Structural formula: (position of label)

[U-14C-triazole]CGA 64250

02027	_	* = 14C
4.2	Specification	
4.3	Storage stability	Not applicable
4.4 vehicle	Stability in	Not applicable
4.5 vehicle	Homogeneity in	Not applicable
4.6	Validity	Not applicable
5	Vehicle / solvent	Stock solution in acetone adsorbed onto ground corn cobs in gelatin capsules
6	Physical form	See 5
7.1	Test method	In house method. Guidelines were not available at the time the test was performed.
7.2	Justification	Report was accepted by several European Authorities and by EPA
7.3	Copy of method	Description of the test method is included in the report
8 method	Choice of	Not applicable
9	Deviations	Not applicable
10.1 laboratory	Certified	Not applicable
10.2 authority	Certifying	Not applicable
10.3	GLP	No
10.4	Justification	When the study was performed, GLP was not required
11.1	GEP	Not applicable
11.2 (official or offi	Type of facility icially recognized)	
11.3	Justification	Not applicable

12	Test system	Test species:	laying hens (strain: Leghorn)
----	-------------	---------------	-------------------------------

Source:

Age/weight (at time of

dosing):

oral application Application

on 16 consecutive days 1 application with [Phenyl-¹⁴C]CGA 64250/hen1 or [Triazole-¹⁴C]CGA 64250/hen2 equivalent to Dose levels:

54.2 ppm and 48.0 ppm in feed, respectively

stock solution in acetone adsorbed onto ground corn cobs in gelatin capsules, 5.49 mg and 5.99 mg 14 C CGA 64250 / vehicles or solvents used/concentration:

capsule, respectively

1.58 kg and 1.68 kg

Group size: one hen per label

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Analytical methods: The hens were acclimatized for 6 days prior to dosing. Excreta

and eggs were collected daily and the eggs were separated into yolks and whites. About 24 hours after the last dose the hens were sacrificed and blood and tissue samples were collected as follows: liver, kidney, muscle, skin and fat. Quantitation of the radioactivity in tissues and extracts was by combustion with subsequent LSC-measurement or direct LSC-measurement,

respectively. Not applicable

Radioactive areas on

plates:

Not used

Non-radioactive standards:

Radioassay: Liquid scintillation counting

13 Findings

At _______, two chickens were orally dosed--one with phenyl- and one with triazole-¹⁴C labeled propiconazole--for 16 consecutive days at 54.2 ppm and 48.0 ppm, respectively. The chickens were sacrificed 24 hours after the last dose.

The objectives of this study were to compare metabolism of phenyl-¹⁴C-propiconazole and triazole-¹⁴C-propiconazole in chickens.

Most of the radioactivity was eliminated in the excreta regardless of label.

Radioactivity levels in the egg yolk and egg white fluctuated and accounted from 0.13% to 0.36% of the total ¹⁴C for both labels. Plateau in yolks and whites was reached after 11 dosings between 0.870 ppm and 1.180 ppm.

Very small portion of the radioactivity was in tissues (0.17-0.27%). Radioactive levels in tissues and blood showed label differences -- in muscle 7-fold, in skin 1.5-fold and in blood 3.5-fold higher for the triazole label than the phenyl label, indicating a cleavage between the phenyl and triazole ring.

Over 60.9% of the ¹⁴C was extractable regardless of the label. The ratio of organic soluble components to aqueous soluble components varied by tissue type. Egg yolk and egg white were mainly organic soluble (55.%-77.4%) for both labels.

With the exception of fat tissue, the nonextractable components in the samples for phenyl label were higher (20.3%-40.6%) than for the triazole label (3.1%-25.1%).

14 Statistics Not applicable

15 References No publications cited in this summary

(published)

16 References No unpublished data cited in this summary

(unpublished)

17 Reliability Indicator 1

Data Protection Claim Yes

Table 1: Residual radioactivity in tissues, eggs and excreta of hens after oral administration of 48.0 ppm [U-¹⁴C-triazole]CGA 64250 and 54.2 ppm [U-¹⁴C-phenyl]CGA 64250 in the feed.

[U- ¹⁴ C-triazole]CGA 64250	[U-14C-phenyl]CGA 64250
--	-------------------------

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Tissue	ppm	% of Total Dose	ppm	% of Total Dose
Liver	1.587	0.060	1.823	0.060
Kidney	1.442	0.020 2.028		0.025
Br. Muscle	0.446	0.100	0.100 0.046	
Th. Muscle	0.405	0.060	0.072	0.010
Br. Skin	0.226	0.010	0.169	0.010
Th. Skin	0.278	0.010	0.180	0.010
Fat	0.142	0.012	0.190	0.020
Blood	0.666	0.070	0.187	0.020
Egg Yolk		0.21		0.13
day 1	0.339		0.092	
day 5	0.601		0.514	
day 10	0.985		0.752	
day 16	0.896		0.737	
Egg White		0.36		0.20
day 1	0.684		0.276	
day 5	0.494		0.396	
day 10	0.864		0.127	
day 16	0.578		0.327	
Excreta		102.70		94.10
CO ₂		not sampled		not sampled
Total		103.61		94.60

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	Evaluation by Competent Authorities
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	27.6.2005
Materials and Methods	
Results and discussion	
Conclusion	
Reliability	
Acceptability	
Remarks	

	COMMENTS FROM
Date	Give date of comments submitted
Materials and Methods	Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion. Discuss if deviating from view of rapporteur member state
Results and discussion	Discuss if deviating from view of rapporteur member state
Conclusion	Discuss if deviating from view of rapporteur member state
Reliability	Discuss if deviating from view of rapporteur member state
Acceptability	Discuss if deviating from view of rapporteur member state
Remarks	

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6

Physical form

See 5

98/8 Doc IIIA section	6.2/18	Metabolism studies in mammals. Basic toxicokinetics, including a
No.	6.2/19	dermal absorption study
91/414 Annex	II	Biokinetics and metabolism in farm animals
Point addressed	5.1.3 / 04a	
	5.1.3 / 04b	

Title Part A: Biological Report for the Metabolism of 14C-Propiconazole in Laying Hens 1.2 Part B: Metabolism of [Phenyl-14C] Propiconazole in Chickens 1.3 Report and/or BIOL-89009 (Part A) and F-00051 (Part B) project N° 64250/2468 (Part A) 64250/2022 (Part B) Syngenta File N° (SAM) Lab. Report Nº 6.3 / 02 (A, B) 1.5 91/414 Cross Reference Authors 1.6 Report: Summary: 1.7 Date of report January 5, 1990 (Part A) June 7, 1990 (Part B) 1.8 Published / No / Syngenta Limited Owner 2.1 **Testing facility** 2.2 Dates of March 29, 1989 (Application) November 30, 1989 (Completion of analytical work) experimental work 3. Objectives see findings 4.1 Test substance ISO common name Propiconazole Trade name TILT Batch ¹⁴C-labelled test substance No [] Specific activity of [U-14Cphenyl]CGA 64250 Radiochemical purity of the test substance Structural formula: [U-14C-phenyl]CGA 64250 (position of label) * = 14C4.2 Specification 4.3 Storage stability Not applicable 4.4 Stability in Not applicable vehicle 4.5 Homogeneity in Not applicable vehicle 4.6 Validity Not applicable 5 Vehicle / solvent Stock solution adsorbed onto granular cellulose in gelatin capsules

