



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
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August 10, 1992

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Office of Pollution Prevention and Toxics
Environmental Protection Agency
401 M Street., S.W.
Washington, D.C. 20460
Attn: Section 8(e) Coordinator (CAP Agreement)

Dear Coordinator:

8ECAP-0025

On behalf of the Regulatee and pursuant to Unit II B.1.b. and Unit II C of the 6/28/CAP Agreement, E.I. Du Pont de Nemours and Co. hereby submits (*in triplicate*) the attached studies. Submission of this information is voluntary and is occasioned by unilateral changes in EPA's standard as to what EPA now considers as reportable information. Regulatee's submission of information is made solely in response to the new EPA §8(e) reporting standards and is not an admission: (1) of TSCA violation or liability; (2) that Regulatee's activities with the study compounds reasonably support a conclusion of substantial health or environmental risk or (3) that the studies themselves reasonably support a conclusion of substantial health or environmental risk.

For Regulatee,

Mark H. Christman
Counsel
Legal D-7058
1007 Market Street
Wilmington, DE 19898
(302) 774-6443

RECEIVED
22495

ATTACHMENT 1

Submission of information is made under the 6/28/91 CAP Agreement, Unit II. This submission is made voluntarily and is occasioned by recent changes in EPA's TSCA §8(e) reporting standard; such changes made, for the first time in 1991 and 1992 without prior notice and in violation of Regulatee's constitutional due process rights. Regulatee's submission of information under this changed standard is not a waiver of its due process rights; an admission of TSCA violation or liability, or an admission that Regulatee's activities with the study compounds reasonably support a conclusion of substantial risk to health or to the environment. Regulatee has historically relied in good faith upon the 1978 Statement of Interpretation and Enforcement Policy criteria for determining whether study information is reportable under TSCA §8(e), 43 Fed Reg 11110 (March 16, 1978). EPA has not, to date, amended this Statement of Interpretation.

After CAP registration, EPA provided the Regulatee the June 1, 1991 "TSCA Section 8(e) Reporting Guide". This "Guide" has been further amended by EPA, EPA letter, April 10, 1992. EPA has not indicated that the "Reporting Guide" or the April 1992 amendment supersedes the 1978 Statement of Interpretation. The "Reporting Guide" and April 1992 amendment substantively lowers the Statement of Interpretation's TSCA §8(e) reporting standard². This is particularly troublesome as the "Reporting Guide" states criteria, applied retroactively, which expands upon and conflicts with the Statement of Interpretation.³ Absent amendment of the Statement of Interpretation, the informal issuance of the "Reporting Guide" and the April 1992 amendment clouds the appropriate standard by which regulated persons must assess information for purposes of TSCA §8(e).

Throughout the CAP, EPA has mischaracterized the 1991 guidance as reflecting "longstanding" EPA policy concerning the standards by which toxicity information should be reviewed for purposes of §8(e) compliance. Regulatee recognizes that experience with the 1978 Statement of Interpretation may cause a review of its criteria. Regulatee supports and has no objection to the Agency's amending reporting criteria *provided that* such amendment is not applied to the regulated community in an unfair way. However, with the unilateral announcement of the CAP under the auspices of an enforcement proceeding, EPA has wrought a terrific unfairness since much of the criteria EPA has espoused in the June 1991 Reporting Guide and in the Agency's April 2, 1992 amendment is new criteria which does not exist in the 1978 Statement of Interpretation and Enforcement Policy.

²In sharp contrast to the Agency's 1977 and 1978 actions to soliciting public comment on the proposed and final §8(e) Policy, EPA has unilaterally pronounced §8(e) substantive reporting criteria in the 1991 Section 8(e) Guide without public notice and comment, See 42 Fed Reg 45362 (9/9/77), "Notification of Substantial Risk under Section 8(e): Proposed Guidance".

³A comparison of the 1978 Statement of Interpretation and the 1992 "Reporting Guide" is appended.

