ECETOC

Technical Report No. 66

SKIN IRRITATION AND CORROSION: REFERENCE CHEMICALS DATA BANK

March 1995

European Centre for Ecotoxicology
and Toxicology of Chemicals

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SUMMARY

Earlier ECETOC has published comprehensive listing of *in vivo* rabbit eye irritation data for 55 readily-available chemicals of high purity. The establishment of such a data bank allows investigators of *in vitro* or alternative methods to evaluate their own techniques without the need to carry out *in vivo* testing of the reference chemicals.

A companion data bank has now been developed for 176 chemicals for which comprehensive rabbit skin irritation/corrosion data are available. No new *in vivo* testing has been carried out to qualify a chemical for inclusion in this list. The 176 chemicals selected are readily available at high and consistent purity and are expected to be stable on storage. They have been tested undiluted in *in vivo* studies, excepting those chemicals where high concentrations of the substance could be expected to cause severe effects. The *in vivo* data have been generated since 1981 in studies carried out according to OECD Test Guideline 404 and following the principles of Good Laboratory Practice. The data presented were obtained from tests normally using at least three rabbits, involving application of 0.5ml (or 0.5g) to the flank under semi-occlusive patches and in which observations were made at least 24, 48, and 72 hours after application.

The chemicals represent a range of chemical classes (acids, acrylates/methacrylates, alcohols, aldehydes, alkalis, amides, amines, brominated derivatives, chlorinated solvents, esters, ethers, fatty acids and mixtures, fragrance oils, halogenated aromatics, hydrocarbons (unsaturated), inorganics, ketones, nitriles, phenolic derivatives, S-containing compounds, soaps/surfactants, triglycerides) and different degrees of irritancy. The chemicals are ranked for skin irritation potential on the basis of a 'primary irritation index'. They should be of use in validation tests of promising alternatives to the *in vivo* rabbit skin irritation/corrosion test. This is an essential step in the progression to regulatory acceptance.

Classification schemes for chemicals on the basis of their skin irritation/corrosion properties are appended to the report for the convenience of readers.

SECTION 1. BACKGROUND AND INTRODUCTION

The importance of high quality toxicological data on chemicals used in validation of in vitro methods has been emphasised (Purchase, 1990).

As a consequence, ECETOC has published comprehensive listing of *in vivo* rabbit eye irritation data for 55 chemicals (in 72 tests) (ECETOC, 1992). The *in vivo* data were generated in tests carried out according to OECD Test Guideline 404 (OECD, 1981, 1992) and following the principles of Good Laboratory Practice. All the chemicals are available at high and consistent purity and are expected to be stable on storage. The availability of this reference chemical data bank of chemicals of known purity and ocular irritation response allows investigators of alternative eye irritation assessment techniques to evaluate the performance of their techniques against reference chemicals without the need to carry out *in vivo* testing.

Subsequently (1993) a Task Force was formed to develop a similar reference data bank for chemicals found to be irritant or corrosive to rabbit skin. The data bank could be used in assessing the potential of alternative techniques as a replacement for *in vivo* rabbit skin irritation/corrosivity tests.

The terms of reference of the Task Force were:

- to derive from the literature sources of *in vivo* skin corrosivity/irritancy data of chemicals,

- to prepare a list of chemicals suitable for use in the validation of alternative methods for the assessment of skin corrosion and irritation; the list should contain chemicals covering different classes and different degrees of corrosion and irritancy,

- to rank the skin corrosivity/irritancy potential of the chemicals on the basis of the individual data available.

SECTION 2. PROCESS FOR THE SELECTION OF CHEMICALS

The scientific literature does not contain the detailed data required by the Task Force to compile a suitable data bank. Authors of relevant publications in the literature were contacted and asked if they would make individual rabbit skin data available to the Task Force. Additionally, companies known to possess data were requested to provide information. The activity of the Task Force was publicised by an "APPEAL FOR RABBIT SKIN IRRITATION DATA" which appeared in journals which would reach the toxicological community. This appeal was also widely publicised at internationally-supported scientific meetings.

The chemicals and the *in vivo* skin irritation/corrosivity data given in Appendix A meet the following selection criteria.

Reference chemicals are single chemical entities commercially available at known high consistent purity and expected to be stable on storage.

Some commercial chemicals, manufactured and supplied to a specification which ensures a consistent purity, are included in the data bank, e.g. fatty acids where composition is guaranteed by analytical parameters such as saponification value rather than percentage purity, and perfume chemicals where odour is a prime consideration.

The *in vivo* rabbit skin irritation data have been generated since 1981 in studies carried out according to OECD Test Guideline 404 (OECD 1981, 1992) and following the Principles of Good Laboratory Practice, and have been obtained in tests:

- normally using at least three albino rabbits tested at the same time,
- involving application of 0.5ml or 0.5g of the test substance to intact skin for not more than 4 hours exposure,
- in which observations were made at least 24, 48 and 72 hours after patch removal,
    - or over sufficient duration to enable reversibility/ irreversibility to be assessed,
    - and include individual scores (using the Draize scale) for each observation in each rabbit,

- in which chemicals were tested undiluted (except that data from studies using dilutions of the chemical were acceptable when higher concentrations of the chemical could be expected to cause severe effects).

Some of the data for chemicals included in Appendix A were generated in multi-patch studies in which more than one chemical was tested on the same rabbit at the same time. The Task Force decided that:

- multi-patch studies did not contravene OECD Test Guideline 404,

- such studies should be identified on the individual data sheets (and on the index sheets) in Appendix A.

In no case was interference reported between reactions on different patch sites in the multi-patch studies.

SECTION 3. CHEMICALS DATA BANK

3.1 CHEMICALS SELECTED

One hundred and seventy six chemicals met the criteria defined above (Section 2) for inclusion in the data bank assessed in 215 tests.

The availability of *in vivo* data available precluded the need for any additional animal testing.

3.2 GRADING OF EFFECTS ON SKIN

The grading scale for irritant effects on rabbit skin, originally proposed by Draize and adopted by OECD Test Guideline 404 and the US and EC regulatory agencies, is shown in Table 1.

Table 1 Grading Scale for Skin Irritation Effects According to EC and US Regulatory Agencies Following OECD Test Guideline 404

Erythema and eschar formation	**Grade**
No erythema	0
Very slight erythema (barely perceptible)	1
Well-defined erythema	2
Moderate to severe erythema	3
Severe erythema (beet redness) to slight eschar formation (injuries in depth)	4
Oedema formation	**Grade**
No oedema	0
Very slight oedema (barely perceptible)	1
Slight oedema (edges of area well defined by definite raising)	2
Moderate oedema (raised approximately I millimetre)	3
Severe oedema (raised more than 1 millimetre and extending beyond area of exposure)	4

Definition of skin 'corrosion'

There is no internationally-harmonised definition of 'corrosion'. The definitions used by different national/international regulatory bodies are summarised in Appendix B.

3.3 RANKING OF CHEMICALS SELECTED

The skin irritation potential of chemicals is often summarised as the "Primary Irritation Index" (PII) calculated from erythema and oedema grades.

PII's are not always calculated the same way. For the purpose of this data bank, PII was calculated according to the following formula :

$$PII = \frac{\sum \text{ERYTHEMA at 24/48/72 hrs} + \sum \text{OEDEMA at 24/48/72 hrs}}{3 \times \text{no. of animals}}$$

The maximum possible PII is 8.

The use of PII in this report is for the purposes of relative ranking of skin effects, and does not necessarily represent endorsement by the Task Force of its use for assessment of irritancy hazard.

3.4 SKIN TOXICITY DATA

The data of the skin toxicity of 176 chemicals have been assembled - presented as

(a) a list of chemicals by chemical data (Appendix A, Table A1)

(b) a list of chemicals by Primary Irritation Index (Appendix A, Table A2)

and (c) individual animal data (Appendix A, Table A3).

3.5 CLASSIFICATION SCHEMES

Data obtained from *in vivo* rabbit skin irritation tests are used to assess the potential of materials to cause skin irritancy or corrosion in man, and to meet regulatory requirements which require classification and appropriate labelling of a material if it is believed to be potentially irritant or corrosive. Different national/international schemes exist for the classification of the irritancy/ corrosivity hazard.

The principal classification schemes are summarised, **for guidance only**, in Appendix C to facilitate comparison of results from alternative techniques against the scheme most appropriate to an investigator's needs.

SECTION 4. USE OF THIS REPORT

The use of these chemicals in the validation of alternative tests will help to provide comparable information on test performance. In carrying out such validation studies, sufficient chemicals from a variety of classes, with a range of PIIs should be used.

GLOSSARY

The following definitions are reproduced from an ECETOC monograph on Skin Irritation (ECETOC, 1990) and are used in this data bank :

DERMAL IRRITATION:

The production of reversible inflammatory changes in irritation skin following the application of a substance.

DERMAL CORROSION:

The production of scarring usually as the result of corrosion tissue destruction (necrosis) following the application of a substance.

ERYTHEMA:

Redness of the skin produced by vascular congestion or increased perfusion.

ESCHAR:

A superficial dry slough at the site of a heat or caustic burn which contains cell debris and dried tissue exudate and occludes the healing skin.

OEDEMA:

The presence of abnormally large amounts of fluid in the intercellular tissue spaces of the epidermis, dermis or subcutaneous tissues.

SCAR (CICATRIX) :

Fibrous tissue replacing normal tissues which have been destroyed by injury or disease.

APPENDIX A: SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

All chemicals were tested applying a volume or weight of 0.5ml or 0.5g undiluted, except where an alternative weight or concentration is specified. Exposure time was for 4 hours except when specified otherwise.

Numerical suffixes (e.g [1], [2]) denote instances where the same sample of the chemical (or a sample meeting the same specification) was retested in the same laboratory.

THE CHEMICALS LISTED IN THIS APPENDIX MAY BE OBTAINED IN 10g PACKAGES FROM :

BIBRA INTERNATIONAL
WOODMANSTERNE ROAD
CARSHALTON
SURREY SM5 4DS
UNITED KINGDOM

DISCLAIMER

THE CHEMICALS LISTED IN APPENDIX A HAVE BEEN ASSESSED BY THE ECETOC TASK FORCE ONLY IN RELATION TO *IN VIVO* RABBIT SKIN IRRITATION DATA. NO OTHER POTENTIALLY HAZARDOUS PROPERTIES WERE REVIEWED. USERS OF THE CHEMICALS SHOULD SATISFY THEMSELVES WITH REGARD TO OTHER POSSIBLE HAZARDOUS PROPERTIES OF THE CHEMICALS.

Table A1. Skin Irritation Data for Individual Rabbits; Index by Chemical Class

PII = Primary Irritation Index
N = number of animals
M = tested in multi-patch study
[S] = solid, tested with chemical or patch moistened with water

		Conc/Time Tested	Purity(%)	N	PII	Page
ACIDS - [2 chemicals]						
M	2-methylbutyric acid		>95	4	>4	21
M	10-undecenoic acid		98.8	4	2.42	22
ACRYLATES/METHACRYLATES - [4 chemicals]						
	ethyltriglycol methacrylate		96.1	3	0.22	23
	ethylthioethyl methacrylate		99.7	3	0.56	24
	2-ethoxyethyl methacrylate		99.8	3	1.67	25
	2-methoxyethyl acrylate		99.6	3	-	26
ALCOHOLS - [19 chemicals, 32 tests]						
M	benzyl alcohol [1]		>99	3	1.56	27
M	benzyl alcohol [2]		>99	4	1.83	28
M	cinnamyl alcohol [1]	[S]	98.9	3	0	29
M	cinnamyl alcohol [2]	[S]	98.9	6	0.5	30
	dl-citronellol [1]		98.7	3	4.22	31
M	dl-citronellol [2]		98.7	4	4.0	32
M	dl-citronellol [3]		98.7	4	3.67	33
M	1-decanol		98.8	4	3.33	34
M	dihydromercenol [1]		>98	3	3.67	35
M	dihydromercenol [2]		>98	4	2.0	36
	2,6-dimethyl-4-heptanol		90	3	0	37
M	dipropylene glycol [1]		>99	3	0.33	38
M	dipropylene glycol [2]		>99	4	0	39
M	geraniol [1]		90.7	3	3.67	40
M	geraniol [2]		90.7	4	3.33	41
M	geraniol [3]		90.7	4	2.92	42
M	geranyl dihydrolinalool		>90	4	2.25	43
M	geranyl linalool		matches standard	4	4.29	44
M	alpha-Ionol		90-95	4	1.33	45
M	beta-Ionol		93.4	4	1.88	46
M	Linalol (= Linalool) [1]		97.1	3	3.33	47
M	Linalol (= Linalool) [2]		97.1	4	3.42	48
M	Linalol (= Linalool) [3]		97.1	4	2.08	49
M	p-mentha-1,8-dien-7-ol		94.6	4	3.29	50
M	2-methyl-4-phenyl-2-butanol		100	4	1.58	51
M	phenylethyl alcohol [1]		99.6	3	2.22	52
M	phenylethyl alcohol [2]		99.6	4	0.92	53
M	isopropanol		100	3	0.78	54
	stearyl alcohol		-	3	2.56	55
M	alphaterpineol [1]		98.4	3	4.44	56
M	alphaterpineol [2]		98.4	4	4.75	57
M	alphaterpineol [3]		98.4	4	4.0	58
ALDEHYDES [24 chemicals, 31 tests]						
M	p-tert-butyl dihydrocinnamaldehyde		95.0	4	2.42	59
M	isobutyraldehyde		98	4	0.13	60
M	cinnamaldehyde		98.4	4	3.71	61
M	citrathal		-	4	3.63	62
M	cyclamen aldehyde [1]		>98	3	5.11	63

		Conc/Time Tested		Purity(%)	N	PII	Page
M	cyclamen aldehyde [2]			>98	4	4.17	64
M	cyclamen aldehyde [3]			>98	4	4.83	65
M	cyclamen aldehyde [4]			>98	4	3.42	66
M	2,4-decadienal			96.5	4	4.79	67
M	2,4-dimethyl-3-cyclohexen-1-carboxaldehyde			99.0	4	3.21	68
M	3,7-dimethyl-2,6-nonadien-1-al			matches standard	4	3.75	69
M	2,4-dimethyltetrahydrobenzaldehyde			-	4	2.75	70
M	2-ethylhexanal			-	4	3.88	71
M	heptanal			95.0	4	5.0	72
M	2,4-hexadienal			-	4	7.08	73
M	alphahexyl cinnamic aldehyde [1]			91.9	3	4.0	74
M	alphahexyl cinnamic aldehyde [2]			91.9	4	4.0	75
M	alphahexyl cinnamic aldehyde [3]			91.9	4	2.58	76
M	hydroxycitronellal [1]			98.7	3	1.11	77
M	hydroxycitronellal [2]			98.7	4	0.92	78
M	Lilestralis/Lilial [1]			97.8	3	4.56	79
M	Lilestralis/Lilial [2]			97.8	4	3.58	80
M	3-methylbutyraldehyde			>98.5	4	2.83	81
M	2,5-methylene-6-propyl-3-cyclohexen-carbaldehyde			>92	4	2.42	82
M	nonanal			98.9	4	3.46	83
M	2-phenylpropionaldehyde			98.4	4	2.92	84
M	p-isopropylphenylacetaldehyde			>97	4	2.29	85
M	salicylaldehyde			>98	4	2.54	86
M	tetrahydrogeranial			-	4	2.58	87
M	4-tricyclo-decylindene-8-butanal			>90	4	3.29	88
	methacrolein			97	3	4.11	89
ALKALIS - [4 chemicals, 6 tests]							
M	potassium hydroxide		5%	)REAGENT	3	5.22	90
M	potassium hydroxide		10%	)GRADE	3	-	91
	sodium bicarbonate	[S]	0.3g	99.7	3	0.11	92
M	sodium carbonate		50%	100	3	2.33	93
M	sodium metasilicate		10%	)REAGENT	3	1.22	94
M	sodium metasilicate		50%	)GRADE	3	3.67	95
AMIDES - [1 chemical]							
	erucamide [S]			-	3	0	96
AMINES - [14 chemicals, 16 tests]							
	diethylaminopropylamine			99.8	1	-	97
	N,N-dimethylbenzylamine			99.3	3	-	98
	dimethyl-n-butylamine			99.5	6	5.11	99
	dimethylisopropylamine			99.6	6	5.61	100
	dimethyldipropylenetriamine		3min	99.5	1	-	101
	dimethyldipropylenetriamine		4hr	99.5	3	-	101
	2,4-dinitromethylaniline	[S]		99	3	0	102
	n-heptylamine			99.5	6	6.67	103
	methoxy-3-propylamine			>99	6	6.67	104
	oleyl propylene diamine dioleate			-	3	3.67	105
	hydrogenated tallow amine	[S]		>95	3	3.56	106
	hydrogenated tallow propylene diamine	[S]		>85	6	0	107
	tallow polypropylene polyamine	[S]	3min	>95	3	2.67	108
	tallow polypropylene polyamine	[S]	1hr	>95	3	4.11	109
	tallowamine	[S]	3min	>95	3	-	110
	2,4-xylidine			98.1	3	1.44	111

		Conc/Time Tested	Purity(%)	N	PII	Page
ETHERS - [1 chemical]						
M	1,4-cineole (eucalyptol)		-	4	2.25	167
FATTY ACIDS AND MIXTURES - [10 chemicals/mixtures]						
	caprylic acid		-	3	4.44	168
	55/45 caprylic/capric acids		-	3	5.11	169
	60/40 caprylic/capric acids		-	3	-	170
	65/35 caprylic/capric acids		-	3	-	171
M	65/35 caprylic/capric acids		>92	3	5.33	172
	lauric acid	[S]	-	3	0.44	173
	70/30 oleine/caprylic acid		-	3	3.78	174
	80/20 oleine/caprylic acid		-	3	6.67	175
	90/10 oleine/caprylic acid		-	3	4.67	176
	isostearic acid		-	3	4.33	177
FRAGRANCE OILS [10 chemicals]						
M	cinnamon leaf oil		-	4	1.71	178
M	clove leaf oil		-	4	4.29	179
M	Litsea Cubaba oil		-	4	3.88	180
M	origanum oil		-	4	>4	181
M	parsley herb oil		-	4	3.0	182
M	perilla oil		-	4	2.42	183
M	pimenta leaf (allspice) oil		-	4	2.79	184
M	tagetes oil		-	4	3.13	185
M	Tea tree oil		-	4	3.63	186
M	thyme oil, red		-	4	4.92	187
HALOGENATED AROMATICS [4 chemicals]						
	3-chloro-4-fluoronitrobenzene		98	6	1.67	188
	m-chloronitrobenzene	[S]	99.6	3	0	189
	fluorobenzene		99.7	3	0.11	190
	2-fluorotoluene		99.8	3	0.11	191
HYDROCARBONS (unsaturated) [4 chemicals]						
	cis-cyclooctene		95	6	1.89	192
	1,9-decadiene		97	3	3.0	193
	1,5-hexadiene		97	3	0	194
	1,13-tetradecadiene		97	4	1.67	195
INORGANICS - [2 chemicals]						
	sodium bisulphite	[S]	>97	3	1.0	196
	sodium chlorite	34.5%	80	3	0.33	197
KETONES - [5 chemicals]						
M	benzyl acetone		99.3	4	1.21	198
M	diacetyl		98.3	4	0.63	199
M	cis-Jasmone		>98	4	2.58	200
M	isolongifolene ketone		90.0	4	3.0	201
M	methyl lavender ketone		>98	4	3.79	202
NITRILES - [2 chemicals]						
	2,3-dichloropropionitrile		96.3	3	2.0	203
	3-diethylaminopropionitrile		99.8	3	0	204

Table A2. INDEX IN ORDER OF PRIMARY IRRITATION INDEX (PII)

PI = Primary Irritation Index
N = number of animals
M = tested in multi-patch study
[S] = solid, tested with chemical or patch moistened with water