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7.1	Test method	EPA Pesticide Assessment Guidelines, Subdivision O, 171-4			
7.2	Justification	Reregistration of Propiconazole			
7.3	Copy of method	Description of the test method is included in the report			
8 method	Choice of	Not applicable			
9	Deviations	Not applicable			
10.1 laboratory	Certified	Not applicable			
10.2 authority	Certifying	Not applicable			
10.3	GLP	Yes			
10.4	Justification	=			
11.1	GEP	Not applicable			
11.2 (official or offi	Type of facility cially recognized)				
11.3	Justification	Not applicable			
12	Test system	Test species:	laying hens (strain: Leghorn)		
12	Test system	Test species: Source:	laying hens (strain: Leghorn)		
12	Test system	Source: Age/weight (at time of	laying hens (strain: Leghorn) 50 wks / 1.5 - 1.9 kg		
12	Test system	Source: Age/weight (at time of dosing): Application	50 wks / 1.5 - 1.9 kg oral application		
12	Test system	Source: Age/weight (at time of dosing):	50 wks / 1.5 - 1.9 kg oral application on 8 consecutive days 1 application with [Phenyl- ¹⁴ C]CGA		
12	Test system	Source: Age/weight (at time of dosing): Application	50 wks / 1.5 - 1.9 kg oral application		
12	Test system	Source: Age/weight (at time of dosing): Application Dose levels: vehicles or solvents used/concentration: Group size: Analytical methods:	oral application on 8 consecutive days 1 application with [Phenyl- ¹⁴ C]CGA 64250/hen equivalent to 67 ppm in feed stock solution adsorbed onto granular cellulose in gelatin capsules, 10 mg ¹⁴ C CGA 64250 / capsule four hens The hens were acclimatized for 16 days prior to dosing. Excreta and eggs were collected daily and the eggs were separated into yolks and whites. Six hours after the last dose the hens were sacrificed and blood and tissue samples were collected as follows: liver, kidney, lean meat, skin + fat, peritoneal fat, heart, gizzard and crop. Quantitation of the radioactivity in tissues and extracts was by combustion with subsequent LSC-measurement or direct LSC-measurement, respectively.		
12	Test system	Source: Age/weight (at time of dosing): Application Dose levels: vehicles or solvents used/concentration: Group size:	oral application on 8 consecutive days 1 application with [Phenyl- ¹⁴ C]CGA 64250/hen equivalent to 67 ppm in feed stock solution adsorbed onto granular cellulose in gelatin capsules, 10 mg ¹⁴ C CGA 64250 / capsule four hens The hens were acclimatized for 16 days prior to dosing. Excreta and eggs were collected daily and the eggs were separated into yolks and whites. Six hours after the last dose the hens were sacrificed and blood and tissue samples were collected as follows: liver, kidney, lean meat, skin + fat, peritoneal fat, heart, gizzard and crop. Quantitation of the radioactivity in tissues and extracts was by combustion with subsequent LSC-measurement or direct LSC-measurement,		

13 Findings

The metabolism of [Phenyl-¹⁴C]propiconazole was determined utilizing the in-life facilities (from 29 March 89 to 5 April 89). Four laying hens were dosed daily with 10 mg of ¹⁴C-propiconazole (67 ppm in feed based on 150 g feed/day intake) in a gelatin capsule for 8 consecutive days. Eggs and excreta were collected during the dosing phase. Six hours after the last dose, the animals were sacrificed and tissues excised. From 73 to 87 % of administered ¹⁴C-dose was found in excreta. Edible tissues were found to contain the following levels of ¹⁴C-residues calculated as propiconazole: liver (3.2-5.0 ppm), kidney (3.3-

Liquid scintillation counting

Radioassay:

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5.3 ppm), fat (0.5-0.7 ppm), and muscle (0.3-0.6 ppm). Egg ¹⁴C-residues were determined in whites and yolks: egg whites (maximum of 0.70 ppm at 5 days) and egg yolks (maximum of 1.67 ppm at 7 days).

Three major metabolites were identified in poultry:

A: propiconazole

B: 1-{[2-(2,4-dichlorophenyl)-4-(2-hydroxypropyl)-1,3-dioxolan-2-yl]methyl}-1H-1,2,4-triazole

C: 1-{[2-(2,4-dichlorophenyl)-2-hydroxy]ethyl}-1H-1,2,4-triazole

Metabolites A, B and C accounted for most of the ¹⁴C-residues found in tissues and eggs: liver (87%), kidney (51%), fat (87%), muscle (89%), egg white (96%) and egg yolk (88%).

14 Statistics Not applicable

15 References No publications cited in this summary

(published)

6 References No unpublished data cited in this summary

(unpublished)

17 Reliability Indicator 1

Data Protection Claim	Yes

Table 1: Residual radioactivity in tissues, eggs and excreta of hens after oral administration of 67 ppm [U-¹⁴C-phenyl]CGA 64250 in the feed.

	[U- ¹⁴ C-phenyl]CGA 64250		
Tissue	ppm ¹	% of Total Dose	
Liver	3.94		
Kidney	4.19		
Gizzard	2.38		
Crop	2.28		
Peritoneal Fat	0.98		
Heart	0.71		
Blood	0.69		
Skin/Fat	0.59		
Thigh Muscle	0.40		
Breast Muscle	0.33		
Egg Yolk			
day 1	0.05		
day 2	0.42		
day 3	0.91		
day 4	1.26		
day 5	1.30		
day 6	1.54		
day 7	1.67		
day 8	1.53		
Egg White			
day 1	0.15		
day 2	0.33		
day 3	0.34		
day 4	0.31		
day 5	0.70		
day 6	0.59		
day 7	0.31		
day 8	0.27		
Excreta		82.9	

¹ as ppm propiconazole equivalents

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Table 2: Summary of metabolite characterization in tissue and eggs of laying hens dosed with [U-¹⁴C-phenyl]CGA 64250