The following examples of new criteria contained in the "Reporting Guide" that is not contained in the Statement of Interpretation follow:

- even though EPA expressly disclaims each "status report" as being preliminary evaluations that should not be regarded as final EPA policy or intent⁴, the "Reporting Guide" gives the "status reports" great weight as "sound and adequate basis" from which to determine mandatory reporting obligations. ("Guide" at page 20).
- the "Reporting Guide" contains a matrix that establishes new numerical reporting "cutoff" concentrations for acute lethality information ("Guide" at p. 31). Neither this matrix nor the cutoff values therein are contained in the Statement of Interpretation. The regulated community was not made aware of these cutoff values prior to issuance of the "Reporting Guide" in June, 1991.
- the "Reporting Guide" states new specific definitional criteria with which the Agency, for the first time, defines as 'distinguishable neurotoxicological effects'; such criteria/guidance not expressed in the 1978 Statement of Interpretation.⁵
- the "Reporting Guide" provides new review/ reporting criteria for irritation and sensitization studies; such criteria not previously found in the 1978 Statement of Interpretation/Enforcement Policy.
- the "Reporting Guide" publicizes certain EPA Q/A criteria issued to the Monsanto Co. in 1989 which are not in the Statement of Interpretation; have never been published in the Federal Register or distributed by the EPA to the Regulatee. Such Q/A establishes new reporting criteria not previously found in the 1978 Statement of Interpretation/Enforcement Policy.

In discharging its responsibilities, an administrative agency must give the regulated community fair and adequate warning to as what constitutes noncompliance for which penalties may be assessed.

Among the myriad applications of the due process clause is the fundamental principle that statutes and regulations which purport to govern conduct must give an adequate warning of what they command or forbid.... Even a regulation which governs purely economic or commercial activities, if its violation can engender penalties, must be so framed as to provide a constitutionally adequate warning to those whose activities are governed.

⁴The 'status reports' address the significance, if any, of particular information reported to the Agency, rather than stating EPA's interpretation of §8(e) reporting criteria. In the infrequent instances in which the status reports contain discussion of reportability, the analysis is invariably quite limited, without substantial supporting scientific or legal rationale.

⁵ See, e.g., 10/2/91 letter from Du Pont to EPA regarding the definition of 'serious and prolonged effects' as this term may relate to transient anesthetic effects observed at lethal levels; 10/1/91 letter from the American Petroleum Institute to EPA regarding clarification of the Reporting Guide criteria.

Diebold, Inc. v. Marshall, 585 F.2d 1327, 1335-36 (D.C. Cir. 1978). See also, Rollins Environmental Services (NJ) Inc. v. U.S. Environmental Protection Agency, 937 F. 2d 649 (D.C. Cir. 1991).

While neither the are rules, This principle has been applied to hold that agency 'clarification', such as the Statement of Interpretation, the "Reporting Guide" nor the April 1992 amendments will not applied retroactively.

...a federal court will not retroactively apply an unforeseeable interpretation of an administrative regulation to the detriment of a regulated party on the theory that the post hoc interpretation asserted by the Agency is generally consistent with the policies underlying the Agency's regulatory program, when the semantic meaning of the regulations, as previously drafted and construed by the appropriate agency, does not support the interpretation which that agency urges upon the court.

Standard Oil Co. v. Federal Energy Administration, 453 F. Supp. 203, 240 (N.D. Ohio 1978), aff'd sub nom. Standard Oil Co. v. Department of Energy, 596 F.2d 1029 (Em. App. 1978):

The 1978 Statement of Interpretation does not provide adequate notice of, and indeed conflicts with, the Agency's current position at §8(e) requires reporting of all 'positive' toxicological findings without regard to an assessment of their relevance to human health. In accordance with the statute, EPA's 1978 Statement of Interpretation requires the regulated community to use scientific judgment to evaluate the significance of toxicological findings and to determining whether they reasonably support a conclusion of a substantial risk. Part V of the Statement of Interpretation urges persons to consider "the fact or probability" of an effect's occurrence. Similarly, the 1978 Statement of Interpretation stresses that an animal study is reportable only when "it contains reliable evidence ascribing the effect to the chemical." 43 Fed Reg. at 11112. Moreover, EPA's Statement of Interpretation defines the substantiality of risk as a function of both the seriousness of the effect and the probability of its occurrence. 43 Fed Reg 11110 (1978). Earlier Agency interpretation also emphasized the "substantial" nature of a §8(e) determination. See 42 Fed Reg 45362, 45363 (1977). [Section 8(e) findings require "extraordinary exposure to a chemical substance...which critically imperil human health or the environment"].