PII RANGE: ZERO

Number of Chemicals: 19

			Conc. Tested	Time Tested	PII	N	Page
	4-amino-1,2,4-triazole	[S]			0	6	224
M	benzyl benzoate [1]				0	3	131
	1-bromo-4-chlorobutane				0	3	114
	m-chloronitrobenzene	[S]			0	3	189
M	cinnamyl alcohol [1]	[S]			0	3	29
	3-diethylaminopropionitrile				0	3	204
M	diethyl phthalate [1]				0	3	138
	2,6-dimethyl-4-heptanol				0	3	37
	2,4-dinitro-N-methylaniline	[S]			0	3	102
M	dipropylene glycol [2]				0	4	39
	3,3'-dithiodipropionic acid	[S]			0	3	213
	erucamide	[S]			0	3	96
	glycerol triundecanoate	[S]			0	3	223
	1,5-hexadiene				0	3	194
	hydrogenated tallow propylene diamine	[S]			0	6	107
	methyltrimethyl acetate				0	3	160
	4,4'-methylene bis(2,6-ditertiarybutylphenol)				0	3	209
	phenethyl bromide				0	3	122
M	Tonalid	[S]			0	3	233

PII RANGE: 0.01- <1

Number of Chemicals: 28

M	p-tolyl alcohol (p-methylphenol)	[S]			0.04	4	210
	fluorobenzene				0.11	3	190
	2-fluorotoluene				0.11	3	191
	isopropylisostearate				0.11	3	163
	sodium bicarbonate	[S]	0.3g		0.11	3	92
M	isobutyraldehyde				0.13	4	60
M	diethyl phthalate [2]				0.17	4	139
	ethyltriglycol methacrylate				0.22	3	23
M	benzyl salicylate [1]				0.33	3	133
	1-bromo-4-fluorobenzene				0.33	3	116
M	dipropylene glycol [1]				0.33	3	38
	sodium chlorite		34.5%		0.33	3	197
M	allyl phenoxyacetate				0.38	4	128
	lauric acid	[S]			0.44	3	173
M	cinnamyl alcohol [2]	[S]			0.5	4	30
	ethyl trimethyl acetate				0.5	6	145
	2-ethylhexylpalmitate				0.56	3	143
	ethylthioethylmethacrylate				0.56	3	24
M	diacetyl				0.63	4	199
	glycerol tri-isostearate				0.67	3	222
M	methyl-2-methylbutyrate				0.67	4	157
M	benzyl salicylate [2]				0.75	4	134
M	isopropanol				0.78	3	54
M	benzyl acetate [2]				0.83	4	130
	1,6-dibromohexane				0.89	3	120
	4-(methylthio)-benzaldehyde				0.89	3	216
M	hydroxycitronellal [2]				0.92	4	78
M	phenylethyl alcohol [2]				0.92	4	53

			Conc. Tested	Time Tested	PII	N	Page
PII: RANGE 1.0 - <2							
Number of Chemicals: 29							
	sodium bisulphite	[S]			1.0	3	196
	n-butyl propionate				1.08	4	137
M	hydroxycitronellal [1]				1.11	3	77
	3-mercapto-1-propanol				1.11	6	215
M	ethyl tiglate				1.17	4	144
M	benzyl acetone				1.21	4	198
M	dimethylbenzylcarbinylacetate [1]	[S]			1.22	3	140
	isopropyl myristate				1.22	3	161
M	sodium metasilicate		10%		1.22	3	94
M	alpha-Ionol				1.33	4	45
M	dimethylbenzylcarbinylacetate [2]	[S]			1.39	6	141
	2-bromopropane				1.44	3	119
	isopropyl palmitate				1.44	3	162
	2,4-xylidine				1.44	3	111
M	benzyl acetate [1]				1.56	3	129
M	benzyl alcohol [1]				1.56	3	27
M	benzyl benzoate [2]				1.58	4	132
M	2-methyl-4-phenyl-2-butanol				1.58	4	51
	3-chloro-4-fluoronitrobenzene				1.67	6	188
	2-ethoxyethyl methacrylate				1.67	3	25
	2-ethylhexylcocoate				1.67	3	142
	sodium undecylenate		33.2%		1.67	3	221
	1,13-tetradecadiene				1.67	4	195
M	cinnamon leaf oil				1.71	4	178
M	heptyl butyrate				1.75	4	147
M	benzyl alcohol [2]				1.83	4	28
M	beta-Ionol				1.88	4	46
	cis-cyclooctene				1.89	6	192
	1,3-dibromopropane				1.89	3	121
PII RANGE: 2 - <3							
Number of Chemicals: 38							
	2,3-dichloropropionitrile				2.0	3	203
M	dihydromercenol [2]				2.0	4	36
M	6-butyl-2,4-dimethyldihydropyrane				2.04	4	226
M	n-decylidene methyl anthranilate				2.08	4	227
M	Linalol (= Linalool) [3]				2.08	4	49
	methyl stearate				2.11	3	159
	soap from 20/80 coconut/tallow	[S]			2.11	3	217
M	allyl heptanoate				2.13	4	127
M	phenylethyl alcohol [1]				2.22	3	52
M	1,4-cineole (eucalyptol)				2.25	4	167
M	geranyl dihydrolinalool				2.25	4	43
M	p-isopropylphenylacetaldehyde				2.29	4	85
	1-bromo-2-chloroethane				2.33	3	115
M	sodium carbonate		50%		2.33	3	93
M	guaiacol (o-methoxyphenol)				2.38	4	208
M	p-tert-butyl dihydrocinnamaldehyde				2.42	4	59
M	2,5-methylene-6-propyl-3-cyclohexencarbaldehyde				2.42	4	82
M	perilla oil				2.42	4	183
M	10-undecenoic acid				2.42	4	22
	2-bromobutane				2.44	3	113
M	salicylaldehyde				2.54	4	86
	di-n-propyl disulphide				2.56	3	212
	isostearyl alcohol				2.56	3	55
M	tetrahydrogeranial				2.58	4	87
M	alphahexyl cinnamic aldehyde [3]				2.58	4	76
M	cis-Jasmone				2.58	4	200

			Conc. Tested	Time Tested	PII	N	Page
M	linalool oxide				2.58	4	232
	soap from 20/80 coconut/palm	[S]			2.67	3	218
	tallow polypropylene polyamine	[S]		3min	2.67	3	108
M	2,4-dimethyltetrahydrobenzaldehyde				2.75	4	70
M	α terpinyl acetate [3]				2.75	4	166
	methyl caproate				2.78	3	154
M	pimenta leaf (allspice) oil				2.79	4	184
M	3-methylbutyraldehyde				2.83	4	81
M	eugenol				2.92	4	207
M	geraniol [3]				2.92	4	42
M	linalyl acetate [2]				2.92	4	153
M	2-phenylpropionaldehyde				2.92	4	84
PII RANGE: 3.0 - <4							
Number of Chemicals: 42							
	1,9-decadiene				3.0	3	193
	dimethyl disulphide				3.0	6	211
M	2,6-dimethyl-2,4,6-octatriene				3.0	4	228
M	parsley herb oil				3.0	4	182
M	isolongifolene ketone				3.0	4	201
	methyl linoleate				3.11	3	156
M	tagetes oil				3.13	4	185
M	2,4-dimethyl-3-cyclohexen-1-carboxaldehyde				3.21	4	68
M	d-limonene [2]				3.25	4	231
M	1-formyl-1-methyl-4(4-methyl-3-pentyl-1-yl)-3-cyclohexene				3.29	4	229
M	p-mentha-1,8-dien-7-ol				3.29	4	50
M	4-tricyclo-decylindene-8-butanal				3.29	4	88
M	1-decanol				3.33	4	34
M	geraniol [2]				3.33	4	41
M	hexyl salicylate [4]				3.33	4	151
M	Linalol (= Linalool) [1]				3.33	3	47
M	cyclamen aldehyde [4]				3.42	4	66
M	Linalol (= Linalool) [2]				3.42	4	48
M	hexyl salicylate [1]				3.44	3	148
M	nonanal				3.46	4	83
M	isobornyl acetate [2]				3.5	4	136
	hydrogenated tallowamine	[S]			3.56	3	106
M	d-limonene [1]				3.56	3	230
M	α terpinyl acetate [1]				3.56	3	164
M	Lilestralis/Lilial [2]				3.58	4	80
M	citrathal				3.63	4	62
M	Tea tree oil				3.63	4	186
M	dl-citronellol [3]				3.67	4	33
M	dihydromercenol [1]				3.67	3	35
M	geraniol [1]				3.67	3	40
M	hexyl salicylate [2]				3.67	4	149
M	linalyl acetate [1]				3.67	3	152
	oleyl propylenediamine dioleate				3.67	3	105
	sodium metasilicate		50%		3.67	3	95
M	cinnamaldehyde				3.71	4	61
M	3,7-dimethyl-2,6-nonadien-1-al				3.75	4	69
	70/30 oleine/caprylic acid				3.78	3	174
M	methyl lavender ketone				3.79	4	202
M	2-ethylhexanal				3.88	4	71
M	Litsea Cubaba oil				3.88	4	180
M	isobornyl acetate [1]				3.89	3	135
	methyl laurate				3.89	3	155

			Conc. Tested	Time Tested	PII	N	Page
PII RANGE: 4.0 - <5							
Number of Chemicals: 27							
M	Carvacrol				>4	4	205
M	2-methylbutyric acid				>4	4	21
M	origanum oil				>4	4	181
	1-bromohexane				4.0	3	117
M	dl-citronellol [2]				4.0	4	32
M	alphahexyl cinnamic aldehyde [1]				4.0	3	74
M	alphahexyl cinnamic aldehyde [2]				4.0	4	75
M	alphaterpineol [3]				4.0	4	58
	methacrolein				4.11	3	89
	tallow polypropylene polyamine	[S]		1hr	4.11	3	109
M	cyclamen aldehyde [2]				4.17	4	64
M	hexyl salicylate [3]				4.17	4	150
M	dl-citronellol [1]				4.22	3	31
M	clove leaf oil				4.29	4	179
M	geranyl linalool				4.29	4	44
	isostearic acid				4.33	3	177
M	α terpinyl acetate [2]				4.33	4	165
	1-bromopentane				4.44	3	118
	caprylic acid				4.44	3	168
M	alphaterpineol [1]				4.44	3	56
M	Lilestralis/Lilial [1]				4.56	3	79
	methyl palmitate				4.56	3	158
	90/10 oleine/caprylic acid				4.67	3	176
M	alphaterpineol [2]				4.75	4	57
M	2,4-decadienal				4.79	4	67
M	cyclamen aldehyde [3]				4.83	4	65
M	thyme oil, red				4.92	4	187
PII RANGE: 5 and above							
Number of Chemicals: 21							
M	beechwood creosote				>5	4	225
M	heptanal				5.0	4	72
	55/45 caprylic/capric acids				5.11	3	169
M	cyclamen aldehyde [1]				5.11	3	63
	dimethyl-n-butylamine				5.11	6	99
M	potassium hydroxide		5%		5.22	3	90
	1,1,1-trichloroethane				5.22	3	125
M	63/35 caprylic/capric acids				5.33	3	172
	trichloroethylene				5.44	3	126
	dimethylisopropylamine				5.61	6	100
	2-tertiarybutyl phenol				5.67	6	206
	dichloromethane				5.67	3	123
	tetrachloroethylene				5.67	3	124
M	sodium lauryl sulphate		50%		6.0	3	219
	n-heptylamine				6.67	6	103
	methoxy-3-propylamine				6.67	6	104
	80/20 oleine/caprylic acid				6.67	3	175
M	sodium lauryl sulphate		20%		6.78	3	220
M	2,4-hexadienal				7.08	4	73
	allyl bromide		4hr		7.17	2	112
	glycolbromoacetate		85%		7.67	1	146

			Conc. Tested	Time Tested	PII	N	Page
PII RANGE: NOT POSSIBLE TO CALCULATE							
Number of Chemicals: 11							
	allyl bromide			3min	[<3]	1	112
	60/40 caprylic/capric acids				-	3	170
	65/35 caprylic/capric acids				-	3	171
	diethylaminopropylamine				-	1	97
	N,N-dimethylbenzylamine				-	3	98
	dimethyldipropylenetriamine			3min	-	1	101
	dimethyldipropylenetriamine			4hr	-	3	101
	2-mercaptoethanol Na (1.08ml of 45.21% aq sol)			3min	-	6	214
	2-methoxyethyl acrylate				-	3	26
M	potassium hydroxide		10%		-	3	91
	tallowamine	[S]		3min	-	3	110

Of the 215 tests, 22 (19 differant chemicals) tests were carried out on undiluted solids; 10 other materials were tested as aqueous solutions; the remainder were liquids, tested undiluted. Rabbits were exposed to 5 test materials using patches for 3 minutes; 3 of these chemicals were retested, 2 under patches for 4 hours, 1 for 1 hour. All other test materials were assessed using patches for 4 hours.

Numbers of tests falling into each PII range were:

PII Range	No of Tests
0	19
0-<1	28
1-<2	29
2-<3	38
3-<4	42
4-<5	27
>5	21
Not calculable	11
Total	215

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-METHYL BUTYRIC ACID CONCENTRATION TESTED : 100%

SOURCE : Firmenich VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 116-53-0
Purity >95%
Spec. No. 63608

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2GB	2	2	4		
OEDEMA		3	-	-	-	-		
OBSERVATIONS		W#	WGB#	B#	B#	E		
ANIMAL No.	2							
ERYTHEMA		2	2	2S	3.5	4		
OEDEMA		4	3	3	2.5			
OBSERVATIONS						E		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	4		
OEDEMA		2.5W	2.5	1.5	2	-		
OBSERVATIONS		W	G	D	D	D		
ANIMAL No.	4							
ERYTHEMA		2	2	2	3	4		
OEDEMA		4	4	2.5	2.5	-		
OBSERVATIONS			WY	Y	Y			

Areas of discolouration: W = white, G = green, B = black, Y = yellow, D = dark.
# = irritation assessed at boundary
E = eschar

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = >4

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 10-UNDECENOIC ACID
SOURCE : IFF
SPECIFICATION :
CAS No. 112-38-9
Purity 98.8%
Spec. No. -

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0.5	1.5	2	1.5	0		
OEDEMA	0.5	0.5	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	0.5	2	2	2	0.5		
OEDEMA	0.5	1	1.5	1	0		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	0.5		
OEDEMA	0.5	0.5	0.5	0.5	0		
OBSERVATIONS			Dem	Dem	De		
ANIMAL No. 4							
ERYTHEMA	0.5	2	1.5	1.5	0.5		
OEDEMA	0.5	0.5	0	0	0		
OBSERVATIONS				Dem	De*		

De = DESQUAMATION FROM THE SKIN (De* = MARKED
m = MINIMAL)

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.42$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ETHYLTRIGLYCOL METHACRYLATE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 36670-09-2
Purity 96.1%

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	1	1	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.22$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ETHYLTHIOETHYL METHACRYLATE

CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM

VOLUME TESTED : 0.5ml

No. OF RABBITS : THREE

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 14216-25-2

Purity 99.7%

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	5d	6d	7d
ANIMAL No.	1							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		1	1	1	0	0	0	
OEDEMA		0	0	0	0	0	0	
OBSERVATIONS					Dr	Dr		
ANIMAL No.	3							
ERYTHEMA		1	1	1	1	0	0	0
OEDEMA		0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	Dr	

Dr = DRYNESS OF THE SKIN

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0.56$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-ETHOXYETHYL METHACRYLATE

CONCENTRATION TESTED : 100%

SOURCE : ALDRICH

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 2370-63-0
Purity 99.8%
Product No. 28,066-6

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	4d	5d	6d
ANIMAL No.	1							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	2	2	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	1	0	0
OEDEMA		0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	Dr	

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.56

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-METHOXYETHYL ACRYLATE

SOURCE : ELF ATOCHEM

SPECIFICATION :
CAS No. 3121-61-7
Purity 99.6%

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	9d	14d
ERYTHEMA	4	4	4	Ne	CrDe	Cr	Cr
OEDEMA	4	4	4	4	0	0	0
OBSERVATIONS		Ne	Ne				
ANIMAL No. 2							
ERYTHEMA	4	4	4	Ne	CrDe	Cr	Cr
OEDEMA	4	4	4	4	0	0	0
OBSERVATIONS		Ne	Ne				
ANIMAL No. 3							
ERYTHEMA	4	4	3	2	1	0	0
OEDEMA	4	4	4	0	0	0	0
OBSERVATIONS					De	De	De

Ne = SUPERFICIAL NECROSIS

De = DESQUAMATION

Cr = CRUST

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE
INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL ALCOHOL [1]
SOURCE : FIRMENICH
SPECIFICATION :
CAS No. 100-51-6
Purity >99%
ßpec. No. 05377

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	1	1		
OEDEMA	0	1	0	0	0		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1	1	1	1	1		
OEDEMA	0	0	0	0	0		
OBSERVATIONS			Dvs	Dvs	De		
ANIMAL No. 3							
ERYTHEMA	1	2	1	1	0		
OEDEMA	0	1	0	0	0		
OBSERVATIONS				Des	Des		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED
Des = SLIGHT
Dvs = VERY SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.56

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL ALCOHOL [2]
SOURCE : FIRMENICH
SPECIFICATION :
CAS No. 100-51-6
Purity >99%
Spec. No. 05377

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	0	1	1	1	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1	1	2	2	1		
OEDEMA	0	1	1	0	0		
ANIMAL No. 3							
ERYTHEMA	0	1	1	1	0		
OEDEMA	0	1	0	0	0		
OBSERVATIONS		Des	Des	Des	Des		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1	1	0	0		

Des = SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.83$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CINNAMYL ALCOHOL [1]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 104-54-1
Purity 98.9%
Spec. No. 1173001

CONCENTRATION TESTED : 100%
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CINNAMYL ALCOHOL [2] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE WEIGHT TESTED : 0.5g
No. OF RABBITS : SIX
SPECIFICATION : EXPOSURE TIME : 4 hours

CAS No. 104-54-1
Purity 98.9%
Spec. No. 1173001

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		2	2	1	1	1		
OEDEMA		0	1	0	0	0		
OBSERVATIONS						Dvs		
ANIMAL No.	5							
ERYTHEMA		0	0	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	6							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

Dvs = VERY SLIGHT DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.5$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : dl-CITRONELLOL [1]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 106-22-9
Purity 98.7%
Spec. No. 4075001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	2		
OEDEMA	2	2	2	2	2		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	3	3	1		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	2		
OEDEMA	2	2	2	2	2		
OBSERVATIONS					De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.22$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : dl-CITRONELLOL [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 106-22-9
Purity 98.7%
Spec. No. 4075001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	3	3	2	1		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	3	3	1		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	2	1	1	1		
OBSERVATIONS						De		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	1	1	2	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.0$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : dl-CITRONELLOL [3]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 106-22-9
Purity 98.7%
Spec. No. 4075001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	1		
OEDEMA	1	2	2	2	1		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	1		
OEDEMA	1	2	2	2	1		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	0		
OEDEMA	1	2	1	1	0		
OBSERVATIONS			Des	Des	De*		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	2		
OEDEMA	1	2	1	1	2		
OBSERVATIONS					De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-DECANOL
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 112-30-1
Purity 98.8%
Spec. No. 1140001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0.5	2	2.5	2.5	1		
OEDEMA	0.5	2	2	2	0		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1	2	2.5	2.5	1		
OEDEMA	0	0.5	1	1	0		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1.5	2.5	2	2	2		
OEDEMA	0.5	1	1	1	0.5		
OBSERVATIONS					De		
ANIMAL No. 4							
ERYTHEMA	1.5	1.5	2	2	2		
OEDEMA	0	0.5	1	1	0.5		
OBSERVATIONS					De		

De = DESQUAMATION FROM THE SKIN (De* = MARKED)

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.33$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIHYDROMERCENOL # [1] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 53219-21-9
Purity >98%
Spec. No. 38618

: synonym 2-methyl-6-methylene-7-octen-2-ol

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	2		
OEDEMA	1	1	1	1	0		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	2		
OEDEMA	1	2	2	2	1		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	2	2	2	1		
OBSERVATIONS				De*	De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.67

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIHYDROMYRCENOL # [2] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 53219-21-9
Purity >98%
Spec. No. 38618