Animal Parts ¹	Residues [ppm]	Acetonitrile Extract [% of total residues]				Water Extracts [%]	N.E.	Recovery [%]
	9	total	CGA 64250	CGA 118244	CGA 91305			
Liver	3.24	73.1	1.5	3.0	59.0	12.6	17.8	103.5
Kidney	3.33	94.3	2.0	2.0	44.5	11.1	17.9	123.3
Thigh Muscle	0.32	106.2	7.5	2.0	85.0	2.5	2.3	111.0
Fat/Skin	0.56	100.3	40.0	4.0	43.0	0.5	1.8	102.6
Egg White (day 6)	0.37	103.0	28.0	52.5	18.5	1.75	1.8	104.8
Egg Yolk (day 6)	1.18	82.8	12.5	9.0	51.5	(*)	14.3	97.1

¹ Values from one animal

Figure 1: Proposed metabolic pathway for CGA 64250 in laying hens²

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² Metabolites detected with the phenyl labelled propiconazole

	Evaluation by Competent Authorities
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	27.6.2005
Materials and Methods	<u> </u>
Results and discussion	
Conclusion	
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Remarks	

	COMMENTS FROM
Date	Give date of comments submitted
Materials and Methods	Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion. Discuss if deviating from view of rapporteur member state
Results and discussion	Discuss if deviating from view of rapporteur member state
Conclusion	Discuss if deviating from view of rapporteur member state
Reliability	Discuss if deviating from view of rapporteur member state
Acceptability	Discuss if deviating from view of rapporteur member state
Remarks	

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10.2

authority 10.3

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Certifying

GLP

not applicable

no

98/8 Doc IIIA section No.	6.3.1	Repeated dose toxicity (oral)
91/414 Annex	II.	Short-term toxicity - oral 28-day studies
Point addressed	5.3.1 / 01	

1.2 Title CGA 64'250 techn.: 28 days cumulative toxicity study on rats 1.3 Report and/or 79 16 95 project N° 64250 / 1596 Syngenta File N° (SAM) 1.4 Lab. Report N° 79 16 95 91/414 Cross 1.5 5.3.1 / 01 Reference to original study / report 1.6 Authors Report: Summary: 1.7 Date of report November 11, 1980 1.8 Published / Unpublished / Syngenta owner **Testing facility** 2.1 22 Dates of April 28 to June 2, 1980 experimental work 3. Objectives Investigation of cumulative toxicity in rats 4.1 Test substance CGA 64'250, technical grade active ingredient x4.2 Specification 4.3 Storage stability Dose solutions were freshly prepared every day before the administration 4.4 Stability in vehicle 4.5 Homogeneity in not applicable vehicle 4.6 Validity not applicable 5 Vehicle / solven 2% aqueous carboxymethylcellulose 6 Physical form viscous liquid 7.1 Test method not specified 7.2 Justification The study was conducted before the OECD Guideline 407 was released 7.3 Copy of method Methodological details are part of the original report submitted under 5.3.1 / 01 Choice of not applicable method Deviations from Neurological examinations beyond normal clinical inspections were not conducted. Other, EC-Directive 92/69 B7 formal deviations are outlined below. 10.1 Certified not applicable laboratory

10.4 Justification The study was performed before GLP regulations were enacted. **GEP** 11.1 not applicable 11.2 Type of facility (official or officially recognised) Justification not applicable x12 Test system Animal species: Rat, Tif RAIf (SPF) Source: 0, 50, 150 and 450 mg/kg Dose levels: 10 males and 10 females Group size: Young adult (8 weeks), 211-221 g (males) and 181-191g (females) Age/weight: Administration: Oral by gastric intubation Study duration: 28 days General study Daily treatment (10 ml/kg), 7 days per week for 4 weeks. Design: Mortality: Twice daily Clinical signs: Daily Ophthalmology: Pretest and before sacrifice in all individuals Hearing test: Pretest and before sacrifice in all individuals Body weight: Weekly Food consumption: Weekly At the end of the treatment period (5 animals per sex and group) Hematology: Red blood cells Erythrocyte count (RBC) ✓ Mean corp. hemoglobin (MCH) Mean corp. Hb. conc. (MCHC) ✓ Hemoglobin (Hb) ✓ Hematocrit (Hct) Red cell vol. distr. width (RDW) ✓ Mean corp. volume (MCV) Hb conc. distr. width (HDW) White blood cells ✓ Lymphocytes (differential) Total leukocyte count Neutrophils (differential) Monocytes (differential) Eosinophils (differential) Large unstained cells (diff.) Basophils (differential) Clotting Potential ✓ Prothrombine time ✓ Thrombocyte count Clinical chemistry: At the end of the treatment period (5 animals per sex and group) Electrolytes Calcium ✓ Potassium Chloride Sodium Phosphorus (inorganic) Metabolites and Proteins Albumin ✓ Globulin A/G ratio Glucose Bilirubin (total) Protein (total) Cholesterol ✓ Urea Creatinine Enzymes. Alanine aminotransferase (ALT) ✓ Alkaline phosphatase (ALP) Aspartate aminotransferase (AST) ✓ γ-glutamyl transpeptidase (γ-GT) Urinalysis: At the end of the treatment period (5 animals per sex and group) Quantitative parameters: Urine volume ✓ pH-value ✓ Relative density Semiquantitative parameters: Bilirubin ✓ Ketones Blood ✓ Protein Color Urobilirubin ✓ Glucose Pathology: The following organs were collected (column C), weighed (W) and examined histopathologically (H) from all individuals CWH adrenals pituitary

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~		aorta	1		prostate
1	1	brain			rectum
		caecum	~		salivary gland
1		colon	1		prostate
1		duodenum			seminal vesicles
		epididymides	1		skin
1		esophagus	1		spinal cord
1		eyes	1		spleen
		femur (with joint)	1		sternum with bone marrow
		gross lesions	1		stomach
1	V	heart	1	1	testis
1		ileum	1		thymus
1		jejunum	1		thyroid/parathyroid
1	1	kidneys	1		trachea
		lacrymal glands	1		urinary bladder
1	V V	liver	1		uterus
1		lung			
1		lymph nodes			others:
1		mammary gland (female)			muzzle
1		muscle, skeletal			orbital gland
1		nerve, peripheral			tongue
1	1	ovary			Zymbal gland
1		pancreas			body (exsanguinated)

x13 Findings

Mortality: Three females (2 from the top dose group and one treated at 150 mg/kg) died during the study. The deaths were not considered to be related to the treatment.

Clinical signs: The top dose group females generally showed sedation, ruffled fur and dyspnea during the first week of treatment. No symptoms were noted during later phases of the study.

Ophthalmology: No treatment-related changes.

Hearing test: No treatment-related changes.

xBody weight: A minimally reduced body weight gain was noted in the top dose group males. Differences did not attain statistical significance.