The recently issued "Reporting Guide" and April 1992 Amendment guidance requires reporting beyond and inconsistent with that required by the Statement of Interpretation. Given the statute and the Statement of Interpretation's explicit focus on substantial human or environmental risk, whether a substance poses a "substantial risk" of injury requires the application of scientific judgment to the available data on a case-by-case basis.

If an overall weight-of-evidence analysis indicates that this classification is unwarranted, reporting should be unnecessary under §8(e) because the available data will not "reasonably support the conclusion" that the

chemical presents a substantial risk of serious adverse consequences to human health.

Neither the legislative history of §8(e) nor the plain meaning of the statute support EPA's recent lowering of the reporting threshold that TSCA §8(e) was intended to be a sweeping information gathering mechanism. In introducing the new version of the toxic substances legislation, Representative Eckhart included for the record discussion of the specific changes from the version of H. R. 10318 reported by the Consumer Protection and Finance Subcommittee in December 1975. One of these changes was to modify the standard for reporting under §8(e). The standard in the House version was changed from "causes or contributes to an unreasonable risk" to "causes or significantly contributes to a substantial risk". This particular change was one of several made in TSCA §8 to avoid placing an undue burden on the regulated community. The final changes to focus the scope of Section 8(e) were made in the version reported by the Conference Committee.

The word "substantial" means "considerable in importance, value, degree, amount or extent". Therefore, as generally understood, a "substantial risk" is one which will affect a considerable number of people or portion of the environment, will cause serious injury and is based on reasonably sound scientific analysis or data. Support for the interpretation can be found in a similar provision in the Consumer Product Safety Act. Section 15 of the CPSA defines a "substantial product hazard" to be:

"a product defect which because of the pattern of defect, the number of defective products distributed in commerce, the severity of the risk, or otherwise, creates a substantial risk of injury to the public."

Similarly, EPA has interpreted the word 'substantial' as a quantitative measurement. Thus, a 'substantial risk' is a risk that can be quantified, *See*, 56 Fed Reg 32292, 32297 (7/15/91). Finally, since information pertinent to the exposure of humans or the environment to chemical substances or mixtures may be obtained by EPA through Sections 8(a) and 8(d) regardless of the degree of potential risk, §8(e) has specialized function. Consequently, information subject to §8(e) reporting should be of a type which would lead a reasonable man to conclude that some type action was required immediately to prevent injury to health or the environment.

APPENDIX

Comparison: Criteria found in the 1978 "Statement of Interpretation/ Enforcement Policy", 43 Fed Reg 11110 (3/16/78) and the June 1991 Section 8(e) Guide.

<u>TOXICITY TEST TYPE</u>	<u>1978 POLICY CRITERIA EXIST?</u>	<u>New 1991 GUIDE CRITERIA EXIST?</u>
ACUTE LETHALITY		
Oral	N)	Y)
Dermal	N)	Y)
Inhalation (Vapors)) ¹) ²
aerosol	N)	Y)
dusts/ particles	N)	Y)
SKIN IRRITATION	N	Y ³
SKIN SENSITIZATION	N	Y ⁴
EYE IRRITATION	N	Y ⁵
SUBCHRONIC (ORAL/DERMAL/INHALATION)	N	Y ⁶
REPRODUCTION STUDY	N	Y ⁷
DEVELOPMENTAL TOX	Y ⁸	Y ⁹

¹43 Fed Reg at 11114, comment 14:

"This policy statements directs the reporting of specified effects when unknown to the Administrator. Many routine tests are based on a knowledge of toxicity associated with a chemical unknown effects occurring during such a range test may have to be reported if they are those of concern tot he Agency and if the information meets the criteria set forth in Parts V and VII."

²Guide at pp.22, 29-31.

³Guide at pp-34-36.

⁴Guide at pp-34-36.

⁵Guide at pp-34-36.

⁶Guide at pp-22; 36-37.

⁷Guide at pp-22

⁸43 Fed Reg at 11112

Only the term "Birth Defects" is listed.

NEUROTOXICITY	N	Y ¹⁰
CARCINOGENICITY	Y ¹¹	Y ¹²
MUTAGENICITY		
<i>In Vitro</i>	Y ¹³	Y ¹⁴
<i>In Vivo</i>	Y)	Y)
ENVIRONMENTAL		
Bioaccumulation	Y)	N
Bioconcentration	Y) ¹⁵	N
Oct/water Part. Coeff.	Y)	N
Acute Fish	N	N
Acute Daphnia	N	N
Subchronic Fish	N	N
Subchronic Daphnia	N	N
Chronic Fish	N	N
AVIAN		
Acute	N	N
Reproductive	N	N
Reproductive	N	N

⁹Guide at pp-2122. Includes new detailed criteria regarding statistical treatment, specific observations and the §8(e)-significance of maternal toxicity.