: synonym 2-methyl-6-methylene-7-octen-2-ol

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1	0	0	0		
OBSERVATIONS					Des	Des		
ANIMAL No.	2							
ERYTHEMA		1	1	1	1	1		
OEDEMA		0	0	0	0	0		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	1	0	0	0		
OBSERVATIONS					Des	De		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	1	1	0		
OBSERVATIONS						De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED
Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,6-DIMETHYL-4-HEPTANOL

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 108-82-7
Purity 90%
Product No. 29,297-4

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIPROPYLENE GLYCOL [1] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 26265-71-8
Purity >99%
Spec. No. 39416

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.33$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIPROPYLENE GLYCOL [2] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 25265-71-8
Purity >99%
Spec. No. 39416

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GERANIOL [1]

SOURCE : GIVAUDAN-ROURE

SPECIFICATION :
CAS No. 106-24-1
Purity 90.7%
Spec. No. 5414003

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	1		
OEDEMA	0	1	1	1	1		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	2	2	1		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	3	2	2	2	3		
OBSERVATIONS					De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.67$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GERANIOL [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 106-24-1
Purity 90.7%
Spec. No. 5414003

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	3	3	2		
OEDEMA	2	2	2	2	2		
OBSERVATIONS					Des		
ANIMAL No. 2							
ERYTHEMA	0	2	2	2	1		
OEDEMA	1	1	2	2	0		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	1	1	2	2	2		
OEDEMA	1	1	1	1	2		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	1		
OEDEMA	2	0	0	1	1		
OBSERVATIONS					De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.33$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GERANIOL [3]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 106-24-1
Purity 90.7%
Spec. No. 5414003

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	1	1		
OEDEMA	2	0	1	1	0		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1	1	1	0		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1	1	1	0		
OBSERVATIONS					Des		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	0		
OEDEMA	0	2	1	1	0		
OBSERVATIONS					De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.92$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GERANYL DIHYDROLINALOOL
CONCENTRATION TESTED : 100%

SOURCE : BEDOUKIAN
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 70851-60-4
Purity >90%
Spec. No. 418

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	1	1.5	1.5	1.5	0		
OEDEMA	0	0.5	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	1	1.5	1	1.5	0.5		
OEDEMA	1	1.5	0.5	1.5	0		
OBSERVATIONS				Dem	De		
ANIMAL No. 3							
ERYTHEMA	1.5	1.5	1.5	1	0.5		
OEDEMA	1	1.5	1.5	0.5	0		
OBSERVATIONS				De	De*		
ANIMAL No. 4							
ERYTHEMA	1	2	1.5	1	0		
OEDEMA	0	0.5	0.5	0.5	0		
OBSERVATIONS		Des	De	De	Des		

De = DESQUAMATION FROM THE SKIN (De* = MARKED
Des = SLIGHT
Dem = MINIMAL)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.25

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GERANYL LINALOOL
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 1113-21-9
Purity matches standard
Spec. No. 5469001

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	2	2	2	0.5		
OEDEMA		0.5	3	2	2	0		
ANIMAL No.	2							
ERYTHEMA		0.5	2	2	2	1		
OEDEMA		0	2.5	2.5	1.5	0.5		
OBSERVATIONS					Des	De		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2.5	2.5	2		
OEDEMA		0.5	2.5	2.5	2.5	1		
OBSERVATIONS						De		
ANIMAL No.	4							
ERYTHEMA		1.5	2	2.5	2.5	2		
OEDEMA		0	1.5	1.5	1.5	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.29$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alpha-IONOL
CONCENTRATION TESTED : 100%

SOURCE : BEDOUKIAN
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 25312-34-9
Purity 90-95%
Spec. No. 260

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	1.5	0.5	1	0		
OEDEMA		1	1	0.5	0.5	0		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		1	1	1	1	0.5		
OEDEMA		1	1.5	0.5	0.5	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	0.5	0		
OEDEMA		0	0	0.5	0	0		
OBSERVATIONS					Dem	Dem		
ANIMAL No.	4							
ERYTHEMA		0	1.5	0.5	0.5	0		
OEDEMA		0	0	0	0	0		
OBSERVATIONS					Dem	Des		

Des = SLIGHT DESQUAMATION FROM THE SKIN (Dem = MINIMAL)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.33

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : beta-IONOL
CONCENTRATION TESTED : 100%

SOURCE : BEDOUKIAN
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 22029-76-1
Purity 93.4%
Spec. No. 265

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0.5	1.5	1	1	0		
OEDEMA		0	1	0.5	0	0		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		0	1	1	1.5	0		
OEDEMA		1	1	1	0.5	0		
OBSERVATIONS					Dem			
ANIMAL No.	3							
ERYTHEMA		1	1.5	1.5	1	0.5		
OEDEMA		1	1.5	1	0.5	0		
OBSERVATIONS					De	De		
ANIMAL No.	4							
ERYTHEMA		0	1.5	1	0.5	0		
OEDEMA		0	0.5	0.5	0.5	0		
OBSERVATIONS						Des		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT
m = MINIMAL)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.88

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LINALOL [1]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 78-70-6
Purity 97.1%
Spec. No. 6623501

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	2	2	2		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	2		
OEDEMA	1	2	1	1	1		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	2	1	0		
OEDEMA	0	1	1	1	1		
OBSERVATIONS			De	De*	De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.33

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LINALOL [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 78-70-6
Purity 97.1%
Spec. No. 6623501

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	2	2	1	2		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	2	2	1	0		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	2		
OEDEMA		2	1	1	1	1		
OBSERVATIONS			Des	Des	Des	Des		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	2	1	1	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED
Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.42$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LINALOOL [3]
SOURCE : GIVAUDAN
SPECIFICATION :
CAS No. 78-70-6
Purity 97.1%
Spec. No. 6623501

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	0	0	0	0		
OBSERVATIONS					Des	Des		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1	1	1	0		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	0		
OEDEMA		0	0	1	1	0		
OBSERVATIONS						Des		
ANIMAL No.	4							
ERYTHEMA		1	2	2	1	0		
OEDEMA		0	0	0	0	0		
OBSERVATIONS						Des		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.08

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : p-MENTHA-1,8-DIEN-7-OL

SOURCE : IFF

SPECIFICATION :
CAS No. 536-59-4
Purity 94.6%

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1.5	2	2	2	1.5		
OEDEMA	0.5	0.5	1	1	0.5		
OBSERVATIONS					Des		
ANIMAL No. 2							
ERYTHEMA	1.5	2	2	2	2		
OEDEMA	1	2.5	2	1.5	0.5		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	1	1.5	2	2	1.5		
OEDEMA	0.5	0.5	1.5	2	2		
OBSERVATIONS					De		
ANIMAL No. 4							
ERYTHEMA	1.5	2	2	2	2		
OEDEMA	1.5	1.5	1	1	0.5		
OBSERVATIONS					De		

De = DESQUAMATION FROM THE SKIN (De* = MARKED
Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.29

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-METHYL-4-PHENYL-2-BUTANOL

CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

CAS No. 103-05-9
Purity 100%
Spec. No. 4596003

EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	0.5	1	1.5	2	1.5		
OEDEMA	0	0.5	0.5	1	0.5		
ANIMAL No. 2							
ERYTHEMA	0.5	2	2	1	0		
OEDEMA	0	0.5	0	0	0		
OBSERVATIONS			Dem	Des	De		
ANIMAL No. 3							
ERYTHEMA	0.5	1	1	1	0		
OEDEMA	0	0 5	0	0	0		
ANIMAL No. 4							
ERYTHEMA	0.5	0.5	1	1	0.5		
OEDEMA	0	0	0.5	0.5	0		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT
Dem = MINIMAL)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.58$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : PHENYLETHYL ALCOHOL [1] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 60-12-8
Purity 99.6%
Spec. No. 1246003

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	2	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	2	1	1	1		
OEDEMA		1	1	1	1	0		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	0		
OEDEMA		1	1	1	1	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.22$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : PHENYLETHYL ALCOHOL [2] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 60-12-8
Purity 99.6%
Spec. No. 1246003

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	1	1	0	0		
OBSERVATIONS						Des		
ANIMAL No.	3							
ERYTHEMA		0	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		1	1	0	0	0		
OEDEMA		0	0	0	0	0		

Des = SLIGHT DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.92$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoPROPANOL
SOURCE :
SPECIFICATION :
CAS No. 67-63-0
Purity 100%

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h	1d	2d	3d			
ERYTHEMA		1	2	2	1			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		1	1	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		1	1	0	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 0.78

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoSTEARYL ALCOHOL CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 27458-93-1
Purity -
Trade name PRISORINE 3515

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	6d		
ERYTHEMA		2	2	2	1	0		
OEDEMA		2	2	1	0	0		
ANIMAL No.	2							
ERYTHEMA		2	2	1	1	0		
OEDEMA		2	2	1	0	0		
ANIMAL No.	3							
ERYTHEMA		2	2	2	1	0		
OEDEMA		2	2	1	0	0		

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alphaTERPINEOL [1]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 98-55-5
Purity 98.4%
Spec. No. 9217001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0	1	2	2	1		
OEDEMA		1	2	2	2	1		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	3	2	2	1		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		2	2	2	3	3		
OEDEMA		2	3	3	3	3		
OBSERVATIONS						TDe*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE
TDe* = THICKENING AND MARKED DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alphaTERPINEOL [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 98-55-5
Purity 98.4%
Spec. No. 9217001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	3	3	3	1		
OBSERVATIONS					Des		
ANIMAL No. 2							
ERYTHEMA	2	2	3	3	2		
OEDEMA	3	3	3	3	3		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	3	2	3	3		
OBSERVATIONS					De*		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	1		
OEDEMA	2	2	2	1	0		
OBSERVATIONS					De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED
Des= SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animal s}} = 4.75$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alphaTERPINEOL [3]
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 98-55-5
Purity 98.4%
Spec. No. 9217001

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	1		
OEDEMA		2	3	3	2	0		
OBSERVATIONS						Des		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	2	2	2		
OBSERVATIONS						Des		
ANIMAL No.	3							
ERYTHEMA		1	2	2	1	0		
OEDEMA		0	1	1	0	0		
OBSERVATIONS				Des	Des	Des		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	1		
OEDEMA		1	3	3	3	1		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : paratertiaryBUTYL DIHYDROCINNAMALDEHYDE
CONCENTRATION TESTED : 100%

SOURCE : QUEST
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 18127-01-0
Purity 95.0
Spec. No. 02759

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0.5	0.5	1.5	0.5	0.5		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1.5	2	2	2	1.5		
OEDEMA		0.5	2	1	0.5	0		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1.5	1.5	1.5	0		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		0.5	2	1.5	1	0.5		
OEDEMA		0	1.5	0.5	0	0		
OBSERVATIONS						De		

De = DESQUAMATION FROM TREATED SKIN (De* = MARKED)

THE TREATED SKIN WAS STAINED YELLOW IN ANIMALS 1 & 2 AT 24, 48, 72 hr READINGS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.42$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoBUTYRALDEHYDE
CONCENTRATION TESTED : 100%

SOURCE : IFF
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 78-84-2
Purity 98%
Spec. No. -

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0.5	0.5	0	0		
OEDEMA		0.5	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0.5	0.5	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 0.13

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CINNAMALDEHYDE
SOURCE : IFF
SPECIFICATION :
CAS No. 104-55-2
Purity 98.4%
Spec. No. -

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		2	2	2	2	1		
OEDEMA		3	2	1.5	1.5	0.5		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		4	2	1.5	1.5	1		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	DEAD		
OEDEMA		4	2	1	1			
ANIMAL No.	4							
ERYTHEMA		2	2	2.5	2	2		
OEDEMA		4	2	2.5	1.5	1		

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.71$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CITRATHAL
SOURCE : QUEST
SPECIFICATION :
CAS No. 147060-73-9
Purity -
Spec. No. 41415

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	1.5		
OEDEMA	2	2.5	2.5	2.5	2.5		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	1		
OEDEMA	1	2	2	2	1.5		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	2	2	2	1.5	1		
OEDEMA	1	2	1.5	0.5	0.5		
OBSERVATIONS					De*		
ANIMAL No. 4							
ERYTHEMA	1.5	2	2	2	0		
OEDEMA	2	1.5	0.5	0.5	0		
OBSERVATIONS					De		

De = DESQUAMATION FROM THE SKIN (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.63

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CYCLAMEN ALDEHYDE # [1] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 103-95-7
Purity >98
Spec. No. 37174

: synonym for 2-methyl-3-(p-isopropylphenyl)propionaldehyde

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	3	3	2		
OEDEMA		0	3	3	3	2		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	2		
OEDEMA		1	3	3	3	1		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	2		
OEDEMA		1	2	3	3	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 5.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CYCLAMEN ALDEHYDE # [2] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 103-95-7
Purity >98
Spec. No. 37174

: synonym for 2-methyl-3-(p-isopropylphenyl)propionaldehyde

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	3	2	2	2		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	2		
OEDEMA		2	2	3	3	1		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	2		
OEDEMA		2	2	2	2	2		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	2	2	1	0		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 4.17

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CYCLAMEN ALDEHYDE # [3] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 103-95-7
Purity >98
Spec. No. 37174

: synonym for 2-methyl-3-(p-isopropylphenyl)propionaldehyde

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	2		
OEDEMA		0	2	3	3	2		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	1		
OEDEMA		0	2	3	3	1		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	1		
OEDEMA		1	3	2	2	0		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		1	2	3	3	2		
OEDEMA		0	3	3	3	2		
OBSERVATIONS						De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY
IRRITATION = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 4.83
INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CYCLAMEN ALDEHYDE # [4] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 103-95-7
Purity >98
Spec. No. 37174

: synonym for 2-methyl-3-(p-isopropylphenyl)propionaldehyde

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1	2	1	0		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1	1	1	0		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	2	2	2	0		
OBSERVATIONS					Des	De*		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	2		
OEDEMA		0	2	1	1	1		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.42$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,4-DECADIENAL

SOURCE : IFF

SPECIFICATION :
CAS No. 2363-88-4
Purity 96.5%
Spec. No. -

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	2.5		
OEDEMA	2.5	2.5	2.5	1	1		
ANIMAL No. 2							
ERYTHEMA	2	2.5	2.5	2.5	3		
OEDEMA	4	3	3	2.5	3		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	DEAD		
OEDEMA	2.5	2.5	2.5	2			
ANIMAL No. 4							
ERYTHEMA	2	2.5	2.5	2.5	3		
OEDEMA	3.5	3.5	3	2.5	2.5		

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.79$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,4-DIMETHYL-3-CYCLO-HEXEN-1-CARBOXALDEHYDE

CONCENTRATION TESTED : 100%

SOURCE : IFF

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 68039-49-6

Purity 99.0%

Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	1		
OEDEMA		0	1	1	0.5	0		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2.5	1.5		
OEDEMA		2	1	1.5	1	0.5		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	1.5		
OEDEMA		2	1.5	1	1	0.5		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	1.5	1	0.5		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.21$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 3,7-DIMETHYL-2,6-NONADIEN-1-AL
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 41448-29-7
Purity matches standard
Spec. No. 4941001

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	3		
OEDEMA	3	1.5	1.5	1.5	1.5		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	3.5	2	1.5	1	0.5		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	3		
OEDEMA	4	1.5	2	2	2		
ANIMAL No. 4							
ERYTHEMA	2	2	2	2	2.5		
OEDEMA	3	2.5	2	2	1.5		

De = DESQUAMATION FROM THE SKIN

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.75$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,4-DIMETHYL-TETRAHYDROBENZALDEHYDE
CONCENTRATION TESTED : 100%

SOURCE : QUEST
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 68737-61-1
Purity -
Spec. No. 05668

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1.5	2	0.5	0	0.5		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		0.5	1.5	1.5	1.5	0.5		
OEDEMA		0.5	0	0.5	0	0		
OBSERVATIONS						DesH		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2		
OEDEMA		20.5	1.5	1	1	0.5		
ANIMAL No.	4							
ERYTHEMA		0.5	2	2	2	2Des		
OEDEMA		1	1	1.5	1.5	0.5		
OBSERVATIONS						Des		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT)

H = SKIN HARDENING

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.75

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-ETHYLHEXANAL
CONCENTRATION TESTED : 100%

SOURCE : IFF
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 123-05-7
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1.5	2.5	2.5	2.5	0		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		0.5	2	2	2	1		
OEDEMA		0.5	1.5	2	2	0		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2	2	0.5		
OEDEMA		0.5	2.5	1.5	1	0		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		1.5	2	2	2	0.5		
OEDEMA		1	1.5	1.5	1.5	0		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.88$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HEPTANAL
SOURCE : IFF
SPECIFICATION :
CAS No. 111-71-7
Purity 95.0%
Spec. No. -

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1.5	3.5	3.5	3.5	3.5		
OEDEMA	0.5	2	2	2	2		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1.5	3.5	3.5	3.5	3.5		
OEDEMA	1.5	2.5	2	1.5	1.5		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	3	3H	3		
OEDEMA	1	3	2.5	2.5	2		
OBSERVATIONS					De*		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2.5	2.5		
OEDEMA	0.5	1.5	1.5	1.5	2		
OBSERVATIONS					De		

De = DESQUAMATION FROM THE SKIN (De* = MARKED)

H = SKIN HARDENED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : t,t-2,4-HEXADIENAL
SOURCE : BEDOUKIAN
SPECIFICATION :
CAS No. 142-83-6
Purity -
Spec. No. 360

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	3	4	4	4		
OEDEMA	4	3	3	4	2		
OBSERVATIONS	B	HB	HB	B			
ANIMAL No. 2							
ERYTHEMA	2	3	4	4	4		
OEDEMA	4	4	4	4	-		
OBSERVATIONS	B	HB	B		Pi		
ANIMAL No. 3							
ERYTHEMA	2.5	3	4	4	4		
OEDEMA	4	3	3	3	-		
OBSERVATIONS	B	B	B		Pi		
ANIMAL No. 4							
ERYTHEMA	2	3	3	4	4		
OEDEMA	4	4	4	3	2		
OBSERVATIONS	B	HB	HB				

\- = ASSESSMENT NOT POSSIBLE

H = SKIN HARDENED

B = THE TREATED SKIN WAS STAINED BROWN

Pi = TREATED SKIN PITTED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 7.08$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alphaHEXYLCINNAMIC ALDEHYDE [1]

SOURCE : GIVAUDAN-ROURE

SPECIFICATION :
CAS No. 101-86-0
Purity 91.9%
Spec. No. 1320001

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	2	2	2	1		
OEDEMA		2	2	2	2	1		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	3	3	2	2		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	2		
OEDEMA		1	2	1	1	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 4.0

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alphaHEXYLCINNAMIC ALDEHYDE [2]

CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 101-86-0
Purity 91.9%
Spec. No. 1320001

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	1		
OEDEMA	2	2	2	1	0		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	2	2	1		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	3	2	2	2		
ANIMAL No. 4							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	2	2	2		
OBSERVATIONS					De*		

De = DESQUAMATION FROM SKIN SURFACE (* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alphaHEXYLCINNAMIC ALDEHYDE [3]

CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

CAS No. 101-86-0
Purity 91.9%
Spec. No. 1320001

EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	0	1	2	1	0		
OEDEMA	0	0	0	0	0		
OBSERVATIONS			Des	Des	Des		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1	1	1	1		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	0		
OEDEMA	0	1	1	1	0		
OBSERVATIONS					De*		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	0		
OEDEMA	0	1	1	1	0		
OBSERVATIONS					Des		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.58

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HYDROXYCITRONELLAL [1] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 107-75-5
Purity 98.7%
Spec. No. 5920003

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		2	1	1	1	0		
OEDEMA		1	1	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	1	1	1	1		
OEDEMA		0	1	0	0	0		
OBSERVATIONS						Des		
ANIMAL No.	3							
ERYTHEMA		1	1	1	0	0		
OEDEMA		1	0	0	0	0		

Des = SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HYDROXYCITRONELLAL [2] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 107-75-5
Purity 98.7%
Spec. No. 5920003

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	1	0		
OEDEMA		0	1	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	1	1	0	0		
OEDEMA		0	0	0	0	0		
OBSERVATIONS						Dvs		
ANIMAL No.	4							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		

Dvs = VERY SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 0.92

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LILESTRALIS/LILIAL #[1] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 80-54-6
Purity 97.8%
Spec. No. 6580003