Food consumption: Minimally reduced in top dose group females. Differences did not attain statistical significance.

xHematology: Minimally reduced RBC counts and hemoglobin concentrations in the females from the top dose group. Slightly increased MCV in both sexes treated at 450 mg/kg. Minimally increased thrombocyte counts in all treated males. All changes were of insufficient manitude to be toxicologically significant.

xClinical chemistry: Minimally increased plasma glucose concentrations in all treated females, minimally increased $\alpha 2$ globulin fraction in both sexes and reduced γ globulins in the females. Higher chloride concentration in females of the top dose group. All changes were of insufficient manitude to be toxicologically significant.

xUrinalysis: The specific gravity was slightly increased in males treated at 150 and 450 mg/kg and in the females of the top dose group.

xOrgan weights: Absolute and relative liver weights were dose-relatedly increased in all treated females and in the males treated at 150 mg/kg and above.

Pathology: A minimal to moderate hypertrophy of hepatocytes was noted in both sexes receiving 150 mg/kg CGA 64°250 and higher. In addition, focal liver necroses were diagnosed in several females from the top dose group and in one male treated at 150 mg/kg.

NOEL: Males 50 mg/kg. No NOEL reached in the females.

14 Statistics Uni-variate analysis. Comparison to controls by Lepage-test, trend analysis by the

Jonckheere t-test.

15 References none

(published)

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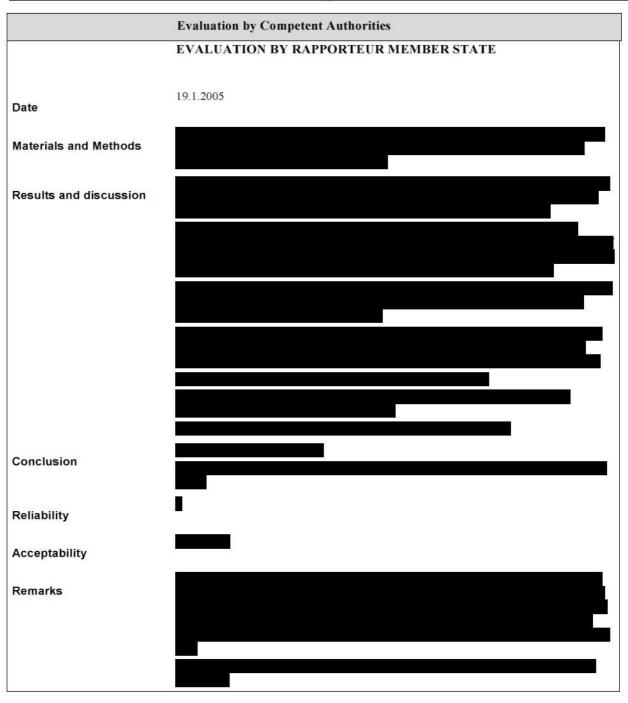
16 Unpublished none

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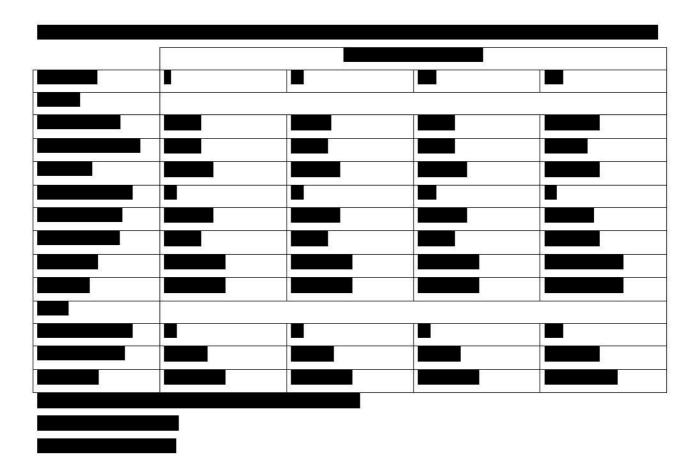
x17 Reliability 1

Indicator





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	COMMENTS FROM
Date	Give date of comments submitted
Materials and Methods	Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion. Discuss if deviating from view of rapporteur member state
Results and discussion	Discuss if deviating from view of rapporteur member state
Conclusion	Discuss if deviating from view of rapporteur member state
Reliability	Discuss if deviating from view of rapporteur member state
Acceptability	Discuss if deviating from view of rapporteur member state
Remarks	

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98/8 Doc IIIA section No.	6.3.2/01	Repeated dose toxicity (dermal)
91/414 Annex	II	Short-term toxicity - other routes
Point addressed	5.3.3 / 01	

1.2 Title CGA 64'250 techn.: 21 day percutaneous toxicity study in rabbits Report and/or 79 00 07 project N° 64250 / 1595 Syngenta File N° (SAM) Lab. Report N° 79 00 07 1.5 91/414 Cross 5.3.3 / 01 Reference to original study / report Authors 1.6 Report: Summary: 1.7 Date of report May 30, 1980 1.8 Published / Unpublished / Syngenta owner 2.1 Testing facility Dates of 2.2 August 13 to September 9, 1979 experimental work 3. Objectives Investigation of cumulative dermal toxicity in rabbits 4.1 Test substance CGA 64'250, technical grade active ingredient x4.2 Specification 4.3 Storage stability stable at room temperature 4.4 Stability in not applicable vehicle 4.5 Homogeneity in not applicable vehicle 4.6 Validity not applicable 5 Vehicle / solven The test material was applied undiluted Physical form viscous liquid 7.1 Test method not specified 7.2 Justification The study was conducted before the OECD Guideline 410 was released 7.3 Copy of method Methodological details are part of the original report submitted under 5.3.3 / 01 Choice of not applicable method Deviations from The duration of treatment was 21 instead of the 28 days recommended. Doses higher than EC-Directive 92/69 B9 1'000 mg/kg are not required. Testing on abraded skin is not required. Other, formal deviations are outlined below. 10.1 Certified not applicable laboratory 10.2 Certifying not applicable authority 10.3 GLP no

