

STUDY TITLE**Report**

¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F)
Study on the Kinetics in Mice

DATA REQUIREMENT

OECD Guideline No. 417
OPPTS 870.7485
Commission Regulation (EC) No 440/2008
Japan/MAFF

AUTHORS

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STUDY COMPLETED ON

09 October 2009

PERFORMING LABORATORY

Experimental Toxicology and Ecology
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LABORATORY PROJECT IDENTIFICATION

Project No.: 02B0250/096008

SPONSOR

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Study report; Projekt No.: 02B0250/096008

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No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA sec.10(d)(1)(A), (B) or (C). This claim specifically supersedes any claim of implication of confidentiality contained in this document.

Company: **BASF Corporation, Agricultural Products**
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Company Agent:

Title:

Signature:

Date:



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GLP COMPLIANCE STATEMENT

This study was conducted in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act) which meet the United States Environmental Protection Agency Good Laboratory Practice Standards [40 CFR Part 160 (FIFRA) and Part 792 (TSCA)], with the exception that recognized differences exist between the GLP Principles/Standards of OECD and the Principles/Standards of FIFRA and TSCA.

 09. Oct 2009
Dr. E. Fabian
(Study Director)

To be filled for USA EPA submission only:

Sponsor Date
Submitter Date

Statement for US EPA submissions only:

FLAGGING CRITERIA

The flagging criteria of 40 CFR 158.34 are not applicable for this study type

SIGNATURE PAGE

Study Director:

 09 Oct 2009
.....
Dr. E. Fabian

Management:

 07 Oct 2009
.....
Dr. R. Landsiedel

**STATEMENT
OF THE QUALITY ASSURANCE UNIT**

The Quality Assurance Unit (QAU) inspected the study and reported any inspection results to the Study Director and to Management.

The final report reflects the raw data.

Phase of study	Date of inspection [mm-dd-yyyy]	Report to Study Director and to Management [mm-dd-yyyy]
Study Plan:	07-29-2009	07-29-2009
Conduct of study	08-06-2009	08-06-2009
Report	09-08-2009	09-08-2009

Ludwigshafen, 07 Oct. 2009

..... *Helt*

M.ABT

GLP-certificate of the test facility**RheinlandPfalz****Gute Laborpraxis / Good Laboratory Practice****GLP-Bescheinigung / Statement of GLP Compliance**

(gem. /according to § 19 Abs. 1 Chemikaliengesetz)

Eine GLP-Inspektion zur Überwachung und der Einhaltung der GLP-Grundsätze gemäß Chemikaliengesetz bzw. Richtlinie 88/320/EG wurde durchgeführt in:

Assessment of conformity with GLP according to Chemikaliengesetz and Directive 88/320/EEC at:

Prüfeinrichtung / Test facility

BASF Aktiengesellschaft
Experimentelle Toxikologie und Ökologie
67056 Ludwigshafen

BASF Aktiengesellschaft
Experimental Toxicology and Ecology
67056 Ludwigshafen, Germany

Prüfung nach Kategorien / Areas of Expertise
(gem. / according ChemVwV-GLP Nr. 5.3/OECD guidance)

1,2,3,4,5,8,9

Kat. 9 – Biochemische und pathologische Untersuchungen zu Wirkmechanismen /
Biochemical and pathological examinations concerning mode of action

Datum der Inspektion / Date of Inspection

(Tag.Monat.Jahr / day.month year)

08.06.2005 und 25. bis 27.07.2005

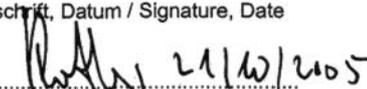
Die genannte Prüfeinrichtung befindet sich im nationalen GLP-Überwachungsverfahren und wird regelmäßig auf Einhaltung der GLP-Grundsätze überwacht.

The above mentioned test facility is included in the national GLP Compliance Programme and is inspected on a regular basis.

Auf der Grundlage des Inspektionsberichtes wird hiermit bestätigt, dass in dieser Prüfeinrichtung die oben genannten Prüfungen unter Einhaltung der GLP-Grundsätze durchgeführt werden können.

Based on the inspection report it can be confirmed, that the test facility is able to conduct the aforementioned studies in compliance with the Principles of GLP.