: tradenames for p-t-butyl-alpha-methylhydrocinnamic aldehyde

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	1	2	2	1		
OEDEMA		1	2	2	2	0		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	3	3	2		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	3	2		
OEDEMA		2	3	3	3	2		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LILESTRALIS/LILIAL #[2] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 80-54-6
Purity 97.8%
Spec. No. 6580003

: tradenames for p-t-butyl-alpha-methylhydrocinnamic aldehyde

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	2		
OEDEMA		1	2	2	1	1		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		1	1	2	2	2		
OEDEMA		2	1	2	2	1		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	3	2	2	0		
OBSERVATIONS						De		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	1	1	1	1		
OBSERVATIONS						Des		

De = DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.58$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 3-METHYLBUTYRALDEHYDE CONCENTRATION TESTED : 100%

SOURCE : BEDOUKIAN VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 590-86-3
Purity >98.5%
Spec. No. 290

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	1		
OEDEMA		2	2.5	2	1.5	0.5		
ANIMAL No.	2							
ERYTHEMA		1	2	2	1.5	0.5		
OEDEMA		2	1.5	1.5	1	0		
ANIMAL No.	3							
ERYTHEMA		1	2	1	0.5	1		
OEDEMA		1	1	0	0	1		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		1	1	1	2	0.5		
OEDEMA		1	1	1.5	1.5	0		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 2.83$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,5-METHYLENE-6-PROPYL -3-CYCLOHEXENCARBALDEHYDE # CONCENTRATION TESTED : 100%

SOURCE : QUEST VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 39067-39-5
Purity >92.0%
Spec. No. 04471

synonym for 3-propylbicyclo[2.2.1]hept-5-ene-2-carboxaldehyde

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	1.5	1.5	0.5		
OEDEMA		1	0.5	0	0	0		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1.5	2	2	2	0.5		
OEDEMA		2.5	1.5	0.5	0.5	0		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2	2	1		
OEDEMA		0.5	1.5	0.5	0.5	0		
OBSERVATIONS						T		
ANIMAL No.	4							
ERYTHEMA		0.5	2	2	1.5	0.5		
OEDEMA		1.5	1.5	0.5	0	0		
OBSERVATIONS						De		

De = DESQUAMATION FROM TREATED SKIN (De* = M,ARKED)

T = SKIN THICKENING

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.42

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : NONANAL
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 124-19-6
Purity 98.9%
Spec. No. 1358583

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0.5	2	2	2	2		
OEDEMA		0.5	1	1	1.5	1.5		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1.5	2	2	2	2		
OEDEMA		1	1	1.5	1.5	1.5		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	2		
OEDEMA		1.5	0.5	1	1.5	1		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		0.5	2	2	2.5	3.5		
OEDEMA		2.5	2.5	2	2	2		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM THE SKIN

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.46$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-PHENYLPROPION-ALDEHYDE

SOURCE : GIVAUDAN-ROURE

SPECIFICATION :
CAS No. 93-53-8
Purity 98.4%
Spec. No. 1557001

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0.5	2	2	2	0.5		
OEDEMA	0	1	0.5	0	0		
OBSERVATIONS					Des		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	0.5		
OEDEMA	0.5	1	1	0.5	0.5		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	0.5		
OEDEMA	0 0	0.5	0.5	0.5	0		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	2		
OEDEMA	2	2	2	1.5	1.5		
OBSERVATIONS					De*		

De = DESQUAMATION FROM THE SKIN (De* = MARKED
Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.92

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : p-isoPROPYLPHENYL-ACETALDEHYDE

CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 4395-92-0
Purity >97%
Spec. No. 13042

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	1.5	1.5	1.5	1.5		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		1	1	0.5	0.5	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1.5	0.5	0.5	0		
OEDEMA		0	1	0	0	0		
ANIMAL No.	4							
ERYTHEMA		1.5	2	2	1.5	1.5		
OEDEMA		1.5	2.5	2	1.5	0.5		

De = DESQUAMATION FROM THE SKIN

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.29$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SALICYLALDEHYDE
CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 90-02-8
Purity >98%
Spec. No. 08132

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	2	2	2	2	2.5		
OEDEMA	4	2.5	1	1	1.5		
ANIMAL No. 2							
ERYTHEMA	2	2	1.5	1.5	2		
OEDEMA	3	1.5	1	1	0.5		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	1	1	0.5	0		
OEDEMA	0.5	0.5	0	0	0		
ANIMAL No. 4							
ERYTHEMA	2	2	1.5	1.5	1.5		
OEDEMA	2	1.5	1	1	0.5		
OBSERVATIONS					De		

De = DESQUAMATION FROM THE SKIN

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.54

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TETRAHYDRO GERANIAL # CONCENTRATION TESTED : 100%

SOURCE : QUEST VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 5988-91-0
Purity -
Spec. No. 09419

: synonym for 3,7-dimethyl octanal

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0.5	2	2	2	2		
OEDEMA		1	1	0.5	0.5	0.5		
ANIMAL No.	2							
ERYTHEMA		0.5	1.5	1.5	1.5	1		
OEDEMA		0	0	0.5	0.5	0.5		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2	2	1.5		
OEDEMA		0	1.5	1	0.5	0		
ANIMAL No.	4							
ERYTHEMA		0.5	2	2	2	2		
OEDEMA		0.5	0.5	1	1	1		

De = DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.58$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 4-TRICYCLO-DECYLINDENE -8-BUTANAL
CONCENTRATION TESTED : 100%
SOURCE : QUEST
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 30168-23-1
Purity >90.0%
Spec. No. 05481

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1.5	0.5	0	0		
OBSERVATIONS					DeT		
ANIMAL No. 2							
ERYTHEMA	1.5	3	2.5	2	2		
OEDEMA	1	3	0.5	0	0		
OBSERVATIONS					T		
ANIMAL No. 3							
ERYTHEMA	0.5	1.5	2	2	1.5		
OEDEMA	1	3	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 4							
ERYTHEMA	1.5	2.5	2	2	2		
OEDEMA	2	2	1.5	1	1		
OBSERVATIONS					T		

De = DESQUAMATION FROM TREATED SKIN

T = SKIN THICKENING

THE TREATED SKIN WAS STAINED YELLOW IN ANIMALS 1, 2, & 4 FROM 24 hr ON

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.29$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHACROLEIN
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 78-85-3
Purity 97%
Product No. 13,303-5

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		30mn	1d	2d	3d	6d	9d	13d
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	2	4	4
OEDEMA		2	2	2	2	2	2	2
OBSERVATIONS				Bl	Bl	Bl	Ne	Ne
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2	4	4
OEDEMA		2	3	3	1	1	1Ne	1Ne
OBSERVATIONS					Bl	Bl	Bl Ne	Bl Ne
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2	4	4
OEDEMA		2	2	2	2	1	2Ne	2Ne
OBSERVATIONS					Bl	Bl	Bl Ne	Bl Ne

Bl = BLANCHING

Ne = NECROSIS

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 4.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : POTASSIUM HYDROXIDE CONCENTRATION TESTED : 5%aq

SOURCE : MALLINDKRODT VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 1310-58-3
Purity REAGENT GRADE
Product No. Lot 6984

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h	1d	2d	3d			
ERYTHEMA		2	3	3	3			
OEDEMA		1	2	2	2			
ANIMAL No.	2							
ERYTHEMA		2	3	3	3			
OEDEMA		1	2	2	2			
OBSERVATIONS		Ex	Ex	Ex	Ex			
ANIMAL No.	3							
ERYTHEMA		3	3	4	4			
OEDEMA		2	2	2	2			
OBSERVATIONS		Ex	Ex	Ex	Ex			

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.22$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : POTASSIUM HYDROXIDE
SOURCE : MALLINDKRODT
SPECIFICATION :
CAS No. 1310-58-3
Purity REAGENT GRADE
Product No. Lot 6984

CONCENTRATION TESTED : 10%aq
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h						
ERYTHEMA		NeEx						
OEDEMA		Sev						
ANIMAL No.	2							
ERYTHEMA		NeEx						
OEDEMA		Sev						
ANIMAL No.	3							
ERYTHEMA		NeEx						
OEDEMA		Sev						

Ne = NECROSIS

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

Sev = NOT EVALUATED DUE TO SEVERITY OF EFFECTS

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM BICARBONATE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
WEIGHT TESTED : 0.3g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 144-55-8
Purity 99.7%
Product No. 23652-7

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1d	2d	3d	7d	14d		
ERYTHEMA		1	0	0				
OEDEMA		0	0	0				
ANIMAL No.	2							
ERYTHEMA		0	0	0				
OEDEMA		0	0	0				
ANIMAL No.	3							
ERYTHEMA		0	0	0				
OEDEMA		0	0	0				

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 0.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM CARBONATE
CONCENTRATION TESTED : 50%aq

SOURCE :
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE

SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 497-19-8
Purity 100%

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h	1d	2d	3d			
ERYTHEMA		0	2	2	2			
OEDEMA		0	1	1	1			
OBSERVATIONS			Ex	Ex	Ex			
ANIMAL No.	2							
ERYTHEMA		1	1	1	1			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		2	2	2	2			
OEDEMA		1	1	1	1			

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.33$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM METASILICATE
CONCENTRATION TESTED : 10%aq

SOURCE : FISHER SCIENTIFIC
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 6834-92-0
Purity REAGENT GRADE
Product No. Lot 704631

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h	1d	2d	3d			
ERYTHEMA		2	1	1	1			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		2	1	1	1			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		2	2	1	1			
OEDEMA		1	1	0	0			

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.22

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM METASILICATE
SOURCE : FISHER SCIENTIFIC
SPECIFICATION :
CAS No. 6834-92-0
Purity REAGENT GRADE
Product No. Lot 704631

CONCENTRATION TESTED : 50%aq
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	4½h	1d	2d	3d			
ERYTHEMA	3	4	4	4			
OEDEMA	2	3	3	3			
OBSERVATIONS	Ex	Ex	Ex	Ex			
ANIMAL No. 2							
ERYTHEMA	2	2	2	2			
OEDEMA	1	1	1	1			
OBSERVATIONS	Ex	Ex	Ex	Ex			
ANIMAL No. 3							
ERYTHEMA	1	1	1	1			
OEDEMA	0	0	0	0			

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ERUCAMIDE

SOURCE :

SPECIFICATION :
CAS No. 112-84-5
Purity -
Trade name UNISLIP 1753

CONCENTRATION TESTED : 100%

WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIETHYLAMINO-PROPYLAMINE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 104-78-9
Purity 99.8%
Product No. D8,920-4

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : ONE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	4d		
ERYTHEMA	Ne	Ne	Ne	Ne	SACRIFICED		
OEDEMA	0	0	0	0			

Ne = NECROSIS

COMMENTS :
TISSUE NECROSIS WAS OBSERVED AT THE PATCH SITE

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : N,N-DIMETHYL-BENZYLAMINE

SOURCE : BAYER AG

SPECIFICATION :
CAS No. 103-83-3
Purity 99.34%
Batch No. 419311

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		4	4	SACRIFICED				
OEDEMA		2	1					
ANIMAL No.	2							
ERYTHEMA		4	4	SACRIFICED				
OEDEMA		1	1					
ANIMAL No.	3							
ERYTHEMA		4	4	SACRIFICED				
OEDEMA		1	1					

THE SEVERE SKIN REATIONS WERE "DEEP RED TO BLACK INJURIES"

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIMETHYL-n-BUTYLAMINE CONCENTRATION TESTED : 100%

SOURCE : ALDRICH VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 927-62-8
Purity 99.5%
Product No. 36,952-7

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	14d	15d
ANIMAL No.	1							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		1	1	1	1	1	0	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	2							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		1	1	1	1	1	0	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	3							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		1	1	1	1	1	0	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	4							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		2	2	1	1	1	0	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	5							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	2	1	1	2	0	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	6							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		2	1	1	1	1	1	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	

Bu = BURNS; Sc = SCABS; SACD = SACRIFICED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 5.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIMETHYLisoPROPYLAMINE CONCENTRATION TESTED : 100%

SOURCE : ALDRICH VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 996-35-0
Purity 99.6%
Product No. 34,398-6

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	14d	15d
ANIMAL No.	1							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		1	2	1	1	1	1	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	2							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		1	2	2	2	1	1	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	3							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		1	2	1	1	1	1	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	4							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		2	2	1	1	1	1	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	5							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	3	2	2	2	2	
OBSERVATIONS		Bu	Bu	Bu	Bu	Sc	Sc	
ANIMAL No.	6							
ERYTHEMA		4	4	4	4	DEAD		
OEDEMA		2	2	1	1			
OBSERVATIONS		Bu	Bu	Bu	Bu			

Bu = BURNS; Sc = SCABS; SACD = SACRIFICED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.61$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIMETHYLDIPROPYLENE-TRIAMINE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 10563-29-8
Purity 99.5%

FOUR HOUR EXPOSURE

	OBSERVATION INTERVAL (days)						
	1h	1d	2d				
ANIMAL No. 1							
ERYTHEMA	Ne	Ne	SACRIFICED				
OEDEMA	2	2					
ANIMAL No. 2							
ERYTHEMA	Ne	Ne	SACRIFICED				
OEDEMA	4	4					
ANIMAL No. 3							
ERYTHEMA	Ne	Ne	SACRIFICED				
OEDEMA	4	4					

Ne = NECROSIS

COMMENTS:
APPLICATION FOR 4 HOURS RESULTED IN TISSUE DESTRUCTION OF THE WHOLE DEPTH OF THE SKIN AND THE ANIMALS WERE SACRIFICED FOR HUMANITARIAN REASONS.

THREE MINUTES EXPOSURE

	1hr	1d	2d	3d	7d	10d	14d
ANIMAL No. 4							
ERYTHEMA	Ne	Ne	Ne	Ne	Ne	Ne	Ne
OEDEMA	2	2	0	0	0	0	0

Ne = NECROSIS

COMMENTS :
FOLLOWING APPLICATION FOR 3 MINUTES, SEVERE ERYTHEMA TO SLIGHT ESCHAR FORMATION WAS OBSERVED AFTER 1 HOUR AND THEN WAS IRREVERSIBLE OVER 14 DAYS. SLIGHT OEDEMA (GRADE 2) WAS OBSERVED AFTER 1 DAY.

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,4-DINITRO-N-METHYL-ANILINE
CONCENTRATION TESTED : 100%

SOURCE : HOECHST AG
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 2044-88-4
Purity 99.0%

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : n-HEPTYLAMINE
CONCENTRATION TESTED : 100%

SOURCE : SIGMA
VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 111-68-2
Purity 99.5%
Product No. H 3750

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d	14d	15d
ANIMAL No. 1							
ERYTHEMA	4	4	4	4	4	4	SACD
OEDEMA	4	3	3	1	2	2	
OBSERVATIONS	Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No. 2							
ERYTHEMA	4	4	4	4	4	4	SACD
OEDEMA	4	4	2	1	1	1	
OBSERVATIONS	Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No. 3							
ERYTHEMA	4	4	4	4	4	4	SACD
OEDEMA	4	4	2	1	1	1	
OBSERVATIONS	Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No. 4							
ERYTHEMA	4	4	4	4	4	4	SACD
OEDEMA	4	4	3	1	2	1	
OBSERVATIONS	Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No. 5							
ERYTHEMA	4	4	4	4	4	4	SACD
OEDEMA	4	4	4	1	2	2	
OBSERVATIONS	Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No. 6							
ERYTHEMA	4	4	4	4	4	4	SACD
OEDEMA	4	4	4	2	2	1	
OBSERVATIONS	Bu	Sc	Sc	Sc	Sc	Sc	

Bu = BURNS; Sc = SCABS; SACD = SACRIFICED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 6.67

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHOXY-3-PROPYLAMINE CONCENTRATION TESTED : 100%

SOURCE : ALDRICH VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 5332-73-0
Purity >99%
Product No. M2,500-7

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	14d	15d
ANIMAL No.	1							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	3	3	1	2	1	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	2							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	4	4	2	2	2	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	3							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	3	3	1	2	2	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	4							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	4	4	1	2	2	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	5							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	4	3	1	2	2	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	
ANIMAL No.	6							
ERYTHEMA		4	4	4	4	4	4	SACD
OEDEMA		3	3	3	1	2	2	
OBSERVATIONS		Bu	Sc	Sc	Sc	Sc	Sc	

Bu = BURNS; Sc = SCABS; SACD = SACRIFICED

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 6.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : OLEYL PROPYLENE DIAMINE DIOLEATE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 40027-38-1
Purity unknown
Trade Name INILOP 002

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	10d	12d
ERYTHEMA	2	2	3	4	2	0	0
OEDEMA	2	3	3	4	2	0	0
OBSERVATIONS					Dr	Dr	
ANIMAL No. 2							
ERYTHEMA	1	2	2	1	0		
OEDEMA	1	1	1	0	0		
OBSERVATIONS					Dr		
ANIMAL No. 3							
ERYTHEMA	2	2	2	1	0	0	0
OEDEMA	0	1	1	0	0	0	0
OBSERVATIONS					Dr	Dr	

Dr = DRYNESS OF THE SKIN

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.67$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HYDROGENATED TALLOW AMINE

CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM

WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 61788-45-2
Purity >95%
Trade Name NORAM SH

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	6d	9d	
ERYTHEMA	2	3	2	2	1		
OEDEMA	4	4	2	2	1		
OBSERVATIONS					Dr		
ANIMAL No. 2							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			
ANIMAL No. 3							
ERYTHEMA	2	3	3	3	2	0	
OEDEMA	2	3	3	2	0	0	
OBSERVATIONS					Dr		

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HYDROGENATED TALLOW PROPYLENE DIAMINE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
WEIGHT TESTED : 0.5g
No. OF RABBITS : SIX
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 68603-64-5
Purity >85%
Trade Name DINORAM SH

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	4							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	5							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	6							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TALLOW POLYPROPYLENE POLYAMINE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 3 mins

SPECIFICATION :
CAS No. 68911-79-5
Purity >95%
Trade name POLYRAM S

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d	10d	
ERYTHEMA		1	2	2	2	Dr	0	
OEDEMA		0	2	1	1	0	0	
ANIMAL No.	2							
ERYTHEMA		0	1	1	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	1	0	
OEDEMA		0	2	2	2	0	0	

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.67

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TALLOW POLYPROPYLENE POLYAMINE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 1 hour

SPECIFICATION :
CAS No. 68911-79-5
Purity >95%
Trade name POLYRAM S

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d	8d	10d
ANIMAL No. 1							
ERYTHEMA	1	2	2	0	0	0	0
OEDEMA	2	4	4	3	2	1	0
OBSERVATIONS				Dr	Dr	Dr	
ANIMAL No. 2							
ERYTHEMA	3	4	4	3	CrDr	0	
OEDEMA	1	4	4	3	2	0	
OBSERVATIONS		Dr	Dr	Dr			
ANIMAL No. 3							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			

Dr = DRYNESS OF THE SKIN

Cr = CRUST

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 4.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TALLOW AMINE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 3 MINS
CAS No. 61790-33-8
Purity Technical grade, >95%
Trade name. NORAM S

THREE MINUTES EXPOSURE

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	4d	7d	13d
ERYTHEMA	2	3	XE	XE	XE	Ne	Ne
OEDEMA	4	4	4	4	4	4	XO
OBSERVATIONS		wd			Dr	rc Dr	rc Dr
ANIMAL No. 2							
ERYTHEMA	1	3	XE	XE	XE	Ne	Ne
OEDEMA	4	4	4	4	4	4	XO
OBSERVATIONS		wd	Dr	Dr	Dr	rc Dr	rc Dr
ANIMAL No. 3							
ERYTHEMA	2	3	XE	XE	XE	rc	rc
OEDEMA	4	4	4	4	4	4	XO
OBSERVATIONS		wd				Dr	Dr

wd = WHITE DISCOLORATION

rc = RED COLORATION OF THE SKIN

Dr = DRYNESS OF THE SKIN

XE = ERYTHEMA NOT SCORABLE DUE TO WHITE DISCOLORATION

XO = OEDEMA NOT SCORABLE DUE TO DRYNESS OF SKIN

Ne = NECROSIS

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,4-XYLIDINE
SOURCE : BAYER AG
SPECIFICATION :
CAS No. 95-68-1
Purity 98.1%
Batch No. 048824-04