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10.4 Justification The study was performaed before GLP regulations were enacted. **GEP** 11.1 not applicable 11.2 Type of facility (official or officially recognised) Justification not applicable x12 Test system Animal species: Rabbit, New Zealand White Source: 0, 200, 1'000 and 5'000 mg/kg Dose levels: 10 males and 10 females Group size: Age/weight: 2.0-2.6 kg Administration: Dermal application to shaved skin under occlusive dressing for 6 hours to an area of 8.5 x 6.5 cm (10% of the body surface). Study duration: 28 days General study Daily treatment, 5 days per week for 3 weeks. In half of the animals, the Design: skin was abraded before the start and in the middle of the study period. Mortality: Daily Daily Clinical signs: Local irritation: Daily Body weight: Weekly Food consumption: Weekly At the end of the treatment period (all animals) xHematology: Red blood cells Erythrocyte count (RBC) Mean corp. hemoglobin (MCH) √ Hemoglobin (Hb) Heinz Bodies Hematocrit (Hct) Reticulocytes Mean corp. volume (MCV) Methemoglobin White blood cells Total leukocyte count ✓ Lymphocytes (differential) Neutrophils (differential) ✓ Monocytes (differential) Eosinophils (differential) Large unstained cells (diff.) ✓ Basophils (differential) Clotting Potential ✓ Partial thromboplastin time ✓ Prothrombine time ✓ Thrombocyte count xClinical chemistry: At the end of the treatment period (all animals) Electrolytes Calcium ✓ Potassium Chloride Sodium Phosphorus (inorganic) Metabolites and Proteins Albumin Globulin A/G ratio Glucose ✓ Bilirubin (total) Protein (total) Cholesterol Urea Protein electrophoresis Creatinine Enzymes: ✓ Lactate dehydrogenase (LDH) Alanine aminotransferase (ALT) ✓ Alkaline phosphatase (ALP) Aspartate aminotransferase (AST) ✓ γ-glutamyl transpeptidase (γ-GT) Urinalysis: nor performed Pathology: The following organs were collected (column C), weighed (W) and examined histopathologically (H) from all individuals. WH pituitary adrenals prostate aorta brain rectum caecum salivary gland colon duodenum seminal vesicles epididymides skin (treated and untreated) esophagus spinal cord

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eyes

spleen

October 2013

femur (with joint) sternum with bone marrow stomach gross lesions heart testis ileum thymus jejunum thyroid/parathyroid kidneys trachea lacrymal glands urinary bladder live uterus lung lymph nodes others: mammary gland (female) muzzle muscle, skeletal orbital gland nerve, peripheral tongue Zymbal gland ovary pancreas body (exsanguinated)

13 Findings

Mortality: No mortality occurred.

Clinical signs: At 1'000 mg/kg and above, dyspnea, tremor, ataxia, sedation and ruffled fur were noted from days 4 onwards.

xLocal irritation: In all treated groups, slight irritation was noted at the application site.

xBody weight: A minimally reduced body weight gain was noted in the top dose group animals.

Food consumption: No changes.

xHematology: An increased plasma bilirubin concentration was noted in the top dose group males. In the absence of any effect in the females, no toxicological significance was attributed to the finding.

xClinical chemistry: No changes.

xOrgan weights: Increased absolute and relative liver weights were noted in both sexes treated at 5'000 mg/kg.

Pathology: The application site showed chronic inflammatory changes, focal acanthosis and hyperkeratosis with a dose-related increasing incidence and severity. Some individuals from the top dose group had necroses and ulcerations, in addition. The intensity of the dermal changes in the low dose group animals was similar to that seen in several control rabbits. The slight changes in this groups were therefore attributed to the occlusive administration procedure. No other treatment related changes were noted.

NOEL: The NOEL for systemic toxicity was 200 mg/kg. Slight skin irritation was still observed at this low dose level.

14 Statistics Uni-variate analysis. Comparison to controls by Lepage-test, trend analysis by the

Jonckheere t-test.

15 References none

(published)

16 Unpublished none

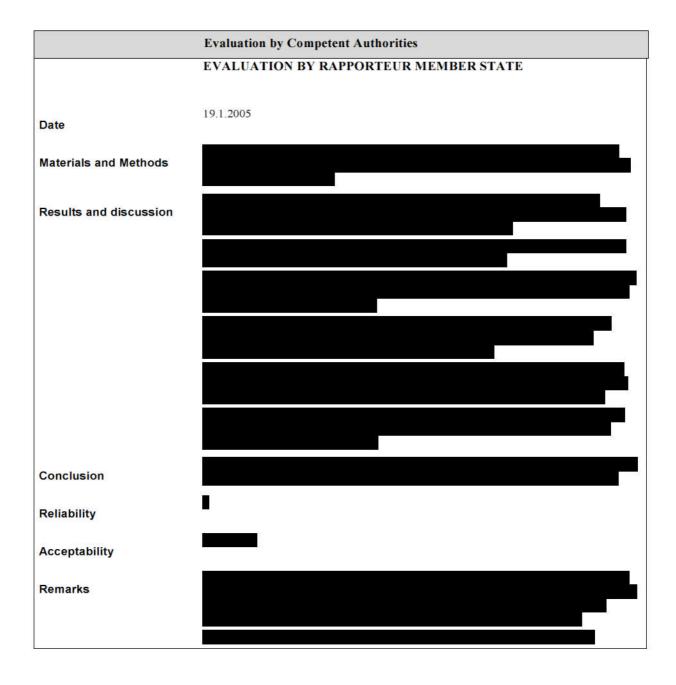
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x17 Reliability 1

Indicator

Data Protection Claim	Yes

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	COMMENTS FROM
Date	Give date of comments submitted
Materials and Methods	Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.
	Discuss if deviating from view of rapporteur member state
Results and discussion	Discuss if deviating from view of rapporteur member state
Conclusion	Discuss if deviating from view of rapporteur member state
Reliability	Discuss if deviating from view of rapporteur member state
Acceptability	Discuss if deviating from view of rapporteur member state
Remarks	

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98/8 Doc IIIA	6.3.2/02	Repeated dose toxicity (dermal)
section No. 91/414 Annex	II	Short-term btoxicity - other routes
Point addresse	d 5.3.3 / 01	Sept. 46-12-9-9-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
1.2	Title	CGA 64'250 techn.: 28 day Repeated Dose Dermal Toxicity Study in Rats
1.3	Report and/or	993102
project N° Syngenta File	N° (SAM)	64250 / 4412
1.4	Lab. Report N°	re-c
1.5	91/414 Cross	5.3.3 / 01
Reference to o	original study /	
report	Authora	Report
1.6	Authors	Report:
1.7	Date of report	March 20, 2001
1.8	Published /	Unpublished / Syngenta
owner	Tootie	
2.1	Testing facility	
x2.2 experimental v	Dates of work	September 30 to October 19, 1999
3.	Objectives	Investigation of cumulative dermal toxicity in rats
	_	
4.1		CGA 64'250, technical grade active ingredient
x4.2	Specification	
4.3	Storage stability	stable at room temperature
4.4 vehicle	Stability in	stable
4.5 vehicle	Homogeneity in	homogene
4.6	Validity	not applicable
x5		Distilled water, 1% CMC, 0.1 Tween 80
6		viscous liquid
	B)	
7.1	Test method	OECD 410
7.2	Justification	Not applicable
7.3	Copy of method	On request
8 method	Choice of	not applicable
9	Deviations from	Not applicable
EC-Directive 92	2/69 B9	
40.4	Continue	not applicable
10.1 laboratory	Certified	not applicable
10.2 authority	Certifying	not applicable
10.3	GLP	yes
10.4	Justification	Not applicable
10.4	GEP	not applicable
13.1	OLF	пот аррисаоте

