding of residence time in groundwater that would indicate site cleanup of the sources of TCP. This is a future research project, if ground water data on the topic are not available. If the data is available, it should be included in the text on "water" and/or "exposure". If the data is not available, it should be stated that it is not available. Some question of clarity are described in Notes A & B below, that are related to statement 5

A) P. 4 Water

Para. 2, line 1. If only groundwater systems are found with 1,2,3-Trichloropropane, that should be stated.

B) In general, if groundwater is the source of 1,2,3-Trichloropropane, then its stability in groundwater systems should be described from basic chemistry or if it was modeled. Are there any data for spills and cleanup? The Exposure section P. 5/6 also seems to assume complete stability in groundwater.

6. Considering the uncertainties the conclusions do provide adequate public health protection.

of presentation



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