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	30mn	1d	2d	3d	4d	5d	
ERYTHEMA	2	1	1	1	0	0	
OEDEMA	2	1	1	0	0	0	
ANIMAL No. 2							
ERYTHEMA	2	1	1	1	1	0	
OEDEMA	1	1	1	0	0	0	
ANIMAL No. 3							
ERYTHEMA	2	1	1	1	0	0	
OEDEMA	2	0	0	0	0	0	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ALLYL BROMIDE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 106-95-6
Purity 99%
Product No. A2,958-5

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 3 mins
OR 4 hours

3 MINUTE APPLICATION

ANIMAL No. 1	OBSERVATION INTERVAL (days) 1h	1d	2d	3d	7d	10d	14d
ERYTHEMA	2	2	3	3	3		
OEDEMA	2	0	0	0	0		
OBSERVATIONS				Dr	Dr		

4 HOUR APPLICATION

ANIMAL No. 2							
ERYTHEMA	3	4	4	4	4	Cr	Cr
OEDEMA	2	2	3	3	0	0	0
OBSERVATIONS					Cr		

ANIMAL No. 3							
ERYTHEMA	3	4	4	4	TD obs'd day 5		
OEDEMA	3	3	4	4	SAC day 6		

Dr = DRYNESS OF THE SKIN

Cr = CRUST

TD = TISSUE DESTRUCTION

SAC = SACRIFICE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 7.17$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-BROMOBUTANE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 78-76-2
Purity >99.0%
Product No. B5,950-0

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (DAYS)						
		1h	1d	2d	3d	5d	7d	14d
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	2	0	
OEDEMA		0	0	0	0	0	0	
OBSERVATIONS						Dr	Dr	
ANIMAL No.	2							
ERYTHEMA		2	2	2	1	1	0	0
OEDEMA		2	2	1	0	0	0	0
OBSERVATIONS						Dr	Dr	Dr
ANIMAL No.	3							
ERYTHEMA		2	2	2	1	1	0	0
OEDEMA		4	2	1	0	0	0	0
OBSERVATIONS							Dr	Dr

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-BROMO-4-CHLORO-BUTANE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 6940-78-9
Purity 98.0%
Product No. B6,080-0

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-BROMO-2-CHLORO-ETHANE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 107-04-0
Purity 98%
Product No. 23,275-0

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	6d	10d	14d
ANIMAL No. 1							
ERYTHEMA	2	2	1	1	0	0	0
OEDEMA	0	2	0	0	0	0	0
OBSERVATIONS					Dr	Dr	Dr
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	1	0	0
OEDEMA	2	2	0	0	0	0	0
OBSERVATIONS					Dr	Dr	Dr
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	0		
OEDEMA	0	1	0	0	0		
OBSERVATIONS					Dr		

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.33 INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-BROMO-4-FLUORO-BENZENE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 460-00-4
Purity 99.8%
Product No. B6720-1

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	4d		
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.33$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-BROMOHEXANE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 111-25-1
Purity >98.5%
Product No. B6,824-0

		OBSERVATION INTERVAL (DAYS)						
		1h	1d	2d	3d	5d	7d	15d
ANIMAL No.	1							
ERYTHEMA		0	2	3	3	2	0	0
OEDEMA		0	0	0	0	0	0	0
OBSERVATIONS						Dr	Dr	Dr
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2	0	0
OEDEMA		4	4	2	2	0	0	0
OBSERVATIONS						Dr	Dr	Dr
ANIMAL No.	3							
ERYTHEMA		1	2	3	3	2	0	0
OEDEMA		2	2	2	2	0	0	0
OBSERVATIONS						Dr	Dr	Dr

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-BROMOPENTANE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 110-53-2
Purity 99%
Product No. 11,781-1

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	5d	7d	14d
ERYTHEMA	2	3	4	4	2	0	0
OEDEMA	4	4	2	2	0	0	0
OBSERVATIONS				Dr	Dr	Dr	Dr
ANIMAL No. 2							
ERYTHEMA	2	2	2	1	0	0	
OEDEMA	2	0	0	0	0	0	
OBSERVATIONS					Dr	Dr	
ANIMAL No. 3							
ERYTHEMA	2	2	3	3	2	0	0
OEDEMA	1	0	4	4	0	0	0
OBSERVATIONS					Dr	Dr	Dr

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-BROMOPROPANE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 75-26-3
Purity 99%
Product No. B7,811-4

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	4d	7d	10d
ANIMAL No.	1							
ERYTHEMA		2	2	2	1	1	0	0
OEDEMA		0	0	0	0	0	0	0
OBSERVATIONS							Dr	
ANIMAL No.	2							
ERYTHEMA		2	2	1	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		2	2	2	1	1	0	
OEDEMA		0	0	0	0	0	0	
OBSERVATIONS						Dr		

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,6-DIBROMOHEXANE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 629-03-8
Purity 98.4%
Product No. D4,100-7

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		0	1	1	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		1	2	1	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		2	2	1	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.89$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,3-DIBROMOPROPANE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 109-64-8
Purity 98.4%
Product No. 12,590-3

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	5d	6d	7d
ANIMAL No. 1							
ERYTHEMA	1	2	2	2	0	0	0
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	
ANIMAL No. 2							
ERYTHEMA	1	2	2	1	0	0	
OEDEMA	0	0	0	0	0	0	
OBSERVATIONS					Dr		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	0	0	
OEDEMA	0	0	0	0	0	0	
OBSERVATIONS					Dr		

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.89$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : PHENETHYL BROMIDE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 103-63-9
Purity 99.5%
Product No. B6,578-0

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d			
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			
ANIMAL No. 2							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			
ANIMAL No. 3							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DICHLOROMETHANE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 75-09-2
Purity >99.95%
Product No. D,6510-0

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	9d	16d	
ERYTHEMA	1	4	4	4	4	0	
OEDEMA	2	2	1	1	1	0	
ANIMAL No. 2							
ERYTHEMA	4	4	4	4	1	1	
OEDEMA	1	2	1	2	1	0	
ANIMAL No. 3							
ERYTHEMA	2	4	4	4	4	1	
OEDEMA	2	2	2	2	1	1	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TETRACHLOROETHYLENE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 127-18-4
Purity >99.95%
Product No. T750-0

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	9d	16d	
ERYTHEMA	2	4	4	4	4	1	
OEDEMA	1	3	1	2	1	0	
ANIMAL No. 2							
ERYTHEMA	1	4	4	4	2	1	
OEDEMA	2	2	1	2	1	0	
ANIMAL No. 3							
ERYTHEMA	1	4	4	4	4	2	
OEDEMA	2	2	1	1	1	2	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,1,1-TRICHLORO-ETHANE

CONCENTRATION TESTED : 100%

SOURCE : ALDRICH

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 71-55-6
Purity >99.95%
Product No. 29,899-9

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	9d	16d	
ERYTHEMA		2	4	4	4	4	0	
OEDEMA		2	2	2	2	1	0	
ANIMAL No.	2							
ERYTHEMA		2	4	4	4	0	1	
OEDEMA		2	2	1	1	1	0	
ANIMAL No.	3							
ERYTHEMA		1	4	4	1	0	0	
OEDEMA		2	2	1	1	1	0	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.22$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TRICHLOROETHYLENE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 79-01-6
Purity >99.95%
Product No. 37,214-5

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	9d	16d	
ERYTHEMA	2	4	4	4	4	1	
OEDEMA	2	2	2	1	1	0	
ANIMAL No. 2							
ERYTHEMA	1	4	4	4	4	0	
OEDEMA	1	2	1	1	1	0	
ANIMAL No. 3							
ERYTHEMA	1	4	4	4	4	0	
OEDEMA	2	2	1	1	1	0	

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ALLYL HEPTANOATE
SOURCE : IFF
SPECIFICATION :
CAS No. 142-19-8
Purity >98%

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	1.5	1	1	0.5		
OEDEMA	0	0.5	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1.5	2	2	2	0.5		
OEDEMA	0.5	0.5	0.5	0.5	0		
ANIMAL No. 3							
ERYTHEMA	1	2	1.5	1.5	0		
OEDEMA	0.5	0.5	0.5	0.5	0		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	1.5		
OEDEMA	0	0.5	0.5	0.5	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.13$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ALLYL PHENOXYACETATE
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 7493-74-5
Purity 100%
Spec. No. 0435001

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0.5	0	0	0		
OEDEMA		0	0.5	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0.5	0.5	0.5	0.5	0		
OEDEMA		0.5	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0.5	0.5	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	0.5	0.5	0	0		
OEDEMA		0	0.5	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.38$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL ACETATE [1]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 140-11-4
Purity 99.3%
Spec. No. 0178121

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	1	0		
OEDEMA	1	1	1	1	1		
ANIMAL No. 2							
ERYTHEMA	1	0	0	0	0		
OEDEMA	1	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	2	2	1	1	1		
OEDEMA	2	1	1	0	0		
OBSERVATIONS					Des		

Des = SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL ACETATE [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 140-11-4
Purity 99.3%
ßpec. No. 0178121

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	1	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	0	0	0	0	0Des		
OEDEMA	0	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	0	1	1	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 4							
ERYTHEMA	1	1	1	1	0		
OEDEMA	0	0	0	0	0		

Des = SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 0.83

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL BENZOATE [1]
SOURCE : FIRMENICH
SPECIFICATION :
CAS No. 120-51-4
Purity >99%
Spec. No. 15204

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	0	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1	0	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	1	0	0	0	0		
OEDEMA	0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL BENZOATE [2]
SOURCE : FIRMENICH
SPECIFICATION :
CAS No. 120-51-4
Purity >99%
Spec. No. 15204

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	2	2	1	0		
OEDEMA		1	1	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	1	0		
OEDEMA		1	1	0	0	0		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	1	1	1	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.58$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL SALICYLATE [1] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 118-58-1
Purity 100%
Spec. No. 8813001

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		2	1	0	0	0		
OEDEMA		1	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		2	1	1	0	0		
OEDEMA		2	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0.33$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL SALICYLATE [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 118-58-1
Purity 100%
Spec. No. 8813001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	1	1	1	0		
OEDEMA	2	1	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1	1	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	2	1	1	1	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 4							
ERYTHEMA	1	0	0	0	0		
OEDEMA	1	1	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.75$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoBORNYL ACETATE [1] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours

CAS No. 125-12-2
Purity 93.5%
Spec. No. 0190001

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		2	2	2	2	1		
OEDEMA		2	2	2	2	1		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	1		
OEDEMA		2	2	2	1	1		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2		
OEDEMA		3	2	2	2	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.89$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoBORNYL ACETATE [2] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours

CAS No.	125-12-2
Purity	93.5%
Spec. No.	0190001

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	2	2	1		
OBSERVATIONS						Des		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	2	2	1		
OBSERVATIONS						Des		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	1		
OEDEMA		1	1	1	1	1		
ANIMAL No.	4							
ERYTHEMA		1	2	2	1	0		
OEDEMA		1	2	1	1	0		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.5$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : n-BUTYL PROPIONATE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 590-01-2
Purity 99%
Product No. 30,737-8

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	2	2	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.08$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIETHYL PHTHALATE [1]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 84-66-2
Purity 99.7%
Spec. No. 8317001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIETHYL PHTHALATE [2] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 84-66-2
Purity 99.7%
Spec. No. 8317001

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.17$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIMETHYLBENZYL CARBINYL ACETATE # [1]

CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH

WEIGHT TESTED : 0.5g

No. OF RABBITS : THREE

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No.	151-05-3
Purity	>97%
Spec. No.	00684

: synonym for alpha,alpha-dimethylphenethyl acetate

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	1	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	1	1	1	0		
OEDEMA		0	1	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		
OBSERVATIONS						Dvs		

Dvs = VERY SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.22

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIMETHYLBENZYL CARBINYL ACETATE # [2]

CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH

WEIGHT TESTED : 0.5g

No. OF RABBITS : SIX

SPECIFICATION :

CAS No. 151-05-3
Purity >97%
Spec. No. 00684

EXPOSURE TIME : 4 hours

: synonym for alpha,alpha-dimethylphenethyl acetate

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	1	2	0		
OEDEMA		0	2	1	1	0		
OBSERVATIONS						Des		
ANIMAL No.	2							
ERYTHEMA		1	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	1	0		
OEDEMA		1	1	1	0	0		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	1		
OEDEMA		1	2	1	0	0		
OBSERVATIONS						De		
ANIMAL No.	5							
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	6							
ERYTHEMA		1	1	0	0	0		
OEDEMA		1	0	0	0	0		

De = DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.39$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-ETHYLHEXYL COCOATE CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 92044-87-6
Purity
Trade name ESTOL 1540/1972

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	1	1	0		
OEDEMA		1	1	1	1	0		
ANIMAL No.	2							
ERYTHEMA		1	1	1	1	0		
OEDEMA		1	1	1	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	0	0		
OEDEMA		1	1	1	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-ETHYLHEXYL PALMITATE
CONCENTRATION TESTED : 100%

SOURCE : DS INDUSTRIES
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 29806-73-3
Purity -
Trade name ESTAMOL EH 16

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		0	1	1	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	1	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	1	1	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ETHYL TIGLATE
CONCENTRATION TESTED : 100%

SOURCE : IFF
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 5837-78-5
Purity 98.8%
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0.5	1.5	1	1	0.5		
OEDEMA		0.5	0.5	0	0	0		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		1	1	0.5	0.5	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1.5	1.5	1.5	0.5	0		
OEDEMA		0	0.5	0	0	0		
ANIMAL No.	4							
ERYTHEMA		1.5	2	1	0.5	0		
OEDEMA		0	0.5	0	0	0		
OBSERVATIONS						Des		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.17

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ETHYL TRIMETHYL ACETATE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 3938-49-2
Purity 99%
Product No. 23,455-9

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	1	1	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	5							
ERYTHEMA		0	1	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	6							
ERYTHEMA		0	1	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.5$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GLYCOLBROMOACETATE
CONCENTRATION TESTED : 85%

SOURCE : SA SOPURA
VOLUME TESTED : 0.5ml
No. OF RABBITS : ONE
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 3785-34-0
Purity 85%

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	10d	14d
ERYTHEMA	4Ne	4Ne	4Ne	4Ne	4Cr	4Sc	2St
OEDEMA	4	4	4	3	3	3	3

Ne = VERY SLIGHT TO MODERATE ISCHEMIC NECROSIS

Cr = SLIGHT OR MODERATE INCRUSTATION

Sc = MODERATE SCALINESS AND SLIGHT TO MODERATE INCRUSTATION

St = SCAR TISSUE AND DECREASED HAIR GROWTH

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 7.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HEPTYL BUTYRATE
CONCENTRATION TESTED : 100%

SOURCE : BBA
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 5870-93-9
Purity >95%
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0.5	1.5	1.5	1.5	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	1.5		
OEDEMA		0	0.5	0	0	0		
OBSERVATIONS						Ts		
ANIMAL No.	3							
ERYTHEMA		0.5	0.5	1	0.5	0.5		
OEDEMA		0	0	0	0	0		
OBSERVATIONS						Des		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	2		
OEDEMA		0	1	0.5	0.5	0		
OBSERVATIONS						Des		

Des = SLIGHT DESQUAMATION FROM TREATED SKIN

Ts = SLIGHT SKIN THICKENING

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 1.75$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HEXYL SALICYLATE [1]
SOURCE : FIRMENICH
SPECIFICATION :
CAS No. 6259-76-3
Purity >98%
Spec. No. 80916

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1	1	1	1		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	2		
OEDEMA	1	1	1	2	2		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	1	2	2	2	1		
OBSERVATIONS					De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HEXYL SALICYLATE [2] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 6259-76-3
Purity >98%
Spec. No. 80916

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		1	1	1	0	0		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	2	2	1		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2		
OEDEMA		3	2	2	2	1		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	2	2	2		
OBSERVATIONS						De*		

De* = MARKED DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HEXYL SALICYLATE [3] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 6259-76-3
Purity >98%
Spec. No. 80916

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2	2	3	3	1		
OBSERVATIONS						Des		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	1	2	1	1		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	2	2	2	2		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	1		
OEDEMA		1	2	3	3	1		

De* = MARKED DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.17$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : HEXYL SALICYLATE [4] CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 6259-76-3
Purity >98%
Spec. No. 80916

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1	1	2	1		
OBSERVATIONS						De*		
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	2		
OEDEMA		1	2	2	2	1		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	1		
OEDEMA		0	1	1	1	1		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	0		
OEDEMA		0	1	1	1	0		
OBSERVATIONS						De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.33$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LINALYL ACETATE [1] CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 115-95-7
Purity 96.6%
Spec. No. 0373001

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	0	1	2	2	0		
OEDEMA	0	2	1	1	0		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	2	2	1		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	3	2	2	2	2		
OBSERVATIONS					De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LINALYL ACETATE [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 115-95-7
Purity 96.6%
Spec. No. 0373001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	2		
OEDEMA	1	1	1	1	1		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	1		
OEDEMA	2	1	1	2	0		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	2	2	1	1	0		
ANIMAL No. 4							
ERYTHEMA	1	2	2	1	1		
OEDEMA	2	1	0	0	0		
OBSERVATIONS					Des		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED
Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.92

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL CAPROATE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 106-70-7
Purity 99%
Product No. 25994-2

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1d	2d	3d	7d	14d	21d	
ERYTHEMA	2	2	1				
OEDEMA	1	1	1				
ANIMAL No. 2							
ERYTHEMA	1	2	2				
OEDEMA	1	1	1				
ANIMAL No. 3							
ERYTHEMA	2	2	1				
OEDEMA	2	1	1				

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.78$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL LAURATE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 111-82-0
Purity 99.5%
Product No. 23459-1

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1d	2d	3d	7d	14d		
ERYTHEMA		2	2	2	2	0		
OEDEMA		2	2	2	2	0		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	0		
OEDEMA		2	2	2	2	0		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	0		
OEDEMA		2	2	1	2	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.89$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL LINOLEATE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 112-63-0
Purity 99%
Product No. 25994-2

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1d	2d	3d	7d	14d	21d	
ERYTHEMA		1	3	3				
OEDEMA		0	2	2				
ANIMAL No.	2							
ERYTHEMA		1	1	1				
OEDEMA		1	0	0				
ANIMAL No.	3							
ERYTHEMA		2	3	2				
OEDEMA		2	2	2				

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.11$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL 2-METHYL BUTYRATE

SOURCE : FIRMENICH

SPECIFICATION :
CAS No. 868-57-5
Purity >95%
Product No. 65070

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0.5	0.5	0.5	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1	1	0.5	0.5	0		
OEDEMA	0.5	0.5	0	0	0		
ANIMAL No. 3							
ERYTHEMA	1.5	1.5	1	0.5	0.5		
OEDEMA	0	0	0	0	0		
ANIMAL No. 4							
ERYTHEMA	0.5	0.5	0.5	0.5	0		
OEDEMA	0.5	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL PALMITATE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 112-39-0
Purity 99%
Product No. 26065-7

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	2d	3d	7d	14d	21d	
ERYTHEMA	2	2	1				
OEDEMA	1	1	1				
ANIMAL No. 2							
ERYTHEMA	3	3	3				
OEDEMA	3	3	2				
ANIMAL No. 3							
ERYTHEMA	3	3	3				
OEDEMA	2	2	3				

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL STEARATE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 112-61-8
Purity 99%
Product No. 33518-5

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
	1d	2d	3d	7d	14d	21d	
ANIMAL No. 1							
ERYTHEMA	1	1	1				
OEDEMA	0	0	0				
ANIMAL No. 2							
ERYTHEMA	2	2	3				
OEDEMA	2	2	2				
ANIMAL No. 3							
ERYTHEMA	1	1	1				
OEDEMA	0	0	0				

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.11$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL TRIMETHYL ACETATE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 598-98-1
Purity 99%
Product No. M8,650-2

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoPROPYL MYRISTATE
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 110-27-0
Purity -
Trade name ESTOL 1512

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	1	1	0	0		
ANIMAL No.	2							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.22$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoPROPYL PALMITATE CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 142-91-6
Purity -
Trade name ESTOL 1517