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11.2 Type of facility (official or officially recognised)

Justification 11.3 not applicable

x12 Test system Albino Rat (Hanl bm:WIST (SPF)) Animal species:

Source:

0, 10, 100, 1000 mg/kg Dose levels: 40 males and 40 females Group size:

Age/weight: 141 - 228 gr

Administration: Dermal application to shaved skin under occlusive dressing for

6 hours to an area of at least 10% of the body surface

Study duration: 6 weeks

General study

Daily treatment, 5 days per week for 3 weeks, and 7 days the 4th week Design:

Mortality: Clinical signs: Daily

Local irritation: 17 hours after completion of each treatment

day 1,8,15,22,28 Body weight:

Food consumption:

At the end of the treatment period (all animals) Hematology:

Red blood cells

White blood cells

Erythrocyte count (RBC) ✓ Mean corp. hemoglobin (MCH) ✓ Heinz Bodies

√ Hemoglobin (Hb) √ Hematocrit (Hct) Reticulocytes ✓ Mean corp. volume (MCV) ✓ Methemoglobin

Total leukocyte count Neutrophils (differential)

✓ Monocytes (differential) Eosinophils (differential) Large unstained cells (diff.)

✓ Lymphocytes (differential)

Basophils (differential)

Clotting Potential ✓ Partial thromboplastin time ✓ Prothrombine time ✓ Thrombocyte count

Urinalysis: nor performed

Pathology: The following organs were collected (column C), weighed (W) and examined histopathologically (H) from all individuals.

CWH WHpituitary Adrenals prostate Aorta 1 Brain rectum Caecum salivary gland

Colon Duodenum

seminal vesicles **Epididymides** Skin (treated and untreated)

Esophagus spinal cord Eyes spleen

femur (with joint) sternum with bone marrow

gross lesions stomach Heart testis Ileum thymus

1 Jejunum thyroid/parathyroid Kidneys trachea

lacrymal glands urinary bladder 1 Liver uterus Lung

lymph nodes others: mammary gland (female) muzzle muscle, skeletal orbital gland nerve, peripheral tongue

ovary pancreas

x13 **Findings**

Mortality: No mortality occurred.

Clinical signs: No clinical signs were observed.

Doc IIIA 6 Page 119 of 267 xLocal irritation:

No occurrence of local irritation was observed.

Table 6.3.2/02 Microscopic findings at the application site: incidence and grading. (added by RMS)

		Males				Female	s		
Skin at the applica-	Dose mg/kg	0	10	100	1000	0	10	100	1000
tion site	No. Exam.	10	10	10	10	10	10	10	10
Acanthosis grade 1 grade 2		8	7 0	9	8 2	1 0	3	0	8
Hydropic cl grade 1	nange	1	2	1	0	0	0	0	0
Hyperkerate Grade 1	osis	1	4	8	6	2	0	1	1

This table is a modification of a tble presented in the test report. Grade 1=minimal; grade 2=slight

Body weight: No changes.

Food consumption: No changes.

Hematology: Treatment had no effect on the hematological profile of the rats.

xBlood chemistry Slightly higher values for protein and globulin with an associated decrease in the albumin to globulin ratio were recorded for females at 1000 mg/kg. In addition, females of group 4 (1000 mg/kg) had an increased cholesterol level and females of group 3 and 4 (100 and 1000 mg/kg) had lower values for chloride. The blood chemistry profile of treated males was not disturbed by treatment.

Clinical chemistry: No changes.

xOrgan weights: The mean absolute/relative liver weights were increased in high dose males (+19%/+15%) and females (+14%/+10%).

No other treatment-related effects were noted.

xPathology: Dermal treatment with the test item over a period of 4 weeks was well tolerated by the rats at all tested dose levels. There were no signs of overt toxicity. At dose levels of 1000 and 100 mg/kg, few blood chemistry parameters were changed in females only, and in both sexes the mean liver weights were increased at 1000 mg/kg. These findings point to the occurrence of adaptive metabolic processes. At the site of application increased incidence of minimal acanthosis was detected in females (1000 mg/kg). Due to the obvious adaptive nature of all observed effects, they were considered to be not adverse.

NOEL: The NOEL was at 10 mg/kg body weight and the NOAEL was defined at 1000 mg/kg body weight.

14 Statistics Parametric and non-parametric statistical tests. Comparison to controls by Dunnett's

multiple comparison test.

15 References

(published)

erences None

16 Unpublished None

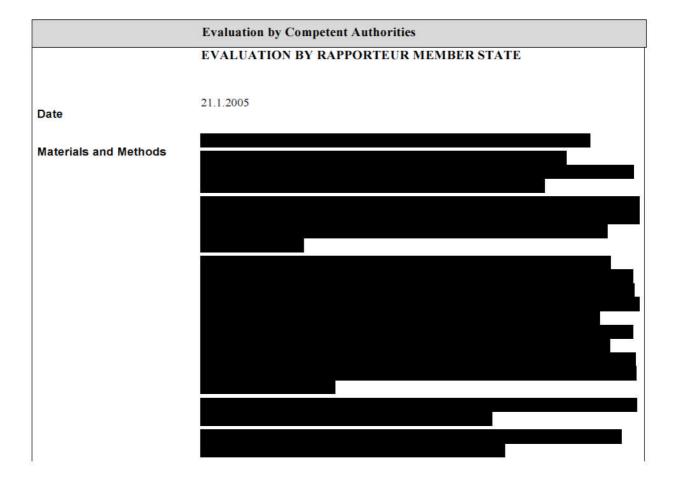
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17 Reliability 1

