Function	Field of use envisaged	Test substance	Test organism(s)	Test method	Test conditions	Test results: effects, mode of action, resistance	Reference*)
				reduction to methane). ASTM D1413 (1961). Blocks were placed on feeder strips, placed on the soil surface.			
fungicide	PT-08	boric acid	Two species *Lentinus lepideus* BK C-1 highest boron tolerancy, but not relevant for present evaluation. Relevant species for toxic threshold concentration: *Gloeophyllum trabeum* (A570)	Pinus sylvestris L. sapwood treated by vacuum/pressure process. Blocks air dried for 24 hrs. No ageing or leaching. Agar block test, mass loss in weight. Blocks were placed on a nylon net, which was placed on the agar surface.	Retentions in blocks 0.1-1.0 kg/m^3 BAE. Blocks exposed for 6 months at 50°C.	Highest boron tolerancy for *Gloeophyllum trabeum* (A570) on pine (*Pinus sylvestris*) sapwood: Toxic threshold concentration determined as 0.08%-0.18% w/w BAE (0.40-0.92 kg/m^3 BAE). Conversion factor kg/m^3 → % w/w multiply by 0.2.	Bechgaard, 1979
fungicide	PT-08	boric-acid triethanolamine (BTEA); boric acid or Timbor (= DOT)	Four species. *Chaetomium globosum* Kunze IAM 8059 highest boron tolerancy, but not relevant for present evaluation. Relevant species for toxic threshold concentration in sequence of highest boron tolerancy: *Coriolus versicolor* L ex. Fr. Quel FFPR 1030 and *Serpula lacrymans* FFPR 0739.	Yezo spruce (Picea jezoensis) and Japanese beech (Fagus crenata) sapwood treated by vacuum impregnation. JIS A9201 (1991) test without weathering. Soil block test or agar block test (C. globosum only), mass loss in weight. Blocks were placed directly on the soil or agar surface. Toxic threshold levels on Japanese beech (Fagus crenata) were higher than on Yezo spruce (only tested for C. versicolor), but dose rates were not high enough to deduce a toxic threshold level for Japanese beech (> 1.45 or >1.53 kg/m^3 BAE for Timbor and boric acid, respectively).	Retention in blocks 0, 0.39-4.29 kg/m^3 BAE for Tim-bor and 0, 0.40-1.65 kg/m^3 BAE for boric acid. Blocks exposed for 120 days at 26 °C or 20 °C (S. lacrymans only). BTEA is considered not relevant for the present evaluation, because the tri-ethanol amine has synergic effects on boron efficacy. Toxic threshold levels for Timbor and boric acid are similar:0.85 and 0.83 kg/m^3 BAE, respectively. for *S. lacrymans* on Yezo spruce,	Highest boron tolerancy for *Coriolus versicolor* L ex. Fr. Quel FFPR 1030 on Yezo spruce (*Picea jezoensis*) sapwood: For **Tim-bor** toxic threshold concentration determined as 0.77%-0.86% w/w BAE (3.84-4.29 kg/m^3 BAE). **Boric acid** was not tested on the combination C. versicolor and Yezo spruce. Conversion factor kg/m^3 → % w/w multiply by 0.2. Toxic threshold levels in this study were higher compared to other studies, because leaching was not prevented during test. This study is therefore considered as not reliable and results are not used in efficacy assessment.	Doi et al., 1994
fungicide	PT-08	Boric acid	Several species *Gloeophylum abietineum* (Fr.) Karst 13851 highest boron tolerancy Other relevant species:	Pinus radiata D Don sapwood and Eucalyptus regnans F. Muell heartwood treated by vacuum impregnation and diffusion. Blocks were air dried for 6 weeks (ageing). No leaching.	Mean retentions in blocks of 0 and 0.5-2.0 kg/m^3 BAE for soil block test or 0 and 0.1-10.0 kg/m^3 BAE for agar block test. Blocks exposed for 12 weeks at 25°C.	Highest boron tolerancy for *Gloeophylum abietineum* (Fr.) Karst 13851 on pine (Pinus radiata) sapwood: Toxic threshold concentration determined as 0.4% w/w BAE (2.0 kg/m^3 BAE) in the soil block test.	Cookson & Pham 1995

Function	Field of use envisaged	Test substance	Test organism(s)	Test method	Test conditions	Test results: effects, mode of action, resistance	Reference*)
			Gloeophyllum trabeum (Fr.) Murr. 7520, *Serpula lacrymans* S.F. Gray 16508, *Coniophora olivacea* (Fr.) Karst, *Poria sp.* 2422, *Poria subcrassa* Rodway & Cleland 11040, *Trametes versicolor* (L.:Fr.) Pil. syn *Coriolus versicolor.*	Soil block test, mass loss in weight. Blocks were placed on a plastic mesh square, but not in contact with the feeder strips which were placed on the soil surface. Agar block test resulted in higher toxic threshold levels, results are considered not reliable because of larger concentration intervals. Results from agar block tests are not used for derivation of toxic threshold levels. Toxic threshold levels for pine and eucalyptus were similar for *Poria sp.* 2422, *Poria subcrassa* Rodway & Cleland 11040. The other relevant species were only tested on pine		Conversion factor kg/m^3 → % w/w multiply by 0.2.	
insecticide	PT-08	Sodium metaborate (assumed $NaBO_2$)	Egg larvae and larger larvae of *Lyctus brunneus* Stephens	Starch-free and starch-containing sapwood of Eucalyptus regnans or Eucalyptus obliqua treated by immersion in boiling solution. Blocks were air dried (period not stated). No ageing or leaching. Larval survival and mass loss in weight of wood. Wood-boring in starch free wood is generally lower than in starch containing wood. Because of the reduced amount of toxic material passed through the digestive tract, toxic threshold levels for starch free wood is higher. Experiments with larger larvae were only carried out on Eucalyptus obliqua. Results from egg larvae on Eucalyptus obliqua and Eucalyptus regnans were similar.	Test concentrations 0.4-2.3 lb/ft^3 for larger larvae and 0.04-2.8 lb/ft^3 for beetle test (egg larvae). Duration of the test not stated, but at least 9 weeks. Large larvae hardly eat from the wood and pupate almost immediately. Therefore tests were carried out with very small, small and medium sized larvae which have sufficient gluttony to ensure proper assessment of efficacy.	Highest boron tolerancy for Lyctus brunneus on starch-free Eucalyptus obliqua: Toxic threshold concentrations for egg larvae determined as 0.30% w/w BAE (1.5 kg/m^3 BAE or 0.1 lb/ft^3 sodium metaborate) assuming wood density is 500 kg/m^3. Not effective against larger larvae at highest level tested: 6.9% w/w BAE (35 kg/m^3 BAE, 2.3 lb/ft^3 sodium metaborate). Conversion factor lb/ft^3 → kg/m3 multiply by 15.99. Conversion factor kg/m^3 → % w/w multiply by 0.2. Conversion factor metaborate (MW 657996) → BAE multiply by 0.94.	Cummins & Wilson 1936
insecticide	PT-08	boric acid or	Egg larvae of *Lyctus brunneus*	Starch containing yellow carrabeen	Test concentrations 0.01-0.24 lb/ft^3	Boron tolerancy for Lyctus	Cummins,