¹⁰Guide at pp-23; 33-34.

¹¹43 Fed Reg at 11112

Only the term "Cancer" listed.

¹²Guide at pp-21. Includes new criteria regarding biological significance and statistical treatment.

¹³43 Fed Reg at 11112; 11115 at Comment 15

"Mutagenicity" listed/ *in vivo* vs *invitro* discussed; discussion of "Ames test".

¹⁴Guide at pp-23.

¹⁵43 Fed Reg at 11112; 11115 at Comment 16.

Attachment 2

Study Summary and Report

CAS # 3825-26-1

Chem: (1) Octanoic Acid, pentadecafluoro-, ammonium salt
(2) 2,4,6(1H,3H,5H)-Pyrimidine-trione, 5-ethyl-5-phenyl-,
monododium salt (3) Benzeneacetic acid, alpha-phenyl-alpha-propyl-z-
(diethylamino)-ethyl ester

Title: Oral LD50 Test in Rats

Date: 9-30-81

Summary of Effects: Tremors

FOR DU PONT USE ONLY

Copies to: R. W. Rickard (1)
G. L. Kennedy (1)

E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine
Elkton Road, Newark, Delaware 19711

HASKELL LABORATORY REPORT NO. 567-81

MR NO. 5342-001

<u>Material Tested</u>	<u>Haskell No.</u>	<u>Other Codes</u>
Octanoic acid, pentadecafluoro-, ammonium salt*	12,037	C-8
2,4,6(1H,3H,5H)-Pyrimidine-trione, 5-ethyl-5-phenyl-, monosodium salt*	14,033	None
Benzeneacetic acid, alpha-phenyl-alpha-propyl-, 2-(diethylamino)-ethyl ester*	14,034	SKF-525-A

Study Initiated/Completed
4/6/81 - 5/14/81

Material Submitted by
G. L. Kennedy
CR&D Department
Haskell Laboratory

ORAL LD50 TEST IN RATS

Purpose: To determine the effects of phenobarbital sodium and proadifen hydrochloride, if any, on the LD50 value of FC-143 in rats.

Procedure: Thirty young adult male Cr1:CD® rats were treated by single intraperitoneal injections with aqueous solutions of phenobarbital sodium at 80 mg/kg/day for 3 days. One day after the final treatment, the 30 rats, 10 rats per group, were administered FC-143 by intragastric intubation as a suspension in corn oil in single doses to determine the LD50 value. The surviving rats were weighed and observed during a 14-day recovery period and then sacrificed. The LD50 value was calculated from the mortality data using the method of D. J. Finney.**

Another group of 30 male rats was treated by single intraperitoneal injection with aqueous solutions of proadifen hydrochloride at 50 mg/kg. One hour after treatment FC-143 was administered, using the same procedure as above, to determine the LD50 value.

An additional group of 30 male rats served as controls and was administered only the FC-143 by intragastric intubation to determine the LD50 value. The same procedure was used.

Results:

H-12,037 Control (FC-143)

<u>Dose (mg/kg)</u>	<u>Average Body Weight (g)</u>	<u>Suspension (%)</u>	<u>Average Dose (mL)</u>	<u>Mortality Ratio</u>	<u>LD50***</u>
650	267	4	4.32	8/10	478 mg/kg
500	276	3	4.59	7/10	
400	262	3	3.49	2/10	

Clinical Signs: Wet and/or stained perineal area and weight loss at all levels tested. Stained face and weakness at 650 and 500 mg/kg. Chromodacryorrhea at 500 mg/kg. All deaths occurred within 6 days after dosing.

H-12,037 (FC-143) & H-14,033 (phenobarbital sodium)

<u>Dose (mg/kg)</u>	<u>Average Body Weight (g)</u>	<u>Suspension (%)</u>	<u>Average Dose (mL)</u>	<u>Mortality Ratio</u>	<u>LD50****</u>
650	259	4	4.21	19/20††	547 mg/kg
500	260	3	4.33	4/20	
400	261	3	3.48	0/20	

Clinical Signs: Wet and stained perineal area, stained face, diarrhea and weight loss at all levels tested. Weakness at 650 and 500 mg/kg and lethargy at 650 mg/kg. All deaths occurred within 4 days after dosing.