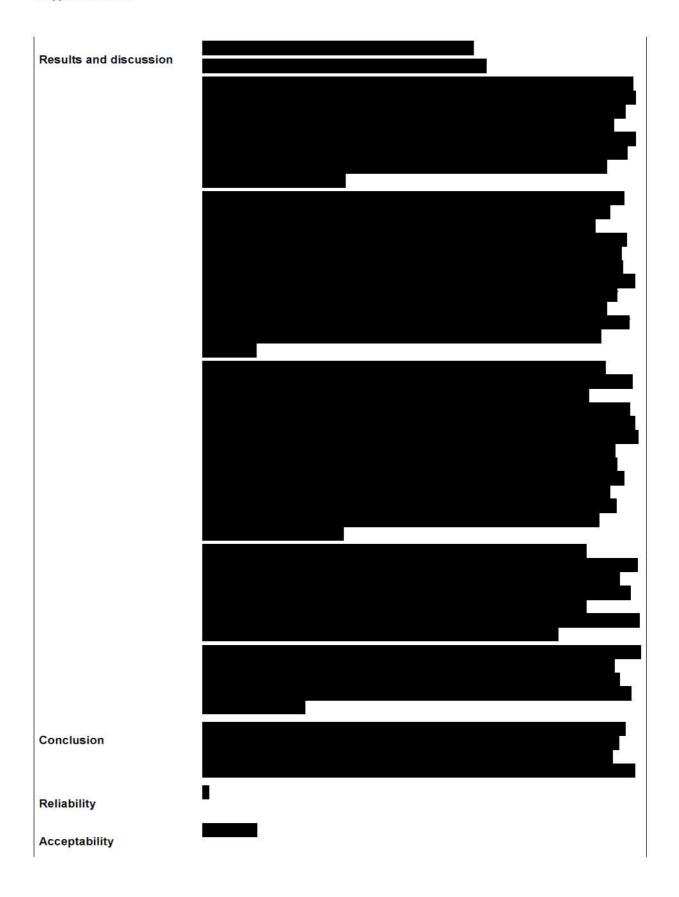
Indicator

Data Protection Claim	Yes

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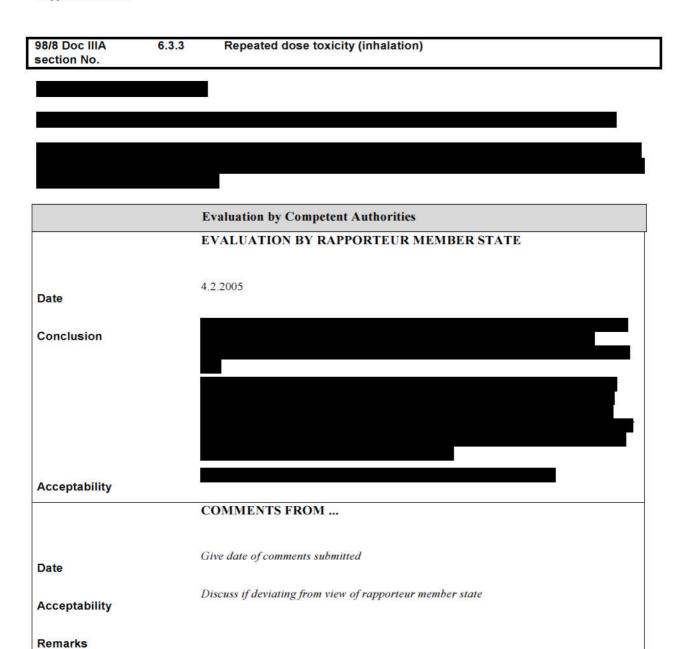


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	COMMENTS FROM
Date	Give date of comments submitted
Materials and Methods	Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion. Discuss if deviating from view of rapporteur member state
Results and discussion	Discuss if deviating from view of rapporteur member state
Conclusion	Discuss if deviating from view of rapporteur member state
Reliability	Discuss if deviating from view of rapporteur member state
Acceptability	Discuss if deviating from view of rapporteur member state
Remarks	

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98/8 Doc IIIA section No.	6.4.1/01	Subchronic oral toxicity test
91/414 Annex Point addressed	II 5.3.2 / 01	Short-term toxicity - oral 90-day studies

1.2	Title	CGA 64'250 techn.: Three months toxicity study on rats
1.3 project N° Syngenta File	Report and/or N° (SAM)	79 00 14 64250 / 1538
1.4	Lab. Report N°	79 00 14
1.5 Reference to c	91/414 Cross original study /	5.3.2 / 01
1.6	Authors	Report: Summary:
1.7	Date of report	August 30, 1979
1.8 owner	Published /	Unpublished / Syngenta
2.1	Testing facility	
2.2 experimental	Dates of work	January 15 to April 17, 1979
3.	Objectives	Investigation of short-term toxicity in rats
4.1	Test substance	CGA 64'250, technical grade active ingredient
x4.2	Specification	
4.3	Storage stabilit	The a.i. is known to be stable at room temperature.
4.4 vehicle	Stability in	Confirmed. Prior to the initiation of the study and after the end of the treatment period diet samples were analysed. Mean concentrations in all samples were in the range of 87 to 95% of the intended values.
4.5 vehicle	Homogeneity in	Not specifically tested. As all samples analysed were in the same concentration range, a homogeneous mixture was achieved.
4.6	Validity	not applicable
5	Vehicle / solver	The test substance was admixed to the powdered standard diet. 12% of water was added and the mixture was pelleted. Pellets were air dried.
6	Physical form	viscous liquid
7.1	Test method	not specified
7.2	Justification	The study was conducted before the OECD Guideline 408 was released
7.3	Copy of method	Methodological details are part of the original report submitted under 5.3.2 / 01
8 method	Choice of	not applicable
9 EC-Directive 8		Not all of the suggested biochemical parameters were investigated. Formal deviations are outlined below.
10.1 laboratory	Certified	not applicable
10.2 authority	Certifying	not applicable
10.3	GLP	No

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10.4 Justification The study was performed before GLP regustions were enacted. **GEP** 11.1 not applicable 11.2 Type of facility (official or officially recognised) Justification not applicable x12 Test system Animal species: Rat, Tif RAIf (SPF) Source: 0, 240, 1'200 and 6'000 ppm (= mg/kg diet) Dose levels: 20 males and 20 females Group size: Young adult (4 weeks), 123-125 g (males) and 111-116g (females) Age/weight: Administration: Oral with the diet 28 days Study duration: General study Design: Continuous dietary treatment over 3 months Twice daily Mortality: Clinical signs: Daily Ophthalmology: Pretest and before sacrifice in all individuals Hearing test: Pretest and before sacrifice in all individuals Body weight: Weekly Food consumption: Weekly After 4, 8 and 13 weeks (10 animals per sex and group) Hematology: Red blood cells Erythrocyte count (RBC) ✓ Mean corp. hemoglobin (MCH) Mean corp. Hb. conc. (MCHC) ✓ Hemoglobin (Hb) ✓ Hematocrit (Hct) Red cell vol. distr. width (RDW) Mean corp. volume (MCV) Hb conc. distr. width (HDW) White blood cells ✓ Lymphocytes (differential) Total leukocyte count Neutrophils (differential) Monocytes (differential) Eosinophils (differential) Large unstained cells (diff.) Basophils (differential) Clotting Potential ✓ Prothrombine time ✓ Thrombocyte count Clinical chemistry: After 4, 8 and 13 weeks (10 animals per sex and group) Electrolytes Calcium Potassium Chloride Sodium Phosphorus (inorganic) Metabolites and Proteins Albumin Globulin A/G ratio Glucose Bilirubin (total) Protein (total) Cholesterol Urea Creatinine Protein electrophoresis Enzymes: ✓ Lactate dehydrogenase (LDH) Alanine aminotransferase (ALT) ✓ Alkaline phosphatase (ALP) Aspartate aminotransferase (AST) ✓ γ-glutamyl transpeptidase (γ-GT) Urinalysis: After 4, 8 and 13 weeks (10 animals per sex and group) Quantitative parameters: Urine volume ✓ pH-value ✓ Relative density Semiquantitative parameters: Bilirubin ✓ Ketones Blood ✓ Protein ✓ Urobilirubin Color ✓ Glucose ✓ Sediment Pathology: The following organs were collected (column C), weighed (W) and examined histopathologically (H) from all individuals. CWH CWH adrenals pituitary ✓ prostate aorta