Function	Field of use envisaged	Test substance	Test organism(s)	Test method	Test conditions	Test results: effects, mode of action, resistance	Reference*)
		borax or boric acid plus borax	Stephens	(Sloanea woolsii). Wood treatment not stated. Visual damage to wood. Experimental conditions not stated.	BAE for boric acid or 0.04-0.3 lb/ft^3 for borax. Duration of the test not stated.	brunneus on yellow carrabeen (Sloanea woolsii) For boric acid, toxic threshold concentration is 0.16% w/w BAE (0.80 kg/m^3 BAE, 0.05 lb/ft^3 BAE). For borax, toxic threshold concentration is 0.08% w/w (0.42 kg/m^3 BAE, 0.04 lb/ft^3 as borax). Toxicity of boric acid, borax or mixtures of borax and boric acid, is considered equal. Because of differences in concentration ranges, final endpoints are slightly different. Conversion factor lb/ft^3 → kg/m3 multiply by 15.99. Conversion factor kg/m^3 → % w/w multiply by 0.2. Conversion factor borax → BAE multiply by 0.65.	1939
insecticide	PT-08	Boric acid	Egg larvae of *Anobium punctatum* de Geer	Pinus radiata D. Don sapwood and Podocarpus dacrydoides sapwood; wood treatment not stated. Larval survival. Efficacy results for Pinus radiata D. Don sapwood and Podocarpus dacrydoides sapwood are similar.	Test concentrations 0.004-3.25 % (w/w) in wood. Duration of the test not stated.	Highest boron tolerancy for *Anobium punctatum* on pine (Pinus radiata) and kabikatea (Podocarpus Dacrydoides) sapwood: Toxic threshold concentrations determined as 0.022 – 0.043% (w/w) BAE (0.11 – 0.21 kg/m^3 BAE) assuming wood density is 500 kg/m^3. Conversion factor % w/w → kg/m^3 multiply by 5.	Spiller 1948
insecticide	PT-08	Borax or DOT	Egg larvae and larger larvae of two species *Anobium punctatum* de Geer highest boron tolerancy Other relevant species:	Corsican pine sapwood treated by vacuum impregnation. Details on wood treatment not stated. BS 3651 and BS 3652 newly hatched (egg larvae) or larger larvae introduced into holes.	Borax test concentrations 0.068-3.4 kg/m3 or 0.013-0.70 % w/w (0.008-0.45 % w/w BAE) for egg larvae and larger larvae (1-3 mg). DOT test concentrations 0.077-7.7 kg/m3 or 0.016-1.6 % w/w (0.019-	Highest boron tolerancy for *Anobium punctatum* on pine sapwood. For borax the toxic threshold concentrations determined as 0.45% w/w BAE (2.2 kg/m^3 BAE,	Taylor 1967

Function	Field of use envisaged	Test substance	Test organism(s)	Test method	Test conditions	Test results: effects, mode of action, resistance	Reference*)
			Hylotrupes bajulus	Larval survival and mass loss in weight of wood.	1.9% w/w BAE). for egg larvae and larger larvae (1.5-5.5 mg). Duration of the test 6-18 months.	3.4 kg/m^3 borax) for larger larvae. For DOT the toxic threshold concentrations determined as 1.9% w/w BAE (9.5 kg/m^3 BAE, 7.7 kg/m^3 DOT) for larger larvae. For DOT the toxic threshold concentrations determined as 0.09% w/w BAE (0.45 kg/m^3 BAE, 0.39 kg/m^3 DOT) for egg larvae. Toxicity of boric acid and DOT, is considered equal. Because the test conditions for DOT differ from test conditions for boric acid (length of larvae, test duration), final endpoints are different Conversion factor % w/w → kg/m^3 multiply by 5.	
termiticide	PT-08	DOT	*Reticulitermes flavipes*	Slash pine (Pinus elliottii Engelm. variety elliottii) treated by vacuum/pressure impregnation. Air dried for 24 hrs. No ageing or leaching. Laboratory test with no choice (only treated wood) or choice (both treated and untreated wood available). Subterranean termite attack in a field test in Gulfport, MS, USA (non-leaching conditions and protected from rain). Termite mortality and mass loss of weight in wood.	DOT loadings equivalent to 0.37-2.9 kg/m^3 BAE or 0.10-0.54% (w/w) BAE (by analytical determination). Duration of the laboratory test 4 weeks at 25-28 °C. Duration of the field test 18 months.	Boron tolerancy for *Reticulitermes flavipes* on pine (Pinus elliottii). For DOT, toxic threshold concentrations determined as 0.30% BAE (1.5 kg/m^3 BAE) in the choice laboratory test. Field tests in USA are considered not relevant for EU. No conversion factors used, actual values from study report.	Mauldin and Kard, 1996
fungicide; insecticide	PT-08	Boric acid or borax or sodium borate (assumed to be borax)	Review article on decay fungi (e.g. *Coniophora cerebella* syn *Coniophora puteana*, *Lenzites trabea* syn *Gloeophyllum trabeum*, *Poria vaporaria* syn *Poria*	Not stated	Not stated	For boric acid highest toxic threshold levels for decay fungi were determined as 0.12%-0.40% w/w BAE (0.6-2.0 kg/m^3 BAE). For egg larvae, highest toxic	Findlay, 1959

Function	Field of use envisaged	Test substance	Test organism(s)	Test method	Test conditions	Test results: effects, mode of action, resistance	Reference*)
			placenta, Polystictus versicolor syn *Coriolus versicolor, Merulius lacrymans* syn *Serpula lacrymans*) and wood boring insects (egg larvae and larger larvae of *Anobium punctatum, Hylotrupes bajules, Lyctus brunneus*).			threshold levels were 0.04%-0.12% w/w BAE (0.2-0.6 kg/m^3 BAE). For borax (or sodium borate) highest toxic threshold levels for decay fungi were determined as 0.065%-0.38% w/w BAE (0.32-1.9 kg/m^3 BAE, 0.5-2.9 kg/m^3 borax) Toxicity of boric acid and borax, is considered equal. Because the test conditions for borax differ from test conditions for boric acid, final endpoints are slightly different Conversion factor kg/m^3 → % w/w multiply by 0.2. Conversion factor % w/w → kg/m^3 multiply by 5. Conversion factor borax → BAE multiply by 0.65.	
fungicide; insecticide	PT-08	Boric acid or borax	Review article on decay fungi (e.g. *Coniophora cerebella* syn *Coniophora puteana, Lenzites trabea* syn *Gloeophyllum trabeum, Poria vaporaria* syn *Poria placenta, ,Merulius lacrymans* syn *Serpula lacrymans*) and wood boring insects (egg larvae and larger larvae of *Anobium punctatum, Hylotrupes bajules, Lyctus brunneus*).	Not stated	Not stated	For boric acid highest toxic threshold levels for decay fungi were determined as 0.072%-0.28 % w/w BAE (0.36-1.4 kg/m^3 BAE) if American test methods are omitted. Highest toxic threshold levels for egg larvae were 0.03%-0.12% w/w BAE (0.15-0.6 kg/m^3 BAE) after 12 weeks. Highest toxic threshold levels for larger larvae were 0.072%-1.5% w/w BAE (0.36-7.4 kg/m^3 BAE) after 16-24 weeks. For borax toxic highest threshold levels for decay fungi were determined as 0.065%-0.21% w/w BAE (0.32-1.0 kg/m^3 BAE, 0.5-1.6 kg/m^3 borax) if American test methods are omitted. Highest toxic threshold levels for egg larvae were 0.023%-0.084% w/w BAE (0.12-0.42 kg/m^3 BAE, 0.18-0.65 kg/m^3 borax) after 12 weeks. Highest toxic threshold levels for larger larvae were 0.091%-0.34% w/w	Becker, 1959