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d	14d	
ERYTHEMA		0	1	1	1	0	0	
OEDEMA		0	0	0	0	0	0	
ANIMAL No.	2							
ERYTHEMA		1	1	2	2	1	0	
OEDEMA		0	0	1	1	0	0	
ANIMAL No.	3							
ERYTHEMA		0	1	1	1	0	0	
OEDEMA		0	0	0	0	0	0	

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoPROPYLisoSTEARATE CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 68171-33-5
Purity. -
Trade name PRISORINE 2021 (Tested as Estol 2021)

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		1	1	0	0			
OEDEMA		1	0	0	0			
ANIMAL No.	2							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0.11$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alpha-TERPINYL ACETATE # [1]

CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :

CAS No.	80-26-2
Purity	100%
Spec. No.	0495001

: synonym p-menth-1-en-8-ol acetate

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0	1	2	2	1		
OEDEMA	0	1	1	1	1		
OBSERVATIONS					De*		

ANIMAL No. 2							
ERYTHEMA	2	2	2	2	1		
OEDEMA	1	2	2	2	1		
OBSERVATIONS					De		

ANIMAL No. 3							
ERYTHEMA	1	2	2	2	2		
OEDEMA	2	2	2	2	1		
OBSERVATIONS					De		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.56$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alpha-TERPINYL ACETATE # [2]

CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :

CAS No.	80-26-2
Purity	100%
Spec. No.	0495001

: synonym p-menth-1-en-8-ol acetate

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	2		
OEDEMA	3	3	3	3	1		
OBSERVATIONS					Des		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	1		
OEDEMA	2	2	2	2	1		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	1		
OEDEMA	2	3	2	2	1		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	1		
OEDEMA	0	2	2	2	1		
OBSERVATIONS					De		

De = DESQUAMATION FROM SKIN SURFACE (Des = SLIGHT)

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.33$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : alpha-TERPINYL ACETATE # [3]

SOURCE : GIVAUDAN-ROURE

SPECIFICATION :

CAS No.	80-26-2
Purity	100%
Spec. No.	0495001

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

: synonym p-menth-1-en-8-ol acetate

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	1		
OEDEMA	1	2	2	2	1		
OBSERVATIONS					Dem		

ANIMAL No. 2							
ERYTHEMA	1	2	2	1	1		
OEDEMA	1	2	1	0	0		
OBSERVATIONS					Des		

ANIMAL No. 3							
ERYTHEMA	1	2	2	2	1		
OEDEMA	1	1	1	0	0		
OBSERVATIONS					Des		

ANIMAL No. 4							
ERYTHEMA	1	2	1	1	0		
OEDEMA	0	1	0	0	0		
OBSERVATIONS					Des		

Des = SLIGHT DESQUAMATION FROM SKIN SURFACE (Dem = MINIMAL)

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 2.75$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,4-CINEOLE

SOURCE : QUEST

SPECIFICATION :
CAS No. 470-67-7
Purity -
Spec. No. 01245

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	1.5		
OEDEMA		0.5	0.5	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0.5	1.5	1.5	1.5	1		
OEDEMA		0	0	0.5	0.5	0.5		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2	2	1.5		
OEDEMA		0	0.5	0.5	0.5	0.5		
ANIMAL No.	4							
ERYTHEMA		0	2	2	2	1.5		
OEDEMA		0.5	0.5	0.5	0.5	0.5		

De = DESQUAMATION FROM THE SKIN

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.25$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CAPRYLIC ACID
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 124-07-02
Purity -
Trade name PRIFRAC 2901/2903

		OBSERVATION				INTERVAL (days)		
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		1	1	4	4	TERMINATED		
OEDEMA		2	3	2	0			
OBSERVATIONS				Ne	Es			
ANIMAL No.	2							
ERYTHEMA		1	1	4	4	TERMINATED		
OEDEMA		1	2	2	0			
OBSERVATIONS				Ne	Es			
ANIMAL No.	3							
ERYTHEMA		1	1	4	4	TERMINATED		
OEDEMA		1	2	2	0			
OBSERVATIONS				Ne	Es			

Ne = NECROSIS

Es = ESCHAR

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.44$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 55/45 MIXTURE OF CAPRYLIC/CAPRIC ACIDS
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 68937-75-7
Purity -
Trade name PRIFRAC 2910

		OBSERVATION INTERVAL (days)				
		1h	1d	2d	3d	
ANIMAL No.	1					
ERYTHEMA		1	2	4	4	TERMINATED
OEDEMA		1	2	2	0	
OBSERVATIONS				Ne	Es	
ANIMAL No.	2					
ERYTHEMA		1	2	4	4	TERMINATED
OEDEMA		1	2	2	0	
OBSERVATIONS				Ne	Es	
ANIMAL No.	3					
ERYTHEMA		1	2	4	4	TERMINATED
OEDEMA		1	3	3	3	
OBSERVATIONS				Ne	Es	

Ne = NECROSIS

Es = ESCHAR

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 5.11$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 60/40 MIXTURE OF CAPRYLIC/CAPRIC ACIDS
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 68937-75-7
Purity -
Trade name PRIFRAC 2912

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	14d	21d
ANIMAL No.	1							
ERYTHEMA		2	4	4	4	4	1	1
OEDEMA		1	3	-*	-*	-*	1	0
OBSERVATIONS			Es	Es	Es	Es	NS	NS
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	4	1	1
OEDEMA		2	4	4	4	-*	1	0
OBSERVATIONS						Es	NSc	NS
ANIMAL No.	3							
ERYTHEMA		1	4	4	4	4	0	1
OEDEMA		2	4	-*	-*	-*	1	2
OBSERVATIONS			Es	Es	Es	Es	NS	

Es = ESCHAR

NS = NEW SKIN FORMATION

NSc = NEW SKIN FORMATION WITH SCALINESS

* = NO SCORE POSSIBLE DUE TO ESCHAR FORMATION

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 65/35 MIXTURE OF CAPRYLIC/CAPRIC ACIDS
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 68937-75-7
Purity -
Trade name PRIFRAC 2911

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d	14d	21d
ANIMAL No. 1							
ERYTHEMA	2	4	4	4	4	1	0
OEDEMA	2	3	-*	-*	-*	1	0
OBSERVATIONS		Es			Es	NS	NS
ANIMAL No. 2							
ERYTHEMA	2	4	4	4	4	1	1
OEDEMA	2	-*	-*	-*	-*	1	2
OBSERVATIONS		Es	Es	Es	Es	NS	NS
ANIMAL No. 3							
ERYTHEMA	2	3	4	4	1	0	0
OEDEMA	2	3	3	3	1	0	0
OBSERVATIONS			Es	Es	NS	Sc	

Es = ESCHAR

NS = NEW SKIN FORMATION

Sc = SCALINESS

* = NO SCORE POSSIBLE DUE TO ESCHAR FORMATION

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 65/35 MIXTURE OF CAPRYLIC/CAPRIC ACIDS

CONCENTRATION TESTED : 100%

SOURCE : PROCTER & GAMBLE

VOLUME TESTED : 0.5ml

No. OF RABBITS : THREE

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 67762-36-1
Purity 53.9% C8, 41.2%C10
Brand code 47032

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h	1d	2d	3d			
ERYTHEMA		2	3	3	3			
OEDEMA		0	2	2	2			
OBSERVATIONS		Ex	Ex	Ex	Ex			
ANIMAL No.	2							
ERYTHEMA		2	3	3	3			
OEDEMA		2	2	2	3			
OBSERVATIONS			Ex	Ex	Ex			
ANIMAL No.	3							
ERYTHEMA		2	3	4	4			
OEDEMA		0	2	2	2			
OBSERVATIONS			Ex	Ex	Ex			

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 5.33$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LAURIC ACID CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 143-07-7
Purity >92%
Trade name PRIFRAC 2922

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		1	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1	1	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.44$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 70/30 MIXTURE OF OLEINE & CAPRYLIC ACID

CONCENTRATION TESTED : 100%

SOURCE :

VOLUME TESTED : 0.5ml

No. OF RABBITS : THREE

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. -

Purity -

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	14d	
ERYTHEMA	2	2	1	2	1	0	
OEDEMA	3	3	2	2	0	0	
OBSERVATIONS					Sc		
ANIMAL No. 2							
ERYTHEMA	2	2	1	2	1	0	
OEDEMA	2	2	2	2	0	0	
OBSERVATIONS					Sc	Sc	
ANIMAL No. 3							
ERYTHEMA	2	2	1	2	1	0	
OEDEMA	3	2	2	2	0	0	
OBSERVATIONS					Sc	Sc	

Sc = SCALINESS

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.78$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 80/20 MIXTURE OF OLEINE & CAPRYLIC ACID

CONCENTRATION TESTED : 100%

SOURCE :

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. -
Purity -

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d	14d	
ANIMAL No. 1							
ERYTHEMA	2	2	2	4	4	0	
OEDEMA	1	4	4	4	2	0	
OBSERVATIONS					Sc	NS	
ANIMAL No. 2							
ERYTHEMA	2	2	3	4	3	0	
OEDEMA	1	4	4	-*	2	0	
OBSERVATIONS					Sc	NS	
ANIMAL No. 3							
ERYTHEMA	2	2	2	3	4	0	
OEDEMA	2	4	4	4	2	0	
OBSERVATIONS					Sc	NS	

Sc = SCALINESS

* = CRUST FORMATION PREVENTED OEDEMA BEING GRADED(assumed grade 4 for calculation)

NS = NEW SKIN FORMATION

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 6.67$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 90/10 MIXTURE OF OLEINE & CAPRYLIC ACID

CONCENTRATION TESTED : 100%

SOURCE :

VOLUME TESTED : 0.5ml

No. OF RABBITS : THREE

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. -

Purity -

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	14d	
ERYTHEMA	1	1	1	2	2	0	
OEDEMA	2	2	3	3	2	0	
OBSERVATIONS					Sc	NS	
ANIMAL No. 2							
ERYTHEMA	1	1	2	3	3	0	
OEDEMA	3	3	3	4	2	0	
OBSERVATIONS					NS		
ANIMAL No. 3							
ERYTHEMA	1	1	2	2	2	0	
OEDEMA	2	2	3	4	2	0	
OBSERVATIONS					Sc		

Sc = SCALINESS

NS = NEW SKIN FORMATION

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.67$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoSTEARIC ACID CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 30399-84-9
Purity -
Trade name PRISORINE 3501/3502/3505

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	14d	
ANIMAL No.	1							
ERYTHEMA		1	1	2	3	1	0	
OEDEMA		2	1	2	2	1	0	
OBSERVATIONS			Ex	Ex	Ex	Ex		
ANIMAL No.	2							
ERYTHEMA		1	1	2	2	2	0	
OEDEMA		1	2	3	3	2	0	
OBSERVATIONS			Ex	Ex	Ex	Ex	NS	
ANIMAL No.	3							
ERYTHEMA		1	1	2	3	3	0	
OEDEMA		1	2	3	4	3	0	
OBSERVATIONS			Ex	Ex	Ex	Ex		

Ex = ERYTHEMA & OEDEMA EXTENDED OUTSIDE APPLICATION SITE

NS = NEW SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.33$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CINNAMON LEAF OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 8015-91-6
Purity -
Spec. No. -

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	0.5		
OEDEMA	1	1	1	0.5	0.5		
ANIMAL No. 2							
ERYTHEMA	2	1.5	1.5	1.5	0.5		
OEDEMA	1	0.5	0.5	0.5	0.5		
OBSERVATIONS				Dem			
ANIMAL No. 3							
ERYTHEMA	1	1.5	1	1	0.5		
OEDEMA	0	0	0	0	0		
OBSERVATIONS					Des		
ANIMAL No. 4							
ERYTHEMA	1	1	0.5	0.5	0		
OEDEMA	0	0.5	0	0	0		
OBSERVATIONS				Dem	De		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT
Dem = MINIMAL)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.71

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CLOVE LEAF OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 8000-34-8
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2.5	2.5	2	1.5		
OEDEMA		3	2	2	1	0.5		
ANIMAL No.	2							
ERYTHEMA		2	2.5	2	2	1		
OEDEMA		3.5	2	1.5	1.5	0.5		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		2	2.5	3	4	DEAD		
OEDEMA		3	3	3	2			
OBSERVATIONS					Dr			
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		2.5	2	2	0.5	1		
OBSERVATIONS						De		

De = DESQUAMATION FROM SKIN SURFACE

Dr = SKIN DRY

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 4.29$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LITSEA CUBEBA OIL CONCENTRATION TESTED : 100%

SOURCE : FIRMENICH VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 68855-99-2
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1.5	2	2	2	2.5		
OEDEMA		2.5	2.5	2.5	2	2		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	2		
OEDEMA		3	2.5	2.5	2.5	1		
OBSERVATIONS						De*		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	1.5		
OEDEMA		3.5	2	1.5	1	0.5		
OBSERVATIONS						De*		
ANIMAL No.	4							
ERYTHEMA		1.5	2	2	2	1.5		
OEDEMA		2.5	2	1	0.5	0		
OBSERVATIONS						De		

De = DESQUAMATION FROM THE SKIN (De* = MARKED)

YELLOW STAINING WAS OBSERVED IN ALL ANIMALS

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.88$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : ORIGANUM OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 8007-11-2
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0.5	4	4	4	4		
OEDEMA		1	-	-	-	-		
OBSERVATIONS		Br	EH	EH	EH	EH		
ANIMAL No.	2							
ERYTHEMA		1	3	3.5	3.5	3.5		
OEDEMA		2.5	2	-	-	-		
OBSERVATIONS				H	H	H		
ANIMAL No.	3							
ERYTHEMA		1	2	3.5	3.5	3.5		
OEDEMA		1.5	2	1	-	-		
OBSERVATIONS					H	H		
ANIMAL No.	4							
ERYTHEMA		0.5	3	3.5	4	2		
OEDEMA		2.5	1.5	-	-	2.5		
OBSERVATIONS				H	EH			

Br = BROWN STAINING

E = ESCHAR

H = SKIN HARDENED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = >4

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : PARSLEY HERB OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 8000-68-8
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	2	2	2	1		
OEDEMA		2.5	1.5	0.5	0.5	0		
OBSERVATIONS						T		
ANIMAL No.	2							
ERYTHEMA		1.5	2	2	2	1.5		
OEDEMA		2.5	2	0	0	O		
OBSERVATIONS						T		
ANIMAL No.	3							
ERYTHEMA		1	1.5	2	2	0.5		
OEDEMA		2	1.5	1.5	1	0		
OBSERVATIONS						Des		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		3	2	1	1	0		
OBSERVATIONS						Ts		

Des = SLIGHT DESQUAMATION FROM TREATED SKIN

T = SKIN THICKENING (Ts = SLIGHT)

THE TREATED SKIN WAS STAINED YELLOW INTERMITTENTLY IN ALL ANIMALS THROUGHOUT THE STUDY

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 3.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : PERILLA OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 68132-21-8
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	1.5	2	1	0.5		
OEDEMA		1	0	0	0	0		
OBSERVATIONS						De		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	1.5		
OEDEMA		4	2	1	1	1		
OBSERVATIONS						De		
ANIMAL No.	3							
ERYTHEMA		1.5	2.5	2	2	1.5		
OEDEMA		0.5	0.5	0.5	0.5	0.5		
OBSERVATIONS						De		
ANIMAL No.	4							
ERYTHEMA		0.5	2	2	2	0.5		
OEDEMA		0	0.5	0	0	0		
OBSERVATIONS						De*		

De = DESQUAMATION FROM TREATED SKIN (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.42

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : PIMENTA LEAF OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 8006-77-7
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	1.5		
OEDEMA		1	1.5	1.5	1.5	0.5		
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	1.5		
OEDEMA		1.5	1.5	1	1	0		
OBSERVATIONS						Des		
ANIMAL No.	3							
ERYTHEMA		2	1	2	1.5	1		
OEDEMA		0.5	0.5	0.5	0.5	0		
ANIMAL No.	4							
ERYTHEMA		2	1.5	2	1.5	1		
OEDEMA		0.5	1.5	0.5	0.5	0		

Des = SLIGHT DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.79$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TAGETES OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 8016-84-0
Purity -
Spec. No. -

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	1.5		
OEDEMA	2	1.5	1	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	2	2	2	1.5	2		
OEDEMA	1	1.5	1	0	0.5		
OBSERVATIONS					De*		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2.5	1.5		
OEDEMA	2	2	1.5	1.5	2		
OBSERVATIONS					De		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	0.5		
OEDEMA	2	1.5	1	0.5	0		
OBSERVATIONS					De		

De = DESQUAMATION FROM THE SKIN (De* = MARKED)

THE TREATED SKIN WAS STAINED YELLOW INTERMITTENTLY IN ALL ANIMALS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.13$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TEA TREE OIL
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 68647-73-4
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	2.5	2.5	2	2		
ANIMAL No.	2							
ERYTHEMA		1.5	2	2	2	2		
OEDEMA		1	1.5	1.5	2	0		
OBSERVATIONS						T		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	2		
OEDEMA		0.5	1	1	1	0		
OBSERVATIONS						T		
ANIMAL No.	4							
ERYTHEMA		1	2	2	2	1.5		
OEDEMA		1.5	1.5	1.5	1.5	0.5		
OBSERVATIONS						De		

De = DESQUAMATION FROM THE SKIN
T = SKIN THICKENING

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.63$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : THYME OIL, RED
CONCENTRATION TESTED : 100%

SOURCE : PRODAROM
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 8007-46-3
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		3	3	4	4	4		
OEDEMA		3	1	0.5	0.5	-		
OBSERVATIONS					DrH	H		
ANIMAL No.	2							
ERYTHEMA		2	2	3	3	3		
OEDEMA		3	2.5	2	3	-		
OBSERVATIONS					H	H		
ANIMAL No.	3							
ERYTHEMA		2	2.5	3	3	3		
OEDEMA		2	2	0.5	1.5	-		
OBSERVATIONS				H	H	H		
ANIMAL No.	4							
ERYTHEMA		2	3	4	4	4		
OEDEMA		3	3	2	2	-		
OBSERVATIONS			H	H	H	H		

- = NO ASSESSMENT POSSIBLE

Dr = DRYSKIN

H = SKIN HARDENED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 4.92$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 3-CHLORO-4-FLUORONITROBENZENE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 350-30-1
Purity 98%
Product No. 23,323-4

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	14d	
ANIMAL No.	1							
ERYTHEMA		0	2	2	1	1	0	
OEDEMA		0	1	1	0	0	0	
ANIMAL No.	2							
ERYTHEMA		0	1	1	1	1	0	
OEDEMA		0	0	0	0	0	0	
ANIMAL No.	3							
ERYTHEMA		0	1	1	1	0	0	
OEDEMA		0	0	0	0	0	0	
ANIMAL No.	4							
ERYTHEMA		0	2	2	1	1	0	
OEDEMA		0	1	1	0	0	0	
ANIMAL No.	5							
ERYTHEMA		0	2	2	1	1	0	
OEDEMA		0	1	1	0	0	0	
ANIMAL No.	6							
ERYTHEMA		0	1	1	1	1	0	
OEDEMA		0	0	0	0	0	0	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : m-CHLORONITROBENZENE
CONCENTRATION TESTED : 100%

SOURCE : BAYER AG
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 121-73-3
Purity 99.6%
Product No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		O	O	O	O			
OEDEMA		O	O	O	O			
ANIMAL No.	2							
ERYTHEMA		O	O	O	O			
OEDEMA		O	O	O	O			
ANIMAL No.	3							
ERYTHEMA		O	O	O	O			
OEDEMA		O	O	O	O			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : FLUOROBENZENE
SOURCE : REIDEL-de HAËN AG
SPECIFICATION :
CAS No. 462-06-6
Purity 99.7%

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	16d	
ERYTHEMA	0	0	0	0	0	0	
OEDEMA	0	0	0	0	0	0	
ANIMAL No. 2							
ERYTHEMA	0	0	0	0	0	0	
OEDEMA	0	0	0	0	0	0	
ANIMAL No. 3							
ERYTHEMA	0	0	0	1	1	0	
OEDEMA	0	0	0	0	0	0	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.11$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-FLUOROTOLUENE CONCENTRATION TESTED : 100%

