



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

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MEMORANDUM

28 August 1000

Subject: Isoxaflutole carbon absorption study

To: Dan Kenny, PM Team Reviewer
Registration Division (7505C)

From: Ian Kennedy, Hydrologist
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Through: Tom Bailey, Branch Chief
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Summary. This batch study (MRID 449264-01) on carbon absorption of isoxaflutole and aldicarb (and two transformation products of each) supplies little information useful for evaluating isoxaflutole. The study does appear to show that some isoxaflutole can be absorbed by activated carbon, but because the design is dissimilar to home filters and did not measure sorption rates, it is not possible to extrapolate the results to such units, even with the comparison to aldicarb.

Reaction of the chemical solutions (containing isoxaflutole, aldicarb and the two principal transformation products of each) was performed by shaking with charcoal for 20 minutes. This method is dissimilar to filtration in a home setting where source water is passed through a bed of activated carbon with before the tap. In such a home situation the contact time is potentially much shorter than 20 minutes, and there is no shaking. An experiment conducted in this way may be a reasonable approximation of the processes in some water treatment plants (although carbon filtration is used in only a small fraction of plants), but different plants treat in different ways and the report would need to state how the experiment relates to treatment plant methods.

Other problems with the study include:

- The report was inconsistent in the amount of carbon used in the study. It is listed as 1 g in the text and 10 g in the a chart. Only the chart mentions the volume of solution used (50 ml).
- The samples were filtered after shaking, but the method of filtration was not described.
- The source of the charcoal is listed in the document.

For these reasons, the study can provide qualitative information only.



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