Function	Field of use envisaged	Test substance	Test organism(s)	Test method	Test conditions	Test results: effects, mode of action, resistance	Reference*)
						BAE (0.46->1.7 kg/m^3 BAE, 0.7->2.6 kg/m^3 borax) after 24 weeks. Toxicity of boric acid and borax, is considered equal. Because the test conditions for borax differ from test conditions for boric acid, final endpoints are slightly different Conversion factor kg/m^3 → % w/w multiply by 0.2. Conversion factor % w/w → kg/m^3 multiply by 5. Conversion factor borax → BAE multiply by 0.65.	
fungicide; insecticide	PT-08	Boric acid or borax or DOT (=TIMBOR = Polybor) or sodium metaborate	Review article on decay fungi (*Coniophora puteana*, *Gloeophyllum trabeum*, *Poria placenta*, *Coriolus versicolor*, *Serpula lacrymans*) and wood boring insects (egg larvae and larger larvae of *Anobium punctatum*, *Hylotrupes bajules*, *Lyctus brunneus*).	Not stated.	Not stated	Highest toxic threshold concentrations determined as 0.016%-0.42% w/w BAE (0.08-2.1 kg/m^3 BAE) for decay fungi (if ASTM values are deleted) and 0.008%-0.2% w/w BAE (0.04-1.0 kg/m^3 BAE) for egg larvae and 0.008%-1.8% w/w BAE (0.04-9.2 kg/m^3 BAE) for larger larvae assuming wood density is 500 kg/m^3. Conversion factor kg/m^3 → % w/w multiply by 0.2.	Bravery & Carey 1983

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Anhydrous - 1

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1 REFERENCE

1.1	**Reference**	[redacted] (1996). [redacted] anhydrous Borax Acute Oral Study in the Rat. [redacted]
		Electronic file
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Curent Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	Yes
		Directive 92/69/EEC, B.1 OECD 401.
2.2	**GLP**	Yes
2.3	**Deviations**	Yes
		This study was carried out to confirm a previous study, which indicated that the LD_{50} was greater than 2000 mg/kg, but where 40% of the male rats died at 2000 mg/kg. See Section A6.1.1.1
		Dose levels were selected on the basis of clinical observations and time of onset of signs or death in the previous study, to straddle the regulatory limit dose, with the intention of establishing mortality rates of 0 - 20% in the lower dose group and 40 - 100% in the higher group, such that a calculation of the LD_{50} would be possible. It was also designed to minimise animal usage.

3 MATERIALS AND METHODS

3.1	**Test material**	As given in section 2
		[redacted] anhydrous Borax
3.1.1	Lot/Batch number	5C152748
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Anhydrous - 1

3.2	**Test Animals**	
3.2.1	Species	Rat
3.2.2	Strain	Crl:CD.BR
3.2.3	Source	Charles River (UK)
3.2.4	Sex	Male
3.2.5	Age/weight at study initiation	5-8 weeks old; 143-198 grams
3.2.6	Number of animals per group	*5*
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Oral
3.3.1	Postexposure period	14 days
		Oral
3.3.2	Type	Gavage
3.3.3	Concentration	1600; 2500 mg/kg bw
3.3.4	Vehicle	Corn Oil
3.3.5	Concentration in vehicle	Adjusted to weight of animal
3.3.6	Total volume applied	10ml/kg
3.3.7	Controls	None
3.4	**Examinations**	Clinical observations, necropsy, histopathology or other
3.5	**Method of determination of LD_{50}**	Limit test
3.6	**Further remarks**	
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	No deaths occurred. No effects at 1600 mg/kg. At 2500 mg/kg, piloerection observed in one animal that recovered by day 2. No other adverse effects were observed.
4.2	**Pathology**	The effects observed.
4.3	**Other**	None
4.4	**LD_{50}**	> 2500 mg/kg bw males
		5 APPLICANT'S SUMMARY AND CONCLUSION

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1	A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Anhydrous - 1
5.1 Materials and methods	Directive 92/69/EEC, B.1 OECD 401. Dose levels of 1600; 2500 mg/kg bw given to males only were selected on the basis of clinical observations and time of onset of signs or death in the previous study (A6.1.1.1), to straddle the regulatory limit dose, with the intention of establishing mortality rates of 0 - 20% in the lower dose group and 40 - 100% in the higher group, such that a calculation of the LD_{50} would be possible. It was also designed to minimise animal usage.
5.2 Results and discussion	In this study no deaths occurred and no significant clinical or pathological findings were observed The results gave a monotonic response, 0/5 rats died at 1600 mg/kg, 2/5 died at 2000 mg/kg and 0/5 died at 2500 mg/kg. Probit analysis of this mortality pattern was unable to produce a value for the LD50. However, if it is assume that the next dose level in the sequence will elicit mortality, then a range within which the LD50 must lie can be determined. Using the dose interval of 1.25, the next higher level would be 3125 mg/kg. It was assumed that one rat would be killed at this level. The LD50could then be computed and the result obtained was 29223 mg/kg; if it were assumed that complete mortality would be elicited at 3125 mg/kg, then the LD50 obtained by extrapolation was 2533 mg/kg. If the next dose level elicited no deaths then the LD50 would exceed 30000 mg/kg. It can therefore be concluded that the LD50 falls between 2500 and 30 000 mg/kg
5.3 Conclusion	Disodium tetraborate anhydrous LD_{50} > 2500 mg/kg (based on 2 studies) This data is consistent with the LD_{50} data obtained with boric acid and various sodium borates (LD_{50}s all >2000 mg/kg)..
5.3.1 Reliability	1
5.3.2 Deficiencies	No

Evaluation by Competent Authorities	
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	24 Feb 2005
Materials and Methods	The version of the applicant is acceptable.
Results and discussion	The version of the applicant is adopted.
Conclusion	The version of the applicant is adopted.
Reliability	1
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1

A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Anhydrous – Second Study

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1 REFERENCE

1.1	**Reference**	[redacted] (1995). [redacted] anhydrous Borax Acute Oral Study in the Rat. [redacted]
		Electronic file
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Current Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	Yes
		Directive 92/69/EEC, B.1 OECD 401.
2.2	**GLP**	Yes
2.3	**Deviations**	No

3 MATERIALS AND METHODS

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3.1	**Test material**	As given in section 2
		[redacted] anhydrous Borax
3.1.1	Lot/Batch number	5C152748
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Anhydrous – Second Study

3.2	**Test Animals**	
3.2.1	Species	Rat
3.2.2	Strain	Crl:CD.BR
3.2.3	Source	Charles River (UK)
3.2.4	Sex	Male & Female
3.2.5	Age/weight at study initiation	5-8 weeks old; Males; 1659-216 grams; Females: 144-176 grams
3.2.6	Number of animals per group	5
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Oral
3.3.1	Postexposure period	14 days
		Oral
3.3.2	Type	Gavage
3.3.3	Concentration	2000 and 200 mg/kg bw
3.3.4	Vehicle	Corn Oil
3.3.5	Concentration in vehicle	Adjusted to weight of animal
3.3.6	Total volume applied	10ml/kg
3.3.7	Controls	None
3.4	**Examinations**	Clinical observations, necropsy, histopathology or other
3.5	**Method of determination of LD_{50}**	Limit test
3.6	**Further remarks**	
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	At 2000 mg/kg one male rat was killed for humane reasons on day2 and a second male was similarly killed on day 3. Slight body weight loses were recorded for both animals. Clinical signs indicated soft faeces, soiling of anogenital area, lethargy, hunched posture, ptosis, hypothermia and wasted appearance. In surviving males, signs of soft faeces, soiling of anogenital area and hunched posture were apparent but had resolved by day 4, but an unkempt appearance was noted between day 7 and termination (day 15). Piloerection and anogenital soiling was noted in 4 females of the same group, and these recovered by day 3.