SOURCE : REIDEL-de HAËN AG VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 95-52-3
Purity 99.8%
Batch No. 92500

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		0	1	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.11$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : cis CYCLOOCTENE
CONCENTRATION TESTED : 100%

SOURCE : FLUKA
VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 931-87-3
Purity 95%
Product No. 29650

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	14d	
ERYTHEMA	0	2	3	1	1 1	0	
OEDEMA	0	1	1	0	0	0	
ANIMAL No. 2							
ERYTHEMA	0	1	1	1	1	0	
OEDEMA	0	0	0	0	0	0	
ANIMAL No. 3							
ERYTHEMA	0	2	3	1	1	0	
OEDEMA	0	1	1	0	0	0	
ANIMAL No. 4							
ERYTHEMA	0	2	2	1	1	0	
OEDEMA	0	1	1	0	0	0	
ANIMAL No. 5							
ERYTHEMA	0	1	1	1	0	0	
OEDEMA	0	0	0	0	0	0	
ANIMAL No. 6							
ERYTHEMA	0	1	2	1	0	0	
OEDEMA	0	0	1	0	0	0	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.89$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,9-DECADIENE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 1647-16-1
Purity 97%
Product No. 11,830-3

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		1	2	2	2	0		
OEDEMA		1	1	1	1	0		
OBSERVATIONS			FB	FB				
ANIMAL No.	2							
ERYTHEMA		1	2	2	2	0		
OEDEMA		1	1	1	1	0		
OBSERVATIONS			FB	FB	FB			
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	0		
OEDEMA		1	1	1	1	0		
OBSERVATIONS			FB	FB	FB			

FB = FAINT BLANCHING

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,5-HEXADIENE
CONCENTRATION TESTED : 100%

SOURCE : FLUKA
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 592-42-7
Purity 97%
Product No. 52440

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1,13-TETRADECADIENE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 21964-49-8
Purity 97%
Product No. 33,364-6

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	14d	21d
ERYTHEMA	0	2	2	2	1	0	0
OEDEMA	1	1	1	0	0	0	0
ANIMAL No. 2							
ERYTHEMA	0	1	1	1	1	1	0
OEDEMA	0	0	0	0	0	0	0
ANIMAL No. 3							
ERYTHEMA	0	1	1	1	1	0	0
OEDEMA	0	0	0	0	0	0	0
ANIMAL No. 4							
ERYTHEMA	0	2	2	1	1	0	0
OEDEMA	0	1	0	0	0	0	0

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 1.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM BISULPHITE
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 7631-90-5
Purity >97%
Product No. 24397-3

		OBSERVATION INTERVAL (days)						
		1d	2d	3d	7d	14d		
ANIMAL No.	1							
ERYTHEMA		1	1	1				
OEDEMA		0	0	0				
ANIMAL No.	2							
ERYTHEMA		1	1	1				
OEDEMA		0	0	0				
ANIMAL No.	3							
ERYTHEMA		1	1	1				
OEDEMA		0	0	0				

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 1.0$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM CHLORITE
CONCENTRATION TESTED : 34.5%aq

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml*
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 7758-19-2
Purity tech. 80%
Product No. 24,415-5

*not neutralised

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	5d	7d	9d
ERYTHEMA	0	1	1	1	0	0	0
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	
ANIMAL No. 2							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			
ANIMAL No. 3							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			

Dr = DRYNESS OF THE SKIN

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0.33$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BENZYL ACETONE
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 2550-26-7
Purity 99.3%
Spec. No. 2660003

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0.5	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0.5	0.5	0.5	0.5	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2	2	0.5		
OEDEMA		0	0.5	0.5	0.5	0		
ANIMAL No.	4							
ERYTHEMA		0.5	1.5	1.5	1.5	0		
OEDEMA		0	0.5	0.5	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 1.21$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIACETYL

SOURCE : IFF

SPECIFICATION :
CAS No. 431-03-8
Purity 98.3%
Spec. No. -

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0.5	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0.5	0.5	0.5	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0.5	1	1	1	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.63$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : cis-JASMONE
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 488-10-8
Purity >98%
Spec. No. 6340001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	1.5		
OEDEMA	0	1.5	1.5	1	0.5		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	1	2	1.5	1	0.5		
OEDEMA	1	0.5	0.5	0	0.5		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	2.5	1.5	1.5		
OEDEMA	1	1	2	0.5	2		
OBSERVATIONS					De		
ANIMAL No. 4							
ERYTHEMA	0	2	1.5	1	0.5		
OEDEMA	0	1	0.5	0	0		
OBSERVATIONS					De*		

De = DESQUAMATION FROM THE SKIN (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.58$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : isoLONGIFOLENE KETONE #

CONCENTRATION TESTED : 100%

SOURCE : IFF

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 33407-62-4
Purity 90.0
Spec. No. -

: synonym for Piconia

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0	2	1.5	1	0		
OEDEMA	0.5	0.5	0	0	0		
OBSERVATIONS		Des	Des	Des	Des		
ANIMAL No. 2							
ERYTHEMA	0	2.5	2	2	1		
OEDEMA	0	3	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2.5	2	2	3.5		
OEDEMA	1.5	4	2.5	2	0		
OBSERVATIONS		T	TY	TY	TH		
ANIMAL No. 4							
ERYTHEMA	0.5	2	1.5	1.5	0		
OEDEMA	0	0	0.5	0	0		
OBSERVATIONS					Des		

De = DESQUAMATION FROM THE SKIN (Ds = SLIGHT)

T = THICKENED

H = HARDENED

Y = YELLOW DISCOLORATION

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.0

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : METHYL LAVENDER KETONE

CONCENTRATION TESTED : 100%

SOURCE : IFF

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 67633-95-8
Purity >98.0%
Spec. No. -

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	0		
OEDEMA	2	1.5	1	1	0		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	4	1	1	1.5	1.5		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2		
OEDEMA	4	2.5	2	1.5	1		
OBSERVATIONS					De*		
ANIMAL No. 4							
ERYTHEMA	2	2	2.5	3.5	3.5		
OEDEMA	3	2	2.5	2	2		
OBSERVATIONS					DesH		

De = DESQUAMATION FROM THE SKIN (De* = MARKED
Des = SLIGHT)
H = HARDENED SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.79$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DICHLORO-2,3-PROPIONITRILE

SOURCE : ELF ATOCHEM

SPECIFICATION :
CAS No. 2601-89-0
Purity 96.3%

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 3 mins

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	10d	14d
ERYTHEMA	2	2	2	2	0		
OEDEMA	2	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	2	1	1
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	Dr
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	2	2	2
OEDEMA	2	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	Dr

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 3-DIETHYLAMINO-PROPIONITRILE

SOURCE : ELF ATOCHEM

SPECIFICATION :
CAS No. 5351-04-2
Purity 99.8%

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d			
ERYTHEMA	1	0	0	0			
OEDEMA	0	0	0	0			
ANIMAL No. 2							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			
ANIMAL No. 3							
ERYTHEMA	0	0	0	0			
OEDEMA	0	0	0	0			

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : CARVACROL

SOURCE : GIVAUDAN-ROURE

SPECIFICATION :
CAS No. 499-75-2
Purity 100%
Spec. No. 3362701

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	2	4	4	4	4		
OEDEMA	4	1	-	-	-		
OBSERVATIONS	Br	EH	EH	EH	EH		
ANIMAL No. 2							
ERYTHEMA	2	4	4	4	4		
OEDEMA	4	-	-	-	-		
OBSERVATIONS	Br	EH	EH	EH	EH		
ANIMAL No. 3							
ERYTHEMA	2	4	4	4	DEAD		
OEDEMA	3	2	-	-			
OBSERVATIONS	Br	E	EH	EH			
ANIMAL No. 4							
ERYTHEMA	2	4	4	4	4		
OEDEMA	3	2	-	-	-		
OBSERVATIONS	Br		EH	EH	EH		

Br = BROWN STAINING

E = ESCHAR

H = SKIN HARDENED

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = >4

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-tertiary-BUTYL PHENOL

CONCENTRATION TESTED : 100%

SOURCE : ALDRICH

VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 88-18-6
Purity 99%
Product No. B9,940-5

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	1	4	4	4	4		
OEDEMA	0	2	2	2	2		
OBSERVATIONS	Di	Ne	Ne	Ne	Es		
ANIMAL No. 2							
ERYTHEMA	4	4	4	4	4		
OEDEMA	1	1	1	1	1		
OBSERVATIONS	Ne	Ne	Ne	Ne	Es		
ANIMAL No. 3							
ERYTHEMA	4	4	4	4	4		
OEDEMA	1	1	2	1	1		
OBSERVATIONS	nE	Ne	Ne	Ne	Es		
ANIMAL No. 4							
ERYTHEMA	4	4	4	4	4		
OEDEMA	1	1	2	2	2		
OBSERVATIONS	Ne	Ne	Ne	Ne	Es		
ANIMAL No. 5							
ERYTHEMA	4	4	4	4	4		
OEDEMA	1	2	2	2	2		
OBSERVATIONS	Ne	Ne	Ne	Ne	Es		
ANIMAL No. 6							
ERYTHEMA	4	4	4	4	4		
OEDEMA	1	2	2	2	1		
OBSERVATIONS	Ne	Ne	Ne	Ne	Es		

Ne = NECROSIS; Di = DISCOLOURATION; Es = ESCHAR

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 5.67

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : EUGENOL
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 97-53-0
Purity 99.9%
Spec. No. 5002001

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0.5	2	2	2	0		
OEDEMA		0.5	1.5	1.5	1	0		
ANIMAL No.	2							
ERYTHEMA		0.5	1 2	1.5	1.5	0		
OEDEMA		0.5	1.5	1	0.5	0		
ANIMAL No.	3							
ERYTHEMA		1.5	2	2	2	1		
OEDEMA		1	0.5	1	0.5	0.5		
ANIMAL No.	4							
ERYTHEMA		2	2	2	2	2		
OEDEMA		1	1	1	1	0.5		
OBSERVATIONS						Des		

Des = SLIGHT DESQUAMATION FROM THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 2.92

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GUAIACOL

SOURCE : GIVAUDAN-ROURE

SPECIFICATION :
CAS No. 90-05-1
Purity 99.4%
Spec. No. 5332001

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	1	2	2	2	0.5		
OEDEMA	0.5	1.5	1	0.5	0		
ANIMAL No. 2							
ERYTHEMA	1	2	1	0.5	0		
OEDEMA	0	0.5	0.5	0	0		
ANIMAL No. 3							
ERYTHEMA	1.5	2	2	2	1		
OEDEMA	0.5	0.5	0.5	0.5	0		
ANIMAL No. 4							
ERYTHEMA	1.5	2	2	2	1		
OEDEMA	0.5	0.5	0.5	0.5	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.38$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 4,4-METHYLENE bis (2.6-DITERTIARYBUTYL PHENOL)
CONCENTRATION TESTED : 100%

SOURCE : ALDRICH
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 118-82-1
Purity 98%
Product No. 27,792-4

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d	7d		
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : p-TOLYL ALCOHOL
CONCENTRATION TESTED : 100%

SOURCE : IFF
WEIGHT TESTED : 0.5g
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 589-18-4
Purity -
Spec. No. -

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0.5	0.5	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	4							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.04$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DIMETHYL DISULPHIDE
SOURCE : ALDRICH
SPECIFICATION :
CAS No. 624-92-0
Purity 99.0%
Product No. 32,041-2

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
EXPOSURE TIME : 4 hours

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		2	2	2	1			
OEDEMA		1	2	1	0			
ANIMAL No.	2							
ERYTHEMA		1	2	2	2			
OEDEMA		2	1	1	1			
ANIMAL No.	3							
ERYTHEMA		1	2	2	2			
OEDEMA		2	2	2	1			
ANIMAL No.	4							
ERYTHEMA		1	2	1	1			
OEDEMA		1	2	1	0			
ANIMAL No.	5							
ERYTHEMA		1	2	2	1			
OEDEMA		1	2	1	0			
ANIMAL No.	6							
ERYTHEMA		2	2	2	2			
OEDEMA		2	2	2	1			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : DI-n-PROPYL DISULPHIDE CONCENTRATION TESTED : 100%

SOURCE : ALDRICH VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 629-19-6
Purity 99.2%
Product No. 14,922-5

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d	10d	13d
ANIMAL No.	1							
ERYTHEMA		2	2	2	1			
OEDEMA		2	0	0	0			
ANIMAL No.	2							
ERYTHEMA		2	3	3	3	0	0	0
OEDEMA		2	0	0	0	0	0	0
OBSERVATIONS						Dr	Dr	
ANIMAL No.	3							
ERYTHEMA		2	3	3	3	0	0	0
OEDEMA		2	0	0	0	0	0	0
OBSERVATIONS						Dr	Dr	

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.56$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 3,3'-DITHIODIPROPIONIC ACID
CONCENTRATION TESTED : 100%
SOURCE : ALDRICH
WEIGHT TESTED : 500mg
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 1119-62-6
Purity 99%
Product No. 10,901-0

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	4							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 0$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2-MERCAPTOETHANOL SODIUM
CONCENTRATION TESTED : 45%aq.

SOURCE : ELF ATOCHEM
VOLUME TESTED : 1.05ml*
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 3 mins
CAS No. 37482-11-4
Purity 45.21% aqueous solution
*1.05ml of 45.21%aq = 0.5g

THREE MINUTE EXPOSURE

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d	10d	12d
ERYTHEMA	0	2	2	2	0		
OEDEMA	0	4	2	2	0		
OBSERVATIONS			Dr	Dr			
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	0		
OEDEMA	2	2	2	0	0		
OBSERVATIONS					Dr		
ANIMAL No. 3							
ERYTHEMA	4	Cr	Cr	Cr	Cr	Cr	0
OEDEMA	0	4	4	4	0	0	0

Dr = DRYNESS OF THE SKIN

Cr = CRUST

COMMENTS :
ONE HOUR AFTER REMOVAL OF THE PATCH AFTER A 4 HOUR APPLICATION TO A SINGLE ANIMAL, SIGNS OF LESIONS THROUGH THE WHOLE DEPTH OF THE SKIN WERE OBSERVED AND THE ANIMAL WAS SACRIFICED FOR HUMANITARIAN REASONS.
AFTER A 3 MINUTE EXPOSURE NO ULCERATION OR NECROSIS WAS SEEN.

PRIMARY
IRRITATION = NOT POSSIBLE TO CALCULATE INDEX

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 3-MERCAPTO-1-PROPANOL CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM VOLUME TESTED : 0.5ml
No. OF RABBITS : SIX
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 63947-56-8
Purity 99.6%

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		1	1	1	1			
OEDEMA		1	1	1	0			
OBSERVATIONS		Ex	Ex	EDDr	EDDr			
ANIMAL No.	2							
ERYTHEMA		1	1	0	0			
OEDEMA		1	0	0	0			
OBSERVATIONS		Ex						
ANIMAL No.	3							
ERYTHEMA		1	1	0	0			
OEDEMA		1	0	0	0			
ANIMAL No.	4							
ERYTHEMA		1	1	1	0			
OEDEMA		1	0	0	0			
ANIMAL No.	5							
ERYTHEMA		1	1	2	2			
OEDEMA		0	1	1	1			
OBSERVATIONS			Ex	ExDr	Dr			
ANIMAL No.	6							
ERYTHEMA		1	1	1	1			
OEDEMA		1	0	0	0			

Ex = REACTION EXTENDED OUTSIDE APPLICATION AREA

De = DESQUAMATION; Dr= DRYNESS; EDDr = Ex + De + Dr

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.11

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 4-(METHYLTHIO)-BENZALDEHYDE

SOURCE : ALDRICH

SPECIFICATION :
CAS No. 3446-89-7
Purity 98.2%
Product No. 22,277-1

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	4d	7d	8d
ERYTHEMA	1	1	1	1	0	0	0
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS				Dr	Dr	Dr	
ANIMAL No. 2							
ERYTHEMA	2	2	1	1	0	0	0
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS				Dr	Dr	Dr	
ANIMAL No. 3							
ERYTHEMA	0	1	0	0			
OEDEMA	0	0	0	0			

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.89$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SOAP FROM 20/80 COCONUT OIL/TALLOW
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. NO SINGLE CAS No. APPLICABLE
Purity -
Trade name PRISAVON 1981

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	35mn	1d	2d	3d	7d	14d	
ERYTHEMA		2	1	1	1	1	0	
OEDEMA		2	1	1	1	1	0	
ANIMAL No.	2							
ERYTHEMA		2	1	1	1	1	0	
OEDEMA		2	1	1	1	0	0	
ANIMAL No.	3							
ERYTHEMA		2	2	1	1	1	0	
OEDEMA		2	1	1	1	1	0	

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.11$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SOAP FROM 20/80 COCONUT/PALM OILS
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. NO SINGLE CAS No. APPLICABLE
Purity -
Trade name PRISAVON 9240

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	40mn	1d	2d	3d	7d	14d	
ERYTHEMA		2	2	2	2	0	0	
OEDEMA		1	0	0	0	0	0	
ANIMAL No.	2							
ERYTHEMA		2	2	2	2	1	0	
OEDEMA		3	1	1	1	0	0	
OBSERVATIONS						Sc		
ANIMAL No.	3							
ERYTHEMA		2	2	2	2	1	0	
OEDEMA		3	1	1	1	0	0	

Sc = SCALINESS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM LAURYL SULPHATE
CONCENTRATION TESTED : 50%aq

SOURCE :
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE

SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 151-21-3
Purity 94.8%

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	4½h	1d	2d	3d			
ERYTHEMA		3	4	4	4			
OEDEMA		1	2	2	2			
ANIMAL No.	2							
ERYTHEMA		3	4	4	4			
OEDEMA		2	2	2	2			
ANIMAL No.	3							
ERYTHEMA		3	3Ex	4Ex	4Ex			
OEDEMA		1	2	2	3			

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 6.0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM LAURYL SULPHATE
CONCENTRATION TESTED : 20%aq

SOURCE :
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 151-21-3
Purity 94.8%

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	4½h	1d	2d	3d			
ERYTHEMA	2Ex	3Ex	3Ex	4Ex			
OEDEMA	1	2	2	3			
ANIMAL No. 2							
ERYTHEMA	2Ex	4Ex	4Ex	4Ex			
OEDEMA	1	3	3	3			
ANIMAL No. 3							
ERYTHEMA	2	4Ex	4Ex	4Ex			
OEDEMA	1	3	4	4			

Ex = REACTION EXTENDED OUTSIDE APPLICATION SITE

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{3 \times \text{no of animals}} = 6.78$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : SODIUM UNDECYLENATE CONCENTRATION TESTED : 33%aq

SOURCE : ELF ATOCHEM VOLUME TESTED : 0.5ml*
No. OF RABBITS : THREE

SPECIFICATION : EXPOSURE TIME : 4 hours

CAS No. 3398-33-2

*of 33.2% aqueous solution

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	5d	7d	10d
ANIMAL No. 1							
ERYTHEMA	2	1	1	1	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	1	0	0
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	
ANIMAL No. 3							
ERYTHEMA	2	2	2	2	1	0	0
OEDEMA	0	0	0	0	0	0	0
OBSERVATIONS					Dr	Dr	

Dr = DRYNESS OF THE SKIN

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 1.67

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GLYCEROL TRI-isoSTEARATE
CONCENTRATION TESTED : 100%

SOURCE : UNICHEMA INTERNATIONAL
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

SPECIFICATION :
CAS No. 26942-95-5
Purity -
Trade name PRISORINE 2041

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	1	1	1	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1	1	1	1	0		
OEDEMA	0	0	0	0	0		
ANIMAL No. 3							
ERYTHEMA	0	0	0	0	0		
OEDEMA	0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0.67$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : GLYCEROL TRIUNDECANOATE
CONCENTRATION TESTED : 100%

SOURCE : ELF ATOCHEM
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 13552-80-2
Purity 97.7%

		OBSERVATION INTERVAL (days)						
ANIMAL No.	1	1h	1d	2d	3d			
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 4-AMINO-1,2,4-TRIAZOLE CONCENTRATION TESTED : 100%

SOURCE : ALDRICH WEIGHT TESTED : 0.5g
No. OF RABBITS : SIX
SPECIFICATION : EXPOSURE TIME : 4 hours
CAS No. 584-13-4
Purity 96.7%
Product No. A8,180-3

