

201-14473



NCIC HPV  
Sent by: Mary-Beth  
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05/20/2003 10:06 AM

To: NCIC HPV, moran.matthew@epa.gov  
cc:

Subject: Environmental Defense comments on Ethylenediaminetetraacetonitrile  
(CAS# 5766-67-6)



Richard\_Denison@environmentaldefense.org on 05/19/2003 02:14:08 PM

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Boswell/DC/USEPA/US@EPA, David.Brandwene@akzo.com  
cc: luciery@msn.com, kflorini@environmentaldefense.org, rdenison@environmentaldefense.org

Subject: Environmental Defense comments on Ethylenediaminetetraacetonitrile (CAS# 5766-67-6)

(Submitted via Internet 5/19/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov,  
boswell.karen@epa.gov, chem.rtk@epa.gov, luciery@msn.com and  
David.Brandwene@akzo.com)

Environmental Defense appreciates this opportunity to submit comments on  
the robust summary/test plan for Ethylenediaminetetraacetonitrile (CAS#  
5766-67-6).

The test plan and robust summaries for ethylenediaminetetraacetonitrile  
(EDTN) were prepared by Akzo Nobel Functional Chemicals LLC. They are  
well-written, objective and informative, and we agree with all but one of  
the proposals made by the sponsor. We recommend that the sponsor conduct a  
combined reproductive/developmental study on EDTN, rather than only a  
developmental toxicology study as proposed.

Specific comments are as follows:

1. The sponsor proposes to use surrogate data from a structural analog of  
EDTN to fulfill most of the HPV screening data requirements so, in essence,  
a category is being proposed. The surrogate chemical is the propylene  
analog of EDTN, and it is abbreviated as PDTN in the test plan and robust  
summaries. The sponsor provides a convincing argument that use of the  
surrogate data is appropriate, as the structures, physiochemical  
properties, metabolism and toxicological properties of the two chemicals  
are very similar. We do note, however, that it is likely that EDTN will be  
slightly more toxic than PDTN based on the general finding in the  
toxicological literature that propyl analogs of complex organic molecules  
are less toxic than ethyl analogs. Nevertheless, we do expect EDTN and PDTN  
to possess the same pattern of toxic effects so use of the category  
designation is justified.

2. No reproductive or developmental studies are available for either EDTN  
or PDTN, and the sponsor proposes to conduct a developmental toxicology  
study. The sponsor also claims that no reproductive studies are needed  
because EDTN is used as a closed system intermediate in the production of  
EDTA. However, no data are available to evaluate whether EDTN residues are  
present in EDTA, which is very widely used, and both EDTA and EDTN are  
transported to various industrial facilities. Because there might be  
opportunity for human exposure to EDTN, we recommend that the sponsor  
conduct a combined reproductive/developmental toxicity study on this  
chemical.

3. Adequate data are presented on the ecological toxicity of EDTN or PDTN  
to fulfill HPV requirements for SIDS endpoints.

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4. Existing data are adequate to indicate that EDTN is not mutagenic in either in vitro or in vivo systems.

5. The purity of EDTN nor PDTN is not provided in the robust summaries, although it is stated that most of the studies were conducted under GLP. We request that information on purity be indicated in the robust summaries.

Thank you for this opportunity to comment.

George Lucier, Ph.D.  
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