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Anhydrous – Second Study

		At 200 mg/kg, no animals died and the only observation seen was an unkempt appearance in one male and one female at intervals during the second week. Although there were no deaths in the females, based on 40% deaths in males, the testing laboratory concluded that the minimum lethal dose was 200 mg/kg.
4.2	**Pathology**	The only effects observed were a distended caecum and jejunum and a wasted appearance in one animal that dies only. No other changes were observed.
4.3	**Other**	None
4.4	**LD_{50}**	> 200 mg/kg bw Males; >2000 mg/kg Females.
		5 APPLICANT'S SUMMARY AND CONCLUSION
5.1	**Materials and methods**	Directive 92/69/EEC, B.1 OECD 401. Limit dose Acute Oral Toxicity Study in male and female rats dosed at 200 and 2000 mg/kg bw
5.2	**Results and discussion**	At 2000 mg/kg 2/5 rats male rats died. Slight body weight loses were recorded for both animals. Clinical signs indicated soft faeces, soiling of anogenital area, lethargy, hunched posture, ptosis, hypothermia and wasted appearance. In surviving males, signs of soft faeces, soiling of anogenital area and hunched posture were apparent but had resolved by day 4, but an unkempt appearance was noted between day 7 and termination (day 15). Piloerection and anogenital soiling was noted in 4 females of the same group, and these recovered by day 3. The only pathological effects observed were a distended stomach and darkened lungs in one rat that died and an enlarged liver, dark inflated lungs and red fluid in the thoracic cavity of the second rat that died. At 200 mg/kg, apart from one male rat with an unkempt appearance no other clinical signs were observed At 200 mg/kg, no animals died and the only observation seen was an unkempt appearance in one male and one female at intervals during the second week. The LD_{50} was estimated to be > 200 mg/kg bw Males; >2000 mg/kg Females.
5.3	**Conclusion**	Disodium tetraborate anhydrous : The LD_{50} was estimated to be > 200 mg/kg bw Males; >2000 mg/kg Females. A further study was carried out to clarify the LD_{50} in the males (See A6.1.1.1)
5.3.1	Reliability	1
5.3.2	Deficiencies	No

Evaluation by Competent Authorities	
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	24 February 2005
Materials and Methods	Body weight range males is 159-216. Otherwise the version of the applicant is acceptable.
Results and discussion	The LD50 is considered to be >2000 mg/kg bw
Conclusion	LD50 >2000 mg/kg bw
Reliability	1
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1

A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Decahydrate

Official use only

1 REFERENCE

1.1	**Reference**	[redacted] (1961), [redacted]. Acute Oral Administration (rats). [redacted] Electronic file
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Current Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	No. This study was carried out at a time when no specific guidelines were available and pre GLP. Although it is not to modern protocols the data is consistent with other 2 other acute oral toxicity studies on disodium tetraborate decahydrate and other sodium borates data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals.
2.2	**GLP**	No – Pre GLP
2.3	**Deviations**	See above

3 MATERIALS AND METHODS

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3.1	**Test material**	As given in section 2 Sodium Tetraborate decahydrate
3.1.1	Lot/Batch number	Not given
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Decahydrate

3.2	**Test Animals**	
3.2.1	Species	Rat
3.2.2	Strain	Sprague-Dawley
3.2.3	Source	Charles River Breeding Laboratories Inc USA
3.2.4	Sex	Male
3.2.5	Age/weight at study initiation	222- 350 grams
3.2.6	Number of animals per group	10
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Oral
3.3.1	Postexposure period	14 days
		Oral
3.3.2	Type	Gavage
3.3.3	Concentration	4.0; 4.5; 5.0; 5.5; 6.0; 6.5; 7.0 grams/kg bw
3.3.4	Vehicle	Distilled water
3.3.5	Concentration in vehicle	Adjusted to weight of animal
3.3.6	Total volume applied	50% w/v
3.3.7	Controls	None
3.4	**Examinations**	Clinical observations, necropsy, histopathology or other
3.5	**Method of determination of LD_{50}**	Miller and Tainter
3.6	**Further remarks**	
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	See Table A6_1-1.
4.2	**Pathology**	Animals that died exhibited congested lungs and adrenals; distension of the stomach and small intestines and pale walls of stomach and small intestine. In the surviving animals there were pale mottled kidneys; pale livers and slightly congested adrenals and in some animals, slightly congested lungs.
4.3	**Other**	None
4.4	**LD_{50}**	LD_{50} : 5560 (5150 - 6000) mg/kg

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1

A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Decahydrate

5 APPLICANT'S SUMMARY AND CONCLUSION

5.1 Materials and methods

LD_{50} study on Disodium tetraborate decahydrate carried out at a time when no specific guidelines were available and pre GLP. Although it is not to modern protocols the data is consistent with other 2 other acute oral toxicity studies on disodium tetraborate decahydrate and other sodium borates data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals. Animals were treated with 4.0; 4.5; 5.0; 5.5; 6.0; 6.5; 7.0 grams/kg bw

5.2 Results and discussion

Mortality was 10/10 at 7000 mg/kg; 9/10 at 6500 mg/kg; 5/10 at 6000 mg/kg; 3/10 at 5500 and 5000 mg/kg; 1/10 at 4500 mg/kg. No deaths occurred at 4000mg/kg

Observations included CNS depression, diarrhoea, ataxia, ptosis and deep yellow urine, bloody discharge around eyes. Survivors recovered by 3-6 days post treatment in the highest dose groups with less sever symptom in the lower dose groups. Pathological examination indicated congested lungs and adrenals; distension of the stomach and small intestines and pale walls of stomach and small intestine in the animals that dies. In the surviving animals there were pale mottled kidneys; pale livers and slightly congested adrenals and in some animals, slightly congested lungs.

5.3 Conclusion

Disodium tetraborate decahydrate

LD_{50}: 5560 (5150 - 6000) mg/kg

Data from other studies (in IUCLID database indicates that the range of the LD_{50} in rats is 4500 – 6000 mg/kg

5.3.1 Reliability 1

5.3.2 Deficiencies No

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1

A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Decahydrate

	Evaluation by Competent Authorities
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	25 February 2005
Materials and Methods	The version of the applicant is acceptable.
Results and discussion	The version of the applicant is adopted.
Conclusion	The version of the applicant is adopted.
Reliability	1
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

Table A6_1-1. Table for Acute Toxicity

Dose g/kg	*Number of dead / number of investigated*	*Time of death (range)*	*Observations*
Males			
4.0	0/10		
4.5	1/10	24 hours	CNS depression, diarrhoea, ataxia, lacrimation, ptosis and deep yellow urine. Survivors recovered by 2 days post treatment.
5.0	3/10	24 hours	CNS depression, diarrhoea, ataxia, lacrimation, ptosis and deep yellow urine. Survivors recovered by 2 days post treatment.
5.5	3/10	24 hours	CNS depression, diarrhoea, ataxia, lacrimation, ptosis and deep yellow urine. Survivors recovered by 2 days post treatment.
6.0	5/10	24 hours	CNS depression, diarrhoea, ataxia, ptosis and deep yellow urine, bloody discharge around eyes. Survivors recovered by 3-6 days post treatment.
6.5	9/10	24 hours	CNS depression, diarrhoea, ataxia, ptosis and deep yellow urine, bloody discharge around eyes. Survivors recovered by 3-6 days post treatment.
7.0	10/10	24 hours	CNS depression, diarrhoea, ataxia, ptosis and deep yellow urine, bloody discharge around eyes. Survivors recovered by 3-6 days post treatment.
LD_{50}	5.56 (5.15- 6.00) mg/kg		

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Pentahydrate

Official use only

1 REFERENCE

1.1	**Reference**	[redacted] 1985) Acute oral LD50 study [redacted] sodium tetraborate pentahydrate in Sprague-Dawley rats. [redacted] Electronic file
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Current Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	This study was carried out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Although it is not to modern protocols the data is consistent with other borate data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals.
2.2	**GLP**	Yes
2.3	**Deviations**	No

3 MATERIALS AND METHODS

.