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d			
ANIMAL No.	1							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	2							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	3							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	4							
ERYTHEMA		1	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	5							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			
ANIMAL No.	6							
ERYTHEMA		0	0	0	0			
OEDEMA		0	0	0	0			

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : BEECHWOOD CREOSOTE OIL

SOURCE : IFF

SPECIFICATION :
CAS No. 8021-39-4
Purity -
Spec. No. -

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	-	-	2	4	4		
OEDEMA	3	-	3	2	-		
OBSERVATIONS	Bl	BlS	ICS	IE	E		
ANIMAL No. 2							
ERYTHEMA	-	2	4	4	4		
OEDEMA	4	3	2	2	-		
OBSERVATIONS	Bl	ICS	BaE	IE	E		
ANIMAL No. 3							
ERYTHEMA	-	2	2	4	4		
OEDEMA	4	3	3	-	-		
OBSERVATIONS	Bl	IC	IC	EH	ESl		
ANIMAL No. 4							
ERYTHEMA	2	2	3	3.5	4		
OEDEMA	4	3.5	2	1	-		
OBSERVATIONS					E		

Bl = BLACKENED
I = IRRITATION AT EDGES
E = ESCHAR
H = HARDENED
S = SUNKEN
C = CENTRE BLACKENED
Ba = BLACKENED AREA
Sl = SLOUGHING

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = >5

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 6-BUTYL-2,4-DIMETHYL-DIHYDROPYRANE
CONCENTRATION TESTED : 100%

SOURCE : QUEST
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 24237-00-1
Purity 83.0
Spec. No. 38462

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	0	1	1.5	1	0		
OEDEMA	0	0.5	0	0	0		
ANIMAL No. 2							
ERYTHEMA	1.5	2	2	2	1.5		
OEDEMA	3	1	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	0.5	2	1.5	1.5	0.5		
OEDEMA	0	0.5	0	0	0		
ANIMAL No. 4							
ERYTHEMA	0	2	2	2	0.5		
OEDEMA	0.5	1	0	0	0		
OBSERVATIONS					De*		

De = DESQUAMATION FROM TREATED SKIN (De* = MARKED)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.04$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : n-DECYLIDENE METHYL ANTHRANILATE #
CONCENTRATION TESTED : 100%

SOURCE : BRI
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
SPECIFICATION :
EXPOSURE TIME : 4 hours
CAS No. 67874-67-3
Purity -
Spec. No. -

: synonym for decanal-methylanthranilate (Schiff base)

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		1	1.5	1	1	0		
OEDEMA		0	1	0.5	0	0		
OBSERVATIONS						Des		
ANIMAL No.	2							
ERYTHEMA		0	1.5	1.5	1	0		
OEDEMA		0	0	0.5	0.5	0		
ANIMAL No.	3							
ERYTHEMA		1	2	2	2	0		
OEDEMA		0	0.5	0.5	0	0		
ANIMAL No.	4							
ERYTHEMA		0	2	1.5	1.5	0.5		
OEDEMA		0	1.5	1	0.5	0		

Des = SLIGHT DESQUAMATION FROM THE SKIN

THE TREATED SKIN WAS STAINED YELLOW IN ANIMALS AT THE 1 & 24hr READINGS

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.08$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 2,6-DIMETHYL-2,4,6-OCTATRIENE

SOURCE : BBA

SPECIFICATION :
CAS No. 3016-19-1
Purity >95%
Spec. No. -

CONCENTRATION TESTED : 100%

VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	1.5		
OEDEMA	0.5	1	0.5	0.5	0.5		
ANIMAL No. 2							
ERYTHEMA	1.5	2.5	2	2	1.5		
OEDEMA	2	2	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1.5	2	2	2	2		
OEDEMA	3	2	0.5	0.5	0		
OBSERVATIONS					De		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	2		
OEDEMA	2	1.5	1	1	1		
OBSERVATIONS					DeTs		

De = DESQUAMATION FROM TREATED SKIN

Ts = SLIGHT THICKENING

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.0

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : 1-FORMYL-1-METHYL-4 (4-METHYL-3-PENTEN-1-YL) -3-CYCLOHEXENE

CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE

VOLUME TESTED : 0.5ml

No. OF RABBITS : FOUR

SPECIFICATION :

EXPOSURE TIME : 4 hours

CAS No. 66327-54-6
Purity 99.8%
Spec. No. 9644601

	OBSERVATION INTERVAL (days)						
	1h	1d	2d	3d	7d		
ANIMAL No. 1							
ERYTHEMA	1	2	2	2	2		
OEDEMA	0.5	2.5	2	1.5	1		
OBSERVATIONS					De		
ANIMAL No. 2							
ERYTHEMA	0.5	2	2	2	1		
OEDEMA	0	1	1.5	1.5	0		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1.5	2	2	2	1.5		
OEDEMA	0.5	2	1	1	0.5		
OBSERVATIONS					Des		
ANIMAL No. 4							
ERYTHEMA	1.5	2	2	2	2		
OEDEMA	0.5	0.5	0.5	0.5	0.5		

De = DESQUAMATION FROM THE SKIN (Des = SLIGHT)

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.29$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : d-LIMONENE [1]
CONCENTRATION TESTED : 100%

SOURCE : GIVAUDAN-ROURE
VOLUME TESTED : 0.5ml
No. OF RABBITS : THREE
SPECIFICATION :
EXPOSURE TIME : 4 hours

CAS No. 5989-27-5
Purity 98.8%
Spec. No. 6588333

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	2	2	2	2	1		
OEDEMA	3	2	1	1	1		
OBSERVATIONS					De*		
ANIMAL No. 2							
ERYTHEMA	2	2	2	2	2		
OEDEMA	4	2	2	2	3		
OBSERVATIONS					De		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	1		
OEDEMA	3	2	1	1	1		
OBSERVATIONS					De*		

De = DESQUAMATION FROM SKIN SURFACE (De* = MARKED)

$$\text{PRIMARY IRRITATION INDEX} = \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 3.56$$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : d-LIMONENE [2]
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 5989-27-5
Purity 98.8%
Spec. No. 6588333

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1	2	2	2	2		
OEDEMA	4	2	1	1	1		
OBSERVATIONS					Des		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	1		
OEDEMA	3	1	1	0	0		
ANIMAL No. 3							
ERYTHEMA	0	1	2	2	2		
OEDEMA	3	2	1	1	2		
ANIMAL No. 4							
ERYTHEMA	2	2	2	2	2		
OEDEMA	3	2	2	2	2		
OBSERVATIONS					Des		

Des = SLIGHT DESQUAMATION FROM SKIN SURFACE

PRIMARY IRRITATION INDEX = $\frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}}$ = 3.25

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : LINALOOL OXIDE
SOURCE : GIVAUDAN-ROURE
SPECIFICATION :
CAS No. 1365-19-1
Purity 97.2%
Spec. No. 7852501

CONCENTRATION TESTED : 100%
VOLUME TESTED : 0.5ml
No. OF RABBITS : FOUR
EXPOSURE TIME : 4 hours

	OBSERVATION INTERVAL (days)						
ANIMAL No. 1	1h	1d	2d	3d	7d		
ERYTHEMA	1.5	1.5	2	2	0.5		
OEDEMA	0	0.5	1	1	0.5		
ANIMAL No. 2							
ERYTHEMA	1	2	2	2	0		
OEDEMA	0.5	1	0.5	0.5	0		
ANIMAL No. 3							
ERYTHEMA	1	2	2	2	1		
OEDEMA	0.5	0.5	0.5	0.5	0		
ANIMAL No. 4							
ERYTHEMA	1	2	2	2	1		
OEDEMA	0.5	0.5	0.5	0.5	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 2.58$

SKIN IRRITATION DATA FOR INDIVIDUAL RABBITS

CHEMICAL : TONALID #
SOURCE : FIRMENICH
SPECIFICATION :
CAS No. 21145-77-7
Purity >97%
Spec. No. 88152

CONCENTRATION TESTED : 100%
WEIGHT TESTED : 0.5g
No. OF RABBITS : THREE
EXPOSURE TIME : 4 hours

: tradename for 6-acetyl-1,1,2,4,4,7-hexamethyltetraline

		OBSERVATION INTERVAL (days)						
		1h	1d	2d	3d	7d		
ANIMAL No.	1							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	2							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		
ANIMAL No.	3							
ERYTHEMA		0	0	0	0	0		
OEDEMA		0	0	0	0	0		

PRIMARY IRRITATION INDEX $= \frac{\text{SUM ERYTHEMA 24/48/72hr + SUM OEDEMA 24/48/72hr}}{\text{3 x no of animals}} = 0$

APPENDIX B. SKIN CORROSION

Definitions of Skin Corrosion

OECD Test Guideline 404 defines dermal corrosion as irreversible tissue damage, but gives no criteria for assessment. The above OECD definition was used in this study, observation of necrosis or eschar formation being interpreted as evidence of corrosive effects.

There is reasonable agreement on the definition of skin corrosion between those classification schemes which include corrosion. The following definitions are used:

AUSTRIA Destruction of the whole thickness of skin tissue,

CANADA Evidence of visible necrosis of human skin tissue; corrosive to skin when tested in accordance with OECD Test Guideline 404,

EEC Full thickness tissue destruction in at least one animal (of three tested),

FINLAND Full thickness destruction of tissue in at least one animal,

NORWAY Destruction of living tissue leaving a sore,

SWEDEN Damage of tissue causing burns,

US-CPSC Visible destruction or irreversible alterations in tissue,

US-OSHA Destruction or irreversible change in the structure of tissue in two animals (of six tested),

US-DoT Visible necrosis of the skin,

UN Full thickness destruction of the skin.

Note: an ECETOC review (ECETOC,1990) comments that the EEC definition should be amended to make clear whether "full thickness destruction refers to the epidermis or both epidermis and dermis".

Some authorities recognise more than one category of skin corrosion:

3 Categories: United Nations, US Department of Transportation,

2 Categories: European Union, Austria, Sweden,

1 Category: Finland, Norway, US Consumer Product Safety Commission.

In each case the discrimination between categories is on the basis of the duration of the exposure following which the 'corrosive' effect was observed, for example:

UNITED NATIONS:

Packing Group I (very dangerous substances)

- effect observed up to 60 minutes after the exposure time of 3 minutes or less,

Packing Group II (substances presenting medium danger)

- effect observed up to 14 days after the exposure time of more than 3, and not more than 60 minutes,

Packing Group III (substances presenting minor danger)

- effect observed up to 14 days after the exposure time of more than 60 minutes and not more than 4 hours.

US Department of Transportation (US-DoT):

Packing Group I

- Substances that cause visible necrosis of the skin at the site of contact when tested on the intact skin of an animal for a period of not more than 3 minutes,

Packing Group II

- Substances that cause visible necrosis of the skin at the site of contact when tested on the intact skin of an animal for a period of more than 3 but not more than 60 minutes,

Packing Group III

- Substances that cause visible necrosis of the skin at the site of contact when tested on the intact skin of an animal for a period of not more than four hours.

Note: the UN-RTDG (1993) phraseology was the same as that of US-DoT (1993) before the former was updated from 'visible necrosis' to 'full thickness destruction' in 1993. Presumably the US-DoT wording will in due time be amended to match that of UN-RTDG.

EEC:	causes severe burns (R35)	- up to 3 minutes exposure,
	causes burns (R34)	- up to 4 hours exposure.
AUSTRIA:	severely corrosive	- up to 3 minutes exposure,
	corrosive	- up to 4 hours exposure.
SWEDEN:	highly corrosive	- up to 3 minutes exposure,
	corrosive	- up to 4 hours exposure.

Criteria for Identification of "Corrosive Effects"

Other than the definitions of "corrosive" effects ("full tissue destruction" etc), the only test method to present criteria on the basis of which a test material can be identified as being "corrosive" is 16 CFR 173.240 (US-CPSC, 1994):

> "Corrosion will be considered to have resulted if the substances in contact with the rabbit skin have caused destruction or irreversible alteration of the tissue on at least two out of each six rabbits tested. Tissue destruction is considered to have occurred if, at any of the readings, there is ulceration or necrosis. Tissue destruction does not include merely sloughing of the epidermis, or erythema, oedema, or fissuring"

Additional Criteria for Classification as Corrosive

References to classification as corrosive on the basis of "human experience" are made by:

CANADA: "if there is evidence that it causes visible necrosis of human skin tissue" (Canada, 1987),

US-CPSC: "if, by human experience, visible destruction or irreversible alterations in tissue occur at the site of contact" (US-CPSC, 1994),

US-DoT: "a corrosive material is a liquid or solid that causes visible destruction or irreversible alterations in human skin tissue at the site of contact" (US-DoT, 1993),

UN: "account should be taken of human experience in instances of accidental exposure. In the absence of human experience the grouping should be based on data obtained from animal experiments in accordance with OECD Test Guideline 404" (UN-RTDG, 1993).

APPENDIX C. CLASSIFICATION BASED ON SKIN CORROSION OR IRRITATION

The following summary of classification schemes is believed to be correct at the time of publication. Readers are advised to check the validity of the statements made.

C.1. European Community (EEC, 1993)

Definitions:

Corrosion: symbol/code: C

- a substance or a preparation is considered to be corrosive if, when it is applied to intact healthy animal skin, it produces full thickness destruction of skin tissue on at least one animal during the test for skin irritation cited in Annex V or during an equivalent method or if the result can be predicted, for example from strongly acidic or alkaline reactions (demonstrated pH of 2 or less or 11.5 or greater. Alkaline or acidic reserve should also be taken into account).

Two levels of corrosivity are recognised by the assignment of different risk phrases:

- R 35: Causes severe burns if
  - when applied to healthy intact animal skin, full thickness destruction of skin tissue occurs as a result of up to 3 minutes exposure, or if this result can be predicted;
- R 34: Causes burns if
  - when applied to healthy intact animal skin, full thickness destruction of skin tissue occurs as a result of up to 4 hours exposure, or if this result can be predicted.

Irritation: symbol/code Xi

- R 38: Irritating to skin
  - substances or preparations which cause significant inflammation of the skin which persists for at least 24 hours after an exposure period of up to 4 hours determined on the rabbit according to the cutaneous irritation test method cited in Annex V.

Inflammation of the skin is significant if:

- the mean value of the scores for either erythema and eschar formation or oedema formation, calculated over all the animals tested, is 2 or more,

- or, in the case where the Annex V test has been completed using 3 animals, either erythema and eschar formation or oedema formation equivalent to a mean value of 2 or more calculated for each animal separately has been observed in 2 or more animals.

In both cases all scores at each of the reading times (24, 48, and 72 hours) for an effect should be used in calculating the respective mean scores.

Inflammation of the skin is also significant if it persists in at least two animals at the end of the observation time. Particular effects e.g. hyperplasia, scaling, discolouration, fissures, scabs and alopecia should be taken into account.

Substances and preparations which cause significant inflammation of the skin, based on practical observation in man are also classified.

C.2. **Canada** (Canada, 1987)

Definitions:

Corrosion:

A product, material or substance shall be included in Class E - Corrosive Material ..... if

(a) .....

(b) it is corrosive to skin when tested in accordance with OECD Test Guideline 404 (May 12 1981),

(c) it is included in Class 8 in Part III of the Transportation of Dangerous Goods Regulations (TDGR),

(d) it is a gas included in Division 4 of Class 2 in Part III of TDGR,

(e) there is evidence that it causes visible necrosis of human skin tissue, or

(f) it is an untested mixture containing a product, material or substance that meets the criteria referred to in paragraph (b) or (e) and is present at a concentration of at least 1%.

Skin irritation:

A pure substance or tested mixture falls into Subdivision B of Division 2 of Class D - Poisonous and Infectious Material if, in an animal assay,

(a) mean erythema formation grade is 2

- or more mean oedema formation grade is 2 or more
- when tested in accordance with OECD Test Guideline No 404 (May 12, 1981) as measured at any of the times specified in the test.

C.3. **Finland** (Finland, 1986)

Definitions:

Corrosive: symbol C

- a substance which, when applied to healthy intact skin, causes full thickness destruction of tissue in at least one animal in a test carried out according to instructions, or if this result can be predicted, for example from the strong acidity or alkalinity of the substance.

Irritant to skin: symbol Xi

- a substance which, when applied to healthy intact skin, causes significant inflammation which is present 24 hours or more after the end of the exposure period in a test carried out according to instructions. Inflammation is significant if the mean value of the scores for either erythema and eschar formation, or oedema formation, is 2 or more.

C.4. United States of America

(a) Occupational Safety and Health Standards (US-OSHA, 1993)

Definitions:

Corrosive:

- a chemical that causes visible destruction or irreversible alterations in living tissue at the site of contact ..... when tested on the intact skin of albino rabbits ..... following an exposure period of 4 hours. This term shall not refer to action on inanimate surfaces.

Irritant:

- a chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact ..... when tested on the intact skin of albino rabbits ..... for 4 hours.

Evaluation criteria:

Skin irritation (method CFR 1500.41):

- Erythema and eschar formation, and oedema formation, are evaluated (a) 24 and 72 hours after removal of the patches on (b) intact and abraded rabbit skin, giving 4 values for each rabbit for both erythema and eschar formation and oedema formation. The total of the 8 values is divided by 4 to give the primary irritation score. If this empirical score is 5 or more, the chemical is a skin irritant.

(b) Federal Hazardous Substances Regulations (US-CPSC, 1994)

Definitions:

Corrosive:

- any substance which in contact with living tissue will cause destruction of tissue by chemical action, but shall not refer to action on inanimate surfaces.

Irritant:

- any (not corrosive) substance which on immediate, prolonged, or repeated contact with normal living tissue will induce a local inflammatory reaction.

Criteria for classification:

Corrosive:

- if, by human experience, visible destruction or irreversible alterations in tissue occur at the site of contact,

- if, when tested by the technique described in CFR 1500.41 the tissue at the site of contact is destroyed or changed irreversibly in 24 hours or less.

Irritant:

- includes "primary irritant to the skin" as well as substances irritant to the eye or to mucous membranes. "Primary irritant" means a substance that is not corrosive and that human experience data indicate is a primary irritant and/or means a substance that results in an empirical score of 5 or more when tested by the method described in CFR 1500.41.

Toxicity test methods:

- US Department of Transportation method (US-DoT, 1993) and CFR 1500.41 specified for skin corrosion and skin irritation respectively.

(c) Federal Insecticide, Fungicide, and Rodenticide Act (US-FIFRA, 1984)

FIFRA assigns products to one of four categories based on toxicological properties.

For skin effects, the criteria are as follows:

Category I Corrosive (tissue destruction into the dermis and/or scarring),
Category II Severe irritation at 72 hours (severe erythema or oedema),
Category III Moderate erythema at 72 hours (moderate erythema),
Category IV Mild or slight irritation (no irritation or slight erythema).

The labels of products assigned to Categories I, II, III, IV on the basis of skin effects are required to carry the signal words DANGER, WARNING, CAUTION, CAUTION respectively.

C.5. United Nations-Related Organisations

"CORROSIVES" constitute Class 8 of dangerous goods in the "Orange Book" (UN-RTDG, 1993).

Classification criteria.

Class 8 dangerous substances are allocated to the three packing groups based on the length of time of contact necessary to produce visible necrosis on intact animal skin:

Packing Group I (very dangerous substances):

- Substances that cause full thickness destruction of intact skin tissue within an observation period up to 60 minutes starting after the exposure time of three minutes or less,

Packing Group II (substances presenting medium danger):

- Substances that cause full thickness destruction of intact skin tissue within an observation period up to 14 days starting after the exposure time of more than three minutes but not more than 60 minutes,

Packing Group III (substances presenting minor danger):

(a) Substances that cause full thickness destruction of intact skin tissue within an observation period up to 14 days starting after the exposure time of more than 60 minutes but not more than 4 hours,

(b) Substances which are judged not to cause full thickness destruction of intact skin tissue but which exhibit a corrosion rate on steel or aluminium surfaces exceeding 6.25mm a year at a test temperature of 55^{0}C..... .

Toxicity test methods:

OECD Test Guideline 404 is to be used.

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