H-12,037 (FC-143) & H-14,034 (proadifen hydrochloride)

<u>Dose (mg/kg)</u>	<u>Average Body Weight (g)</u>	<u>Suspension (%)</u>	<u>Average Dose (mL)</u>	<u>Mortality Ratio</u>	<u>LD50†</u>
650	269	4	4.37	8/10	520 mg/kg
500	256	3	4.27	5/10	
400	261	3	3.48	1/10	

Clinical Signs: Stained face, wet and stained perineal area, weight loss and weakness at all levels tested. Diarrhea at 650 and 500 mg/kg. Tremors and chromodacryorrhea at 400 mg/kg and lacrimation at 650 mg/kg. All deaths occurred within 5 days after dosing.

Summary: There were no significant differences in the LD50 values of FC-143, either when tested alone or following pre-treatment with either phenobarbital sodium or proadifen hydrochloride. The LD50 for FC-143 is 478 mg/kg, FC-143 following proadifen hydrochloride is 520 mg/kg and FC-143 following phenobarbital sodium is 547 mg/kg of body weight.

Clinical signs most frequently seen included: wet and stained perineal area, stained face, weakness, diarrhea and weight loss. All deaths occurred within 6 days after dosing.

* H-12,037

Synonyms: o FC-143
o Ammonium perfluorooctanoate
o Ammonium perfluorocaprylate

Purity: Approximately 100%

Contaminants: Mixed, branched isomers of perfluorooctanoates

H-14,033

Synonym: Phenobarbital sodium

CAS Registry No.: 57-30-7

Purity: 100%

H-14,034

Synonyms: o Proadifen hydrochloride
o beta-Diethylaminoethyl diphenylpropylacetate

CAS Registry No.: 302-33-0

Purity: 100%

** Finney, D. J., Probit Analysis, 3rd Ed., 1971, Cambridge University Press.

*** 95% Confidence Limits: Lower: 361 mg/kg
Upper: 571 mg/kg
Slope: 7.9

**** 95% Confidence Limits: Lower: 517 mg/kg
Upper: 582 mg/kg
Slope: 22.1

† 95% Confidence Limits: Lower: 450 mg/kg
Upper: 618 mg/kg
Slope: 9.8

†† The phenobarbital sodium phase of this study was repeated. Rats were combined and the LD50 value was based on all 60 rats.

Report by: John E. Henry
John E. Henry
Technician

Reviewed by: O. Louis Dashiell
O. Louis Dashiell
Study Director

Approved by: Gerald L. Kennedy, Jr.
Gerald L. Kennedy, Jr.
Chief, Acute Investigations Section

JEH:jrg:WP:1.12
Date Issued: September 30, 1981
N.B. E-24765, p. 50
Report No. 567-81



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Mark H. Christman
Counsel
E. I. Du Pont De Nemours and Company
Legal D-7010-1
1007 Market Street
Wilmington, Delaware 19898

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MAY 08 1995

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and refer to the reverse side of this page for "EPA Information Requests".

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan
Terry R. O'Bryan
Risk Analysis Branch

Enclosure

12420A



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contains at least 50% recycled fiber

Triage of 8(e) Submissions

Date sent to triage: 12/14/95

NON-CAP

CAP

Submission number: 12420 A

TSCA Inventory: Y N D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX SBTOX SEN w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX CTOX EPI RTOX GTOX
STOX/ONCO CTOX/ONCO IMMUNO CYTO NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

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Notes:	
Contractor reviewer: <u>LPS</u>	Date: <u>4/11/95</u>

CECATS TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA: Submission # BEHQ-10R2-12420 SEQ. A

TYPE: INT SUPP FLWP

SUBMITTER NAME: E. I. DuPont de Nemours and Company

SUB. DATE: 08/10/92 OTS DATE: 10/27/92 CSRAD DATE: 03/24/95

CHEMICAL NAME: 2,4,6(1H,3H,5H)-Pyrimidine-trione, 5-ethyl-5-phenyl-, monosodium salt