3.1	**Test material**	As given in section 2 Sodium Tetraborate Penthydrate
3.1.1	Lot/Batch number	USB-12-84
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1 A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Pentahydrate

3.2	**Test Animals**	
3.2.1	Species	Rat
3.2.2	Strain	Sprague-Dawley
3.2.3	Source	Charles River Breeding Laboratories Inc USA
3.2.4	Sex	Male & Female
3.2.5	Age/weight at study initiation	5-8 weeks old; Males; 189 - 202 grams; Females: 186 –210 grams
3.2.6	Number of animals per group	5
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Oral
3.3.1	Postexposure period	14 days
		Oral
3.3.2	Type	Gavage
3.3.3	Concentration	1000; 1495; 2236; 3344 5000 mg/kg bw
3.3.4	Vehicle	Not given
3.3.5	Concentration in vehicle	Adjusted to weight of animal
3.3.6	Total volume applied	Not given
3.3.7	Controls	None
3.4	**Examinations**	Clinical observations, necropsy, histopathology or other
3.5	**Method of determination of LD_{50}**	Miller and Tainter
3.6	**Further remarks**	
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	See Table A6_1-1.
4.2	**Pathology**	No abnormalities observed
4.3	**Other**	None
4.4	**LD_{50}**	LD_{50} combined: 3305 (2403 - 4207) mg/kg LD_{50} males: 3401 (2056 - 4746) mg/kg LD_{50} females: 3225 (2007 - 4443) mg/kg.

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1

A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Pentahydrate

5 APPLICANT'S SUMMARY AND CONCLUSION

5.1 Materials and methods

LD_{50} study on Disodium tetraborate pentahydrate carreid out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Although it is not to modern protocols the data is consistent with other borate data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals. Animals were treated with 1000; 1495; 2236; 3344 5000 mg/kg bw

5.2 Results and discussion

All animals died at 5000 mg/kg. At 33444 mg/kg 1/5 males and 2/5 females died. Clinical sign included ataxia; decreased activity; diarrhoea; lacrimation, tremors at 5000mg/kg with decreasing effects at lower doses. No pathological changes were observed

5.3 Conclusion

Disodium tetraborate pentahydrate

LD_{50} combined: 3305 (2403 - 4207) mg/kg
LD_{50} males: 3401 (2056 - 4746) mg/kg
LD_{50} females: 3225 (2007 - 4443) mg/kg

5.3.1 Reliability: 1

5.3.2 Deficiencies: No

A6.1.1.1 Acute Toxicity

Annex Point IIA6.1

A6.1.1.1 Acute Oral Toxicity: Limit Test: Male Rats Disodium Tetraborate Pentahydrate

	Evaluation by Competent Authorities
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	18 April 2005
Materials and Methods	The version of the applicant is acceptable.
Results and discussion	The version of the applicant is adopted.
Conclusion	The version of the applicant is adopted.
Reliability	1
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

Table A6_1-1. Table for Acute Toxicity

Dose mg/kg	*Number of dead / number of investigated*	*Time of death (range)*	*Observations*
Males			
1000	0/5		Ataxia; Decreased activity; Diarrhoea;
1495	0/5		Decreased activity; Diarrhoea;
2236	0/5		Decreased activity; Diarrhoea;
3344	1/5	Day 2	Ataxia; Decreased activity; Diarrhoea;
5000	5/5	3 Day 2 2 Day 3	Ataxia; decreased activity; Diarrhoea; Lacrimation, Tremors
LD_{50} Male	3401 (2056 - 4746) mg/kg		
Females			
1000	0/5		Ataxia; Decreased activity; Diarrhoea;
1495	0/5		Decreased activity; Diarrhoea;
2236	0/5		Decreased activity; Diarrhoea;
3344	2/5	1Day 2 1 Day 3	Ataxia; Decreased activity; Diarrhoea;
5000	5/5	5 Day 2	Ataxia; decreased activity; Diarrhoea; Lacrimation, Tremors
LD_{50} Female	3225 (2007 - 4443) mg/kg.		
LD_{50} value Combined	3305 (2403 - 4207) mg/kg		

Section A6.1.2 Annex Point IIA6.1	Acute Dermal Toxicity Section A6.1.2; Dermal Route; Disodium Tetraborate Anhydrous	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] Limited exposure [ ]	Technically not feasible [ ] Scientifically unjustified [ ] Other justification [x]	
Detailed justification:	Anhydrous disodium tetraborate is the anhydrous salt of disodium tetraborate decahydrate and disodium tetraborate pentahydrate. For practical purposes one part of anhydrous disodium tetraborate is equivalent to 1.45 parts of disodium tetraborate pentahydrate; 1.9 parts of disodium tetraborate decahydrate; 1.02 parts disodium octaborate tetrahydrate and in aqueous solution 1.23 parts of boric acid. It is hygroscopic and takes up water to form a hydrated salt and like the other borates, in solution it will exist as undissociated boric acid (see Doc IIIA A7.1.1.1 Hydrolysis and Doc IIIA Read Across Statement). Acute dermal limit studies carried out on both hydrated forms and disodium octaborate tetrahydrate indicated the LD_{50} to be > 2000 mg/kg bw. In these studies, limited symptoms were seen with the tetraborates and no symptoms with disodium octaborate tetrahydrate suggesting minimal dermal absorption. In an acute dermal limit study on boric acid, the rabbit skin was abraded to increase the absorption. Even in this study there was limited symptoms observed and the acute dermal LD_{50} was > 2000 mg/kg bw. Human dermal absorption data on disodium tetraborate decahydrate, boric acid and disodium octaborate tetrahydrate indicated percutaneous absorption > 0.5% (see Doc IIIA A6.3 Percutaneous Absorption). Since anhydrous disodium tetraborate will form the various similar borates in the moistened form that it is applied to the skin, then it is unlikely to be absorbed at any greater rate than the other borates tested. A limit dose of 2000 mg/kg bw anhydrous disodium tetraborate would be equivalent to 2040 mg/kg disodium octaborate tetrahydrate and since no adverse symptoms occurred with disodium octaborate tetrahydrate then it may be assume that the same is true for anhydrous disodium tetraborate. The equivalent doses to the other borates are 2900 mg/kg bw disodium tetraborate pentahydrate; 3800 mg/kg bw disodium tetraborate decahydrate and 2460 mg kg/bw boric acid. Based on results of the acute dermal studies and the lack of significant symptoms and the presumed lack of dermal absorption, it can be assumed that the anhydrous disodium tetraborate acute dermal LD_{50} is > 2000 mg/kg bw. Therefore further testing is not warranted in the interests of animal welfare and protecting laboratory animals	
Undertaking of intended data submission [ ]	n.a.	