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✓ ✓ brain rectum salivary gland caecum colon duodenum seminal vesicles epididymides spinal cord esophagus spleen eyes femur (with joint) sternum with bone marrow gross lesions stomach ✓ testis heart ileum thymus jejunum thyroid/parathyroid kidneys trachea urinary bladder lacrymal glands liver uterus lung lymph nodes others: mammary gland (female) muzzle muscle, skeletal orbital gland nerve, peripheral tongue Zymbal gland ovary pancreas body (exsanguinated)

x13 Findings

Mortality: No mortality occurred.

Clinical signs: No symptoms were noted during the study.

Ophthalmology: No treatment-related changes.

Hearing test: No treatment-related changes.

xBody weight: A significantly reduced body weight gain was noted in both sexes from the top dose group and in the females treated at 1'200 ppm CGA 64'250.

xFood consumption: No treatment-related changes.

xHematology: Red blood cell parameters (RBC, Hb, Hct) were slightly but consistently reduced in both sexes treated at 6'000 ppm.

xClinical chemistry: In the top dose group, the serum activity of the γ -GT was increased in males and females. The females showed a higher ALP activity at week 13.

Urinalysis: No treatment-related changes.

Organ weights: No treatment-related changes. Differences in organ weights were considered to be secondary to the reduced body weight in intermediate dose group females and top dose groups.

xPathology: A slight hemosiderosis of the spleen was noted in females receiving 6'000 mg/kg CGA 64'250

NOEL: The NOEL was 240 ppm, estimated to be equivalent to a mean daily intake of 15.9 mg/kg propiconazole in males and 16.8 mg/kg in females, respectively.

14 Statistics Uni-variate analysis. Comparison to controls by Lepage-test, trend analysis by the Jonckheere t-test.

15 References none

(published)

Unpublished none

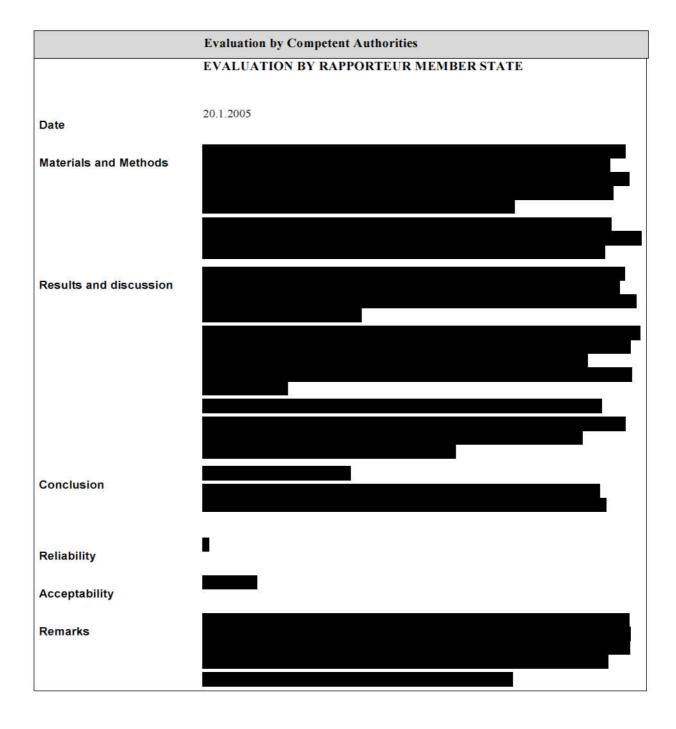
16 data

x17 Reliability 1

Indicator

Data Protection Claim	Yes

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	COMMENTS FROM
Date	Give date of comments submitted
Materials and Methods	Discuss additional relevant discrepancies referring to the (sub)heading numbers and to applicant's summary and conclusion.
	Discuss if deviating from view of rapporteur member state
Results and discussion	Discuss if deviating from view of rapporteur member state
Conclusion	Discuss if deviating from view of rapporteur member state
Reliability	Discuss if deviating from view of rapporteur member state
Acceptability	Discuss if deviating from view of rapporteur member state
Remarks	

PP 2.504 / WM / 25.10.1994

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98/8 Doc IIIA section No.	6.4.1/02	Subchronic oral toxicity test
91/414 Annex	11	Short-term toxicity - oral 90-day studies
Point addressed	5.3.2 / 02	SECURITY CONTROL CONTR

1.2 Title CGA 64'250 techn.: 3-month toxicity study on dogs Report and/or 78 57 51 project N° 64250 / 1539 Syngenta File N° (SAM) x1.4 Lab. Report N° 78 58 51 1.5 91/414 Cross 5.3.2 / 02 Reference to original study / report 1.6 Authors Report: Summary: 1.7 Date of report August 9, 1979 Published / 1.8 Unpublished / Syngenta owner 2.1 Testing facility Dates of December 18, 1978 to March 19, 1979 experimental work 3. **Objectives** Investigation of short-term toxicity in dogs 4.1 Test substance CGA 64'250, technical grade active ingredient x4.2 Specification 4.3 Storage stability The a.i. is known to be stable at room temperature. 4.4 Stability in Confirmed. Diet samples were analysed in week 1, 5, 8 and 13. Mean concentrations in all vehicle groups were in the range of 92 to 97% of the nominal values. 4.5 Homogeneity in Not specifically tested. As all samples analysed were in the same concentration range, a vehicle homogeneous mixture was achieved. 4.6 Validity not applicable Vehicle / solven The test substance was admixed to the powdered standard diet. 18 % of water was added and the mixture was pelleted. Pellets were air dried. 6 Physical form viscous liquid 7.1 Test method not specified 7.2 Justification The study was conducted before the OECD Guideline 409 was released 7.3 Copy of method Methodological details are part of the original report submitted under 5.3.2 / 02 8 Choice of not applicable method Deviations from Not all of the suggested biochemical parameters were investigated. Formal deviations are EC-Directive 87 / 302 B outlined below. 10.1 Certified not applicable laboratory 10 2 Certifying not applicable authority 10.3 GLP no 10.4 Justification not applicable

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