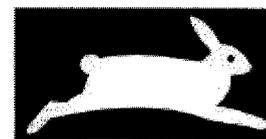


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June 17, 2004

Michael O. Leavitt, Administrator
U.S. Environmental Protection Agency
Ariel Rios Bldg (1101A)
1200 Pennsylvania Ave. NW
Washington, DC 20460



PETA

PEOPLE FOR THE ETHICAL
TREATMENT OF ANIMALS

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Comments on the HPV test plan for benzoyl chloride

Dear Administrator Leavitt:

The following comments on the American Chemistry Council's test plan for benzoyl chloride (CAS no. 98-88-4) are submitted on behalf of the Physicians Committee for Responsible Medicine, People for the Ethical Treatment of Animals, the Humane Society of the USA, the Doris Day Animal League, and Earth Island Institute. These health, animal-protection and environmental organizations have a combined membership of more than ten million Americans.

The ACC is proposing to conduct a combined repeated-dose, reproductive and developmental toxicity study (OECD test no. 422) on benzoyl chloride. This study will kill at least 675 mammals.

The ACC's proposal is fundamentally ill-conceived because benzoyl chloride undergoes rapid hydrolysis. The ACC refers to only one test of the hydrolysis of benzoyl chloride, in which the half life was found to be 16 s (Appendix, p 11). If the half life is indeed so short, toxic effects of benzoyl chloride would only be seen locally (at the point of administration or entry). On the other hand, both local and systemic toxicity of the hydrolysis products of benzoyl chloride (hydrochloric acid and benzoic acid) are important. The ACC actually states this in the test plan:

Benzoyl chloride is expected to react/hydrolyze directly on the site of application; therefore, only systemic effects of benzoic acid would be expected (p. 5)

The EPA's recent comments on the HPV test plan for another readily hydrolyzed compound, triisopropylborate, should be noted. The EPA states that if hydrolysis is sufficiently rapid, data for the hydrolysis products can be used instead of carrying out animal studies (EPA 2004).

The products of benzoyl chloride hydrolysis are benzoic acid and hydrochloric acid. Hydrochloric acid is a strong acid and is therefore highly corrosive. The prevalence of pulmonary toxicity (emphysema, edema and cancer) reported in the benzoyl chloride inhalation toxicity studies (Appendix, pp. 20-22, 30-31) and epidemiology studies (Appendix, pp. 32-33) is consistent with the hypothesis that the toxicity of benzoyl chloride is primarily due to the pulmonary corrosivity of hydrochloric acid. It is outrageous that the ACC is proposing to carry out additional animal studies that may well demonstrate only that strong acids corrode animal tissues.

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With respect to benzoic acid, on the other hand, both the acid and its sodium salt are generally-recognized-as-safe (GRAS) food ingredients by the FDA, and concentrations of up to 0.1% are permitted in food, etc. (21CFR184.1021, 21CFR184.1733). Only a relatively small number of Americans, probably fewer than 7,000 per year (NIOSH), are occupationally exposed to benzoyl chloride whereas almost everyone is exposed directly to benzoate (mostly as sodium benzoate), in processed food, and in toothpaste and other toiletries.

At this stage the most important experimental work with respect to benzoyl chloride is determination of the hydrolysis rates under all the temperature, humidity, and pH conditions that may apply when humans are occupationally exposed to benzoyl chloride.

In addition, we have the following specific criticisms of the test plan:

- (i) The ACC provides no data whatsoever on the use of or exposure to benzoyl chloride. The IUCLID data set in the Appendix has headings for the following items, yet without any text: "Location of production site" (1.0.2), "Use pattern" (1.7), "Methods of manufacture" (1.7.2), "Major accident hazards" (1.8.4), "Source of exposure" (1.10). We can make no attempt to estimate the real-world importance of benzoyl chloride toxicity without data of this type.
- (ii) At least three repeated-dose toxicity studies have been carried out (Appendix, pp. 25-26). With respect to these, the ACC states "documentation insufficient for assessment," but does not explain why. With a little effort, the ACC could probably obtain much of the necessary information, simply by contacting the research groups responsible for these studies.
- (iii) Four epidemiology studies on industrial exposure have been carried out (Appendix, pp. 32-33): three on toluene derivatives in general, and one specifically on benzoyl chloride. However, the ACC provides no discussion of these studies.

To conclude, we urge the ACC not to kill more animals in order to further test hydrochloric acid and benzoic acid. Please feel free to contact me at 757-622-7382, ext. 8001, or via e-mail at JessicaS@peta.org.

Sincerely,

Jessica Sandler
Federal Agency Liaison

References

CFR (Code of Federal Regulations), Title 21, Volume 3, Section 184.1021, pp. 446-447, April 1, 1998.

CFR (Code of Federal Regulations), Title 21, Volume 3, Section 184.1733, p. 515, April 1, 1998.

EPA, "Benzoic acid", February 2, 2004, <http://www.epa.gov/iris/subst/0355.htm>

EPA, "Triisopropylborate: EPA comments", April 19, 2004,
<http://www.epa.gov/chemrtk/triprobtc14841ct.htm>

NIOSH, "Benzoyl chloride", in *National Occupational Exposure Survey (1981-1983)*,
<http://www.cdc.gov/noes/noes1/81724sic.html>.