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	18 April 2005
Evaluation of applicant's justification	The justification of the applicant for the non-submission of data on acute dermal toxicity of disodium tetraborate anhydrous is acceptable.
Conclusion	Data on the acute dermal toxicity of disodium tetraborate anhydrous need not to be provided since data on the acute dermal toxicity of related substances are available.
Remarks	
	COMMENTS FROM OTHER MEMBER STATE *(specify)*
Date	*Give date of comments submitted*
Evaluation of applicant's justification	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Remarks	

Section A6.1.2 Acute Toxicity

Annex Point IIA6.1 **Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Decahydrate**

Official use only

	1 REFERENCE	
1.1	**Reference**	[redacted] (1985) Acute dermal toxicity study [redacted] sodium tetraborate decahydrate in New Zealand white rabbits. [redacted]
		Electronic File
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Current Access:** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA
	2 GUIDELINES AND QUALITY ASSURANCE	
2.1	**Guideline study**	This study was carried out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Although it is not to modern protocols the data is consistent with other borate data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals
2.2	**GLP**	Yes
2.3	**Deviations**	See above
	3 MATERIALS AND METHODS	
3.1	**Test material**	Sodium Tetraborate Decahydrate
3.1.1	Lot/Batch number	USB-11-84
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

Section A6.1.2	Acute Toxicity	
Annex Point IIA6.1	Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Decahydrate	
3.2	**Test Animals**	Non-entry field
3.2.1	Species	Rabbit
3.2.2	Strain	New Zealand White
3.2.3	Source	Sgarlat's Rabbityr, Harvey's Lake
3.2.4	Sex	Male and Female
3.2.5	Age/weight at study initiation	Males: 2.20± 0.07 kg; Females: 2.11± 0.09 kg
3.2.6	Number of animals per group	5 male; 5 female
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Dermal
3.3.1	Post exposure period	14 days
		Dermal
3.3.2	Area covered	Area not specified. The back of each rabbit was clipped free of fur prior to treatment.
3.3.3	Occlusion	Occlusive
3.3.4	Vehicle	
3.3.5	Concentration in vehicle	Assume applied as neat test substance
3.3.6	Total volume applied	Dosage to 2 g/kg bw
3.3.7	Duration of exposure	24 h
3.3.8	Removal of test substance	Moist towel
3.3.9	Controls	None
3.4	**Examinations**	Clinical observations, necropsy, histopathology or other
3.5	**Method of determination of LD_{50}**	Not relevant – Limit test
3.6	**Further remarks**	On removal of binders the binders and exposed areas were moist or dry with sample indicating incomplete absorption of sample.
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	Clinical changes were limited to anorexia and deceased activity in one rabbit, diarrhoea and soft stools in 2 rabbits and nasal discharge in one rabbit
4.2	**Pathology**	No gross necropsy findings were observed.
4.3	**Other**	

Section A6.1.2	Acute Toxicity	
Annex Point IIA6.1	Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Decahydrate	
4.4 LD_{50}	LD_{50} > 2000 mg/kg bw No lethal effect at limit dose	
	5 APPLICANT'S SUMMARY AND CONCLUSION	
5.1 **Materials and methods**	Acute dermal limit study carried out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Rabbits were treated with 2g/kg bw boric acid. Although not carried out to modern protocols, the data is acceptable particularly as percutaneous absorption data is available to indicate the absorption through humans skin is negligible > 0.5%. In addition, acceptable data on other borates indicates that dermal acute toxicity is not an issue. Therefore further testing is not warranted in the interests of animal welfare and protecting laboratory animals	
5.2 **Results and discussion**	LD_{50} > 2000 mg/kg bw indicating no acute dermal toxicity. Clinical changes were limited to anorexia and deceased activity in one rabbit, diarrhoea and soft stools in 2 rabbits and nasal discharge in one rabbit. No gross necropsy findings were observed.	
5.3 **Conclusion**	Disodium Tetraborate Decahydrate: LD_{50} > 2000 mg/kg bw.	
5.3.1 Reliability	2	
5.3.2 Deficiencies	See above	

Section A6.1.2 Acute Toxicity

Annex Point IIA6.1 **Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Decahydrate**

	Evaluation by Competent Authorities
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	28 February 2005
Materials and Methods	Test material (powder) was not moistened, so good contact with skin was not ensured.
Results and discussion	The description of the effects by the applicant is adopted. Although the test substance was not moistened, there are no indications that disodium tetraborate decahydrate is toxic through the dermal route. The dermal absorption is low (0.5% dermal absorption is considered a reasonal worst case estimate). In addition, although oral absorption is virtually complete, the oral LD50 is > 2000 mg/kg bw. Thus, it can be concluded that for disodium tetraborate decahydrate the dermal LD50 >2000 mg/kg bw.
Conclusion	LD_{50} > 2000 mg/kg bw.
Reliability	2
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

Section A6.1.2 Acute Toxicity

Annex Point IIA6.1 | **Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Pentahydrate**

Official use only

1 REFERENCE

1.1	**Reference**	[redacted], Acute dermal toxicity study [redacted] sodium tetraborate pentahydrate in New Zealand white rabbits [redacted]
		Electronic File
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Current Access:** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	This study was carried out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Although it is not to modern protocols the data is consistent with other borate data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals
2.2	**GLP**	Yes
2.3	**Deviations**	See above

3 MATERIALS AND METHODS

3.1	**Test material**	Sodium Tetraborate Pentahydrate
3.1.1	Lot/Batch number	USB-12-84
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

Section A6.1.2	Acute Toxicity	
Annex Point IIA6.1	Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Pentahydrate	
3.2	**Test Animals**	Non-entry field
3.2.1	Species	Rabbit
3.2.2	Strain	New Zealand White
3.2.3	Source	LaCrosse Industries Inc., Schenectady , New York
3.2.4	Sex	Male and Female
3.2.5	Age/weight at study initiation	Males: 2.19± 0.27kg; Females: 2.29± 0.28kg
3.2.6	Number of animals per group	5 male; 5 female
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Dermal
3.3.1	Post exposure period	14 days
		Dermal
3.3.2	Area covered	Area not specified. The back of each rabbit was clipped free of fur prior to treatment.
3.3.3	Occlusion	Occlusive
3.3.4	Vehicle	
3.3.5	Concentration in vehicle	Assume applied as neat test substance
3.3.6	Total volume applied	Dosage to 2 g/kg bw
3.3.7	Duration of exposure	24 h
3.3.8	Removal of test substance	Moist towel
3.3.9	Controls	None
3.4	**Examinations**	Clinical observations, necropsy, histopathology or other
3.5	**Method of determination of LD_{50}**	Not relevant – Limit test
3.6	**Further remarks**	On removal of binders the binders and exposed areas were moist or dry with sample indicating incomplete absorption of sample.
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	Clinical changes included anorexia and deceased activity in four rabbits, diarrhoea and soft stools in 3 rabbits and nasal discharge in three rabbits
4.2	**Pathology**	The only finding in one rabbit was the abdominal cavity was filled with fluid

Section A6.1.2	Acute Toxicity
Annex Point IIA6.1	Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Pentahydrate
4.3 Other	
4.4 LD_{50}	LD_{50} > 2000 mg/kg bw No lethal effect at limit dose
	5 APPLICANT'S SUMMARY AND CONCLUSION
5.1 Materials and methods	Acute dermal limit study carried out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Rabbits were treated with 2g/kg bw boric acid. Although not carried out to modern protocols, the data is acceptable particularly as percutaneous absorption data is available to indicate the absorption through humans skin is negligible > 0.5%. In addition, acceptable data on other borates indicates that dermal acute toxicity is not an issue. Therefore further testing is not warranted in the interests of animal welfare and protecting laboratory animals
5.2 Results and discussion	LD_{50} > 2000 mg/kg bw indicating no acute dermal toxicity Clinical changes included anorexia and deceased activity in four rabbits, diarrhoea and soft stools in 3 rabbits and nasal discharge in three rabbits
5.3 Conclusion	Disodium Tetraborate Pentahydrate: LD_{50} > 2000 mg/kg bw.
5.3.1 Reliability	2
5.3.2 Deficiencies	See above

Section A6.1.2 Acute Toxicity

Annex Point IIA6.1 **Section A6.1.2; Dermal Route; Rat; LD_{50} Limit Test: Disodium Tetraborate Pentahydrate**

	Evaluation by Competent Authorities
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	25 February 2005
Materials and Methods	Test material (powder) was not moistened, so good contact with skin was not ensured.
Results and discussion	The description of the effects by the applicant is adopted. Although the test substance was not moistened, there are no indications that disodium tetraborate pentahydrate is toxic through the dermal route. The dermal absorption is low (0.5% dermal absorption is considered a reasonal worst case estimate). In addition, although oral absorption is virtually complete, the oral LD50 is > 2000 mg/kg bw. Thus, it can be concluded that for disodium tetraborate pentahydrate the dermal LD50 >2000 mg/kg bw.
Conclusion	LD_{50} > 2000 mg/kg bw.
Reliability	2
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