CASE# 3825-26-1
~~vol 3825~~ 57-30-7
~~3825-26-1~~ 302-33-0

Benzeneacetic acid, alpha-phenyl-, alpha-propyl-, 2-(diethylamino)-ethyl ester

- VOLUNTARY ACTIONS:**
 0401 NO ACTION REQUIRED
 0402 STUDIES PLANNED/IN PROGRESS
 0403 NOTIFICATION TO WORKERS
 0404 LABELS/SDS CHANGES
 0405 PROCESS/ANALYSIS CHANGES
 0406 APP/USE DISCONTINUED
 0407 PRODUCTION DISCONTINUED
 0408 CONFIDENTIAL

- INFORMATION REQUESTED: FLWP DATE
 0501 NO INFO REQUESTED
 0502 INFO REQUESTED (TECH)
 0503 INFO REQUESTED (VOL ACTIONS)
 0504 INFO REQUESTED (REPORTING RATIONALE)
 DISPOSITION:
 0579 REFER TO CHEMICAL SCREENING
 0578 CAP NOTICE

INFORMATION TYPE:	P.F.C.	INFORMATION TYPE:	P.F.C.	INFORMATION TYPE:	P.F.C.
0201 ONCO (HUMAN)	01 02 04	0216 EPICLIN	01 02 04	0241 IMMUNO (ANIMAL)	01 02 04
0202 ONCO (ANIMAL)	01 02 04	0217 HUMAN EXPOS (PROD CONTAM)	01 02 04	0242 IMMUNO (HUMAN)	01 02 04
0203 CELL TRANS (IN VITRO)	01 02 04	0218 HUMAN EXPOS (ACCIDENTAL)	01 02 04	0243 CHEM/PHYS PROP	01 02 04
0204 MUTA (IN VITRO)	01 02 04	0219 HUMAN EXPOS (MONITORING)	01 02 04	0244 CLASTO (IN VITRO)	01 02 04
0205 MUTA (IN VIVO)	01 02 04	0220 ECO/AQUA TOX	01 02 04	0245 CLASTO (ANIMAL)	01 02 04
0206 REPRO/TERATO (HUMAN)	01 02 04	0221 ENV. OCCUR/REL FATE	01 02 04	0246 CLASTO (HUMAN)	01 02 04
0207 REPRO/TERATO (ANIMAL)	01 02 04	0222 EMER INCI OF ENV CONTAM	01 02 04	0247 DNA DAM/REPAIR	01 02 04
0208 NEURO (HUMAN)	01 02 04	0223 RESPONSE REQ/EST DELAY	01 02 04	0248 PROD/USE/PROC	01 02 04
0209 NEURO (ANIMAL)	01 02 04	0224 PROD/COMP/CHEM ID	01 02 04	0251 MSDS	01 02 04
0210 CHR. TOX. (HUMAN)	01 02 04	0225 REPORTING RATIONALE	01 02 04	0299 OTHER	01 02 04
0211 CHR. TOX. (ANIMAL)	01 02 04	0226 CONFIDENTIAL	01 02 04		
0212 ACUTE TOX. (ANIMAL)	01 02 04	0227 ALLERG (HUMAN)	01 02 04		
0213 SUB ACUTE TOX (ANIMAL)	01 02 04	0228 ALLERG (ANIMAL)	01 02 04		
0214 SUB CHRONIC TOX (ANIMAL)	01 02 04	0229 METAB/PHARMACO (ANIMAL)	01 02 04		
0215 CHRONIC TOX (ANIMAL)	01 02 04	0240 METAB/PHARMACO (HUMAN)	01 02 04		

TRIAJE DATA: NON-CBI INVENTORY YES (DROPPREF) NO (CONTINUE) REF:R

CAS SR NO (IN IT-AMINE)

SPECIES RAT

TOXICOLOGICAL CONCERN: LOW MED HIGH

USE: PRODUCTION:

UNCLASSIFIED

12420A

M

Acute oral toxicity in rats is of moderate concern based on an LD₅₀ of 478 mg/kg. Male Cri:CD rats (10/dose) received gavage doses of 400, 500 or 650 mg/kg. Deaths were as follows: 2/10, 7/10, and 8/10. Clinical signs included wet or stained perineal area at all doses, chromodacryorrhea at 500 mg/kg, and stained face and weakness at 500 and 650 mg/kg. Intraperitoneal injections of phenobarbital sodium or proadifen hydrochloride prior to administration of the test substance increased the LD₅₀ to 547 and 520 mg/kg, respectively.