Section A6.1.3 Annex Point IIA6.1	Acute Toxicity Section A6.1.3; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Anhydrous	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure** [ ]	**Technically not feasible** [ ] **Scientifically unjustified** [ ] **Other justification** [x]	
Detailed justification:	Anhydrous disodium tetraborate is the anhydrous salt of disodium tetraborate decahydrate and disodium tetraborate pentahydrate. For practical purposes one part of Anhydrous Disodium tetraborate is equivalent to 1.45 parts of disodium tetraborate pentahydrate; 1.9 parts of disodium tetraborate decahydrate; 1.02 parts disodium octaborate tetrahydrate and in aqueous solution 1.23 parts of boric acid. It is hygroscopic and takes up water to form a hydrated salt and like the other borates, in solution it will exist as undissociated boric acid (see Doc IIIA A7.1.1.1 Hydrolysis and Doc IIIA Read Across Statement). It would be difficult to raise a dust sample to 2000 mg/m^3 without some hydrolysis-taking place and the dusk would therefore be hard to maintain. Acute inhalation limit studies carried out on both hydrated forms; disodium octaborate tetrahydrate and two studies on boric acid indicated the LC_{50} to be > 2000 mg/m^3. In all these studies, minimal symptoms were observed and no deaths occurred. A limit dose of 2000 mg/m^3 anhydrous disodium tetraborate would be equivalent to 2040 mg/m^3 disodium octaborate tetrahydrate and since no adverse symptoms occurred with disodium octaborate tetrahydrate then it may be assume that the same is true for anhydrous disodium tetraborate. The equivalent doses to the other borates are 2900 mg/m^3 disodium tetraborate pentahydrate; 3800 mg/m^3 disodium tetraborate decahydrate and 2460 mg/m^3 boric acid. Based on results of the acute inhalation studies and the lack of significant symptoms can be assumed that the anhydrous disodium tetraborate acute dermal LC_{50} is > 2000 mg/m^3 Therefore further testing is not warranted in the interests of animal welfare and protecting laboratory animals	
Undertaking of intended data submission [ ]	n.a.	

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	17 May 2005
Evaluation of applicant's justification	The justification of the applicant is acceptable
Conclusion	The justification of the applicant is acceptable
Remarks	
	COMMENTS FROM OTHER MEMBER STATE *(specify)*
Date	*Give date of comments submitted*
Evaluation of applicant's justification	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Remarks	

Section A6.1.3 Acute Toxicity

Annex Point IIA6.1 | **Section A6.1.3.2; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Decahydrate**

Official use only

1 REFERENCE

1.1	**Reference**	[redacted] (1994), Acute inhalation toxicity limit on disodium tetraborate decahydrate. [redacted]
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Curent Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	Yes OECD Guide-line 403 "Acute Inhalation Toxicity" (USEPA.FIFRA 40 CFR Part 158 Guideline #8-3.
2.2	**GLP**	Yes
2.3	**Deviations**	Yes The report lacks detail. Since the data is in line with other data on sodium borates, further testing is not warranted in the interests of animal welfare and protecting laboratory animals.

3 MATERIALS AND METHODS

3.1	**Test material**	Disodium Decaborate Pentahydrate
3.1.1	Lot/Batch number	Lot #4J18-2271
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

Section A6.1.3	Acute Toxicity	
Annex Point IIA6.1	Section A6.1.3.2; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Decahydrate	
3.2	**Test Animals**	Non-entry field
3.2.1	Species	Rat
3.2.2	Strain	Sprague-Dawley
3.2.3	Source	Hilltop Lab Animals, Scottdale, PS
3.2.4	Sex	
3.2.5	Age/weight at study initiation	Young adults: Males 240-262 grams; Females 205-220 grams
3.2.6	Number of animals per group	5 male; 5 female
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Inhalation
3.3.1	Postexposure period	14 days
		Inhalation
3.3.2	Concentrations	Analytical concentration 2030 ±180 mg/m³
3.3.3	Particle size	Not an aerosol study
3.3.4	Type or preparation of particles	Sample was ground in a ball mill for 24 hours MMAD 3.6 µm Top dose ~ 2 mg/l was the highest that was obtainable under the conditions of the test
3.3.5	Type of exposure	Whole body
3.3.6	Vehicle	Not relevant
3.3.7	Concentration in vehicle	Not relevant
3.3.8	Duration of exposure	4 h
3.4	**Examinations**	Clinical observations, Pathology
3.5	**Method of determination of LC_{50}**	Not relevant – Limit Test
3.6	**Further remarks**	
3.6.1	Controls	None
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	Animal observations were limited due to the accumulation of

Section A6.1.3 **Acute Toxicity**

Annex Point IIA6.1 **Section A6.1.3.2; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Decahydrate**

		test material on the walls of the exposure chamber. During the first hour of exposure, ocular discharge, hypoactivity and hunched posture were noted. On removal from the chamber, ocular discharge persisted in all rats and two had nasal discharge and with in a few hours on rat developed Piloerection and a hunched position. All animals recovered by day seven after removal from chamber.
4.2	**Pathology**	No specific findings.
4.3	**Other**	
4.4	**LC_{50}**	LC_{50} > 2.03.mg/L (2g/m^3) No lethal effect at limit dose
		5 APPLICANT'S SUMMARY AND CONCLUSION
5.1	**Materials and methods**	Acute inhalation toxicity limit on boric acid on Disodium Tetraborate Pentahydrate. MMAD 3.1 µm . Top dose ~ 2 mg/l was the highest that was obtainable under the conditions of the test
5.2	**Results and discussion**	LC_{50} > 2.03.mg/L (2g/m^3). Animal observations were limited due to the accumulation of test material on the walls of the exposure chamber. During the first hour of exposure, ocular discharge, hypoactivity and hunched posture were noted. On removal from the chamber, ocular discharge persisted in all rats and two had nasal discharge and with in a few hours on rat developed Piloerection and a hunched position. All animals recovered by day seven after removal from chamber.
5.3	**Conclusion**	Disodium Tetraborate Decahydrate. LC_{50} > 2.03.mg/L (2g/m^3).
5.3.1	Reliability	1
5.3.2	Deficiencies	No

Section A6.1.3 Acute Toxicity

Annex Point IIA6.1 **Section A6.1.3.2; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Decahydrate**

	Evaluation by Competent Authorities
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	17 May 2005
Materials and Methods	The applicant incorrectly states that the test material is disodium decaborate pentahydrate, whereas it is disodium tetraborate decahydrate. Otherwise the version of the applicant is acceptable.
Results and discussion	The version of the applicant is adopted.
Conclusion	The version of the applicant is adopted.
Reliability	1
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

Section A6.1.3 Acute Toxicity

Annex Point IIA6.1 **Section A6.1.3; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Pentahydrate**

Official use only

1 REFERENCE

1.1	**Reference**	[redacted] (1994), Acute inhalation toxicity limit on disodium tetraborate pentahydrate. [redacted]
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Curent Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

2.1	**Guideline study**	Yes OECD Guide-line 403 "Acute Inhalation Toxicity" (USEPA.FIFRA 40 CFR Part 158 Guideline #8-3.
2.2	**GLP**	Yes
2.3	**Deviations**	Yes The report lacks detail. Since the data is in line with other data on sodium borates, further testing is not warranted in the interests of animal welfare and protecting laboratory animals.

3 MATERIALS AND METHODS

3.1	**Test material**	Disodium Tetraborate Pentahydrate
3.1.1	Lot/Batch number	Lot #4H02-2471
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable

Section A6.1.3	Acute Toxicity	
Annex Point IIA6.1	Section A6.1.3; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Pentahydrate	
3.2	**Test Animals**	Non-entry field
3.2.1	Species	Rat
3.2.2	Strain	Sprague-Dawley
3.2.3	Source	Hilltop Lab Animals, Scottdale, PS
3.2.4	Sex	
3.2.5	Age/weight at study initiation	Young adults: Males 253- 278 grams; Females 218-245 grams
3.2.6	Number of animals per group	5 male; 5 female
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Inhalation
3.3.1	Postexposure period	14 days
		Inhalation
3.3.2	Concentrations	Analytical concentration 2040 ±160 mg/m³
3.3.3	Particle size	Not an aerosol study
3.3.4	Type or preparation of particles	Sample was ground in a ball mill for 24 hours MMAD 3.1 µm ± GSD .971µm Top dose ~ 2 mg/l was the highest that was obtainable under the conditions of the test
3.3.5	Type of exposure	Whole body
3.3.6	Vehicle	Not relevant
3.3.7	Concentration in vehicle	Not relevant
3.3.8	Duration of exposure	4 h
3.4	**Examinations**	Clinical observations, Pathology
3.5	**Method of determination of LC_{50}**	Not relevant – Limit Test
3.6	**Further remarks**	
3.6.1	Controls	None
		4 RESULTS AND DISCUSSION
4.1	**Clinical signs**	Animal observations were limited due to the accumulation of

Section A6.1.3	Acute Toxicity
Annex Point IIA6.1	Section A6.1.3; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Pentahydrate

		test material on the walls of the exposure chamber. During the first hour of exposure, ocular discharge, hypoactivity and haunched posture were noted. Ocular discharge and a few animals exhibited nasal discharge and/or hunched position. All animals recovered by day six after removal from chamber.
4.2	**Pathology**	No specific findings.
4.3	**Other**	
4.4	**LC_{50}**	LC_{50} > 2.04.mg/L (2g/m^3) No lethal effect at limit dose
		5 APPLICANT'S SUMMARY AND CONCLUSION
5.1	**Materials and methods**	Acute inhalation toxicity limit on boric acid on Disodium Tetraborate Pentahydrate. MMAD 3.1 µm ,Top dose ~ 2 mg/l was the highest that was obtainable under the conditions of the test
5.2	**Results and discussion**	LC_{50} > 2.04.mg/L (2g/m^3). Animal observations were limited due to the accumulation of test material on the walls of the exposure chamber. Animal observations were limited due to the accumulation of test material on the walls of the exposure chamber. During the first hour of exposure, ocular discharge, hypoactivity and haunched posture were noted. Ocular discharge and a few animals exhibited nasal discharge and/or hunched position. All animals recovered by day six after removal from chamber.
5.3	**Conclusion**	Disodium Tetraborate Pentahydrate. LC_{50} > 2.04.mg/L (2g/m^3).
5.3.1	Reliability	1
5.3.2	Deficiencies	No

Section A6.1.3 Acute Toxicity

Annex Point IIA6.1 **Section A6.1.3; Inhalation Route; Rat; LC_{50} Limit Test: Disodium Tetraborate Pentahydrate**

	Evaluation by Competent Authorities
	Use separate "evaluation boxes" to provide transparency as to the comments and views submitted
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	28 February 2005
Materials and Methods	The version of the applicant is acceptable. For clarification it should be mentioned that 2.04 mg/L is the actual chamber concentration. The nominal concentration was 21.63 mg/L.
Results and discussion	The version of the applicant is adopted. In addition, it should be mentioned that gross necropsy were unremarkable.
Conclusion	The version of the applicant is adopted.
Reliability	1
Acceptability	acceptable
Remarks	
	COMMENTS FROM ...
Date	*Give date of comments submitted*
Materials and Methods	*Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.* *Discuss if deviating from view of rapporteur member state*
Results and discussion	*Discuss if deviating from view of rapporteur member state*
Conclusion	*Discuss if deviating from view of rapporteur member state*
Reliability	*Discuss if deviating from view of rapporteur member state*
Acceptability	*Discuss if deviating from view of rapporteur member state*
Remarks	

Section A6.1.4 Acute Dermal Irritation

Annex Point IIA6.4

Section A6.1.4 : Rabbit Skin Irritation Study : Disodium Tetraborate Pentahydrate

Official use only

1 REFERENCE

1.1	**Reference**	[redacted] 1985 Primary dermal irritation study [redacted] sodium tetraborate pentahydrate in New Zealand white rabbits. [redacted]
1.2	**Data protection**	Yes
1.2.1	Data owner	[redacted]
1.2.2	Companies with letter of access	**Curent Access** [redacted]
1.2.3	Criteria for data protection	Data on new a.s. for first entry to Annex I/IA

2 GUIDELINES AND QUALITY ASSURANCE

Section A6.1.4		**Acute Dermal Irritation**
Annex Point IIA6.4		Section A6.1.4 : Rabbit Skin Irritation Study : Disodium Tetraborate Pentahydrate
2.1	**Guideline study**	This study was carried out to comply with US EPA-FIFRA guidelines at the time and carried out by the US Food and Drug Laboratories to GLP. Although it is not to modern protocols the data is consistent with another study on the same substance and with other borate data and further testing is not warranted in the interests of animal welfare and protecting laboratory animals
2.2	**GLP**	Yes
2.3	**Deviations**	See above
		3 MATERIALS AND METHODS
3.1	**Test material**	Sodium Tetraborate Pentahydrate
3.1.1	Lot/Batch number	USB-12-84
3.1.2	Specification	As given in section 2
3.1.2.1	**Description**	White powder
3.1.2.2	**Purity**	>99%
3.1.2.3	**Stability**	Stable
3.2	**Test Animals**	Non-entry field
3.2.1	Species	Rabbit
3.2.2	Strain	New Zealand White
3.2.3	Source	LaCrosse Industries Inc
3.2.4	Sex	Male and Female
3.2.5	Age/weight at study initiation	Young adults: 2.13 – 2.45 kg
3.2.6	Number of animals per group	6 males
3.2.7	Control animals	No
3.3	**Administration/ Exposure**	Dermal
3.3.1	Application	Non entry field
3.3.1.1	**Preparation of test substance**	0.5 grams of test substance was moistened with 0.5 ml physiological saline

Section A6.1.4 Acute Dermal Irritation

Annex Point IIA6.4 | Section A6.1.4 : Rabbit Skin Irritation Study : Disodium Tetraborate Pentahydrate

3.3.1.2	**Test site and Preparation of Test Site**	Hair was clipped from the back area of each rabbit. Two areas on each rabbit were treated
3.3.2	Occlusion	Occlusive
3.3.3	Vehicle	Physiological saline
3.3.4	Concentration in vehicle	
3.3.5	Total volume applied	0.5 gram test substance
3.3.6	Removal of test substance	Moistened towel
3.3.7	Duration of exposure	4 h
3.3.8	Post exposure period	72 h
3.3.9	Controls	None
3.4	**Examinations**	
3.4.1	Clinical signs	Ye
3.4.2	Dermal examination	Yes
3.4.2.1	**Scoring system**	Draize, 1959
3.4.2.2	**Examination time points**	24h, 72h post treatment
3.4.3	Other examinations	None
3.5	**Further remarks**	
		4 RESULTS AND DISCUSSION
4.1	**Average score**	NO adverse effects were seen
4.1.1	Erythema	0
4.1.2	Edema	0
4.2	**Reversibility**	Not relevant
4.3	**Other examinations**	
4.4	**Overall result**	Non Irritant
		5 APPLICANT'S SUMMARY AND CONCLUSION