Unterschrift, Datum / Signature, Date


.....
Dr.-Ing. Karl-Heinz Rother - Präsident -
(Name und Funktion der verantwortlichen Person / name and function of responsible person)

Landesamt für Umwelt, Wasserwirtschaft und Gewerbeaufsicht
Kaiser-Friedrich-Straße 7
55116 Mainz

.....
(Name und Adresse der GLP-Überwachungsbehörde /
Name and address of the GLP Monitoring Authority)

Landesamt für
Umwelt, Wasserwirtschaft
und Gewerbeaufsicht



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1. SUMMARY

After single oral administration of ^{14}C -Reg.No. 5570265 (Metabolite of BAS 700 F) to male mice at a nominal dose level of 1000 mg/kg bw and an actual dose level of 841.1 mg/kg bw, the total radioactive residues (TRR) 5h post dosing were 1.61 μg Eq/g in bone marrow corresponding to 0.0002 % of dose. In liver radioactive residues of 32.82 μg Eq/g were found corresponding to 0.230 % of dose. In blood cells and plasma radioactive residues of 0.59 μg Eq/g and 1.51 μg Eq/g were found, corresponding to 0.0005 and 0.0011 % of dose, respectively.

Taken together, these data demonstrate that ^{14}C -Reg.No. 5570265 (Metabolite of BAS 700 F) reaches the systemic circulation including bone marrow, after oral application of a nominal dose of 1000 mg/kg bw.

2. INTRODUCTION

BAS 700 F is to be used as a fungicide. The aim of this study was to generate information on the kinetics of its metabolite, radiolabeled ^{14}C - Reg.No. 5570265 (Metabolite of BAS 700 F) in mice. It is of special interest for the assessment of the results of a micronucleus test in mice, if the test item reaches the systemic circulation (plasma and blood cells) and the bone marrow. In addition, radioactive residues should be determined in the liver.

Studies on the biokinetics of a test substance provide relevant information for the evaluation of test results from other toxicological studies and for the extrapolation of data from animals to man.

3. MATERIAL AND METHODS

3.1. TEST GUIDELINES

The study was performed taking following guidelines into account:

- Commission Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Part B: Methods for the determination of toxicity and other health effects: Toxicokinetics; Official Journal of the European Union, No. L 142
- OECD Guidelines for Testing of Chemicals; Method No. 417 Toxicokinetics, Version dated 4.4.1984
- U.S. EPA, Health Effects Guidelines, OPPTS 870.7485, Metabolism and Pharmacokinetics, August 1998
- Japan/MAFF: Guidelines on the Compiling of Test Results on Toxicity; Tests on In Vivo Fate In Animals, 2001

3.2. TIME SCHEDULE

Study initiation date: 28 July 2009

Experimental starting date: 28 July 2009 (arrival of the animals)

Experimental completion date: 12 August 2009 (last LSC measurement)

3.3. STUDY PERSONAL

Study director: Dr. Eric Fabian

Technicians: Beate Korgel
Jürgen Lindemann
Christina Goth
Andreas Nickel

3.4. TEST ITEMS

3.4.1. ¹⁴C-labeled test substance

3.4.1.1. ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F)

Name of test substance: C14-Reg.No. 5570265 (Metabolite of BAS 700 F)
Test substance No.: 09/0250-001
Batch identification: 957-1019
Radiochemical Purity: 98.3%
Homogeneity: Homogeneous
Stability: see 4.1

ADDITIONAL TEST SUBSTANCES INFORMATION

IUPAC-Name: 3-(difluoromethyl)-1-(β-D-glucopyranosyl)-N-(3',4',5'-trifluorobiphenyl-2-yl)-1H-pyrazole-4-carboxamide
Synonym: C14-Reg.No. 5570265 (Metabolite of 700 F)
Radio label: Aniline-U-C₁₄
Specific activity (AI): 4.82 MBq/mg
Molecular formula: C₂₃H₂₀F₅N₃O₆
Molecular weight (unlabeled): 529.4184 g/mol

Storage conditions: At low temperature and in the dark

Detailed data of the test substance were found in the raw data and at Ecology and Environmental Analytics of the Agricultural Center Limburgerhof of BASF SE, Ludwigshafen, Germany.

3.4.2. Non – radiolabeled material

3.4.2.1. Reg.No. 5570265 (Metabolite of BAS 700 F)

Name of test substance: Reg.No. 5570265 (Metabolite of BAS 700 F)

Test substance No.: 09/0008-5

Batch identification: L81-110

Purity 94.3 % (tolerance \pm 1.0%)

Homogeneity homogeneous

Stability: Expiration date: 01 Apr 2011

The stability of the test substance under storage conditions over the test period was guaranteed by the sponsor, and the sponsor holds this responsibility.

ADDITIONAL TEST SUBSTANCE INFORMATION

IUPAC-Name: 3-(difluoromethyl)-1-(β -D-glucopyranosyl)-N-(3',4',5'-trifluorobiphenyl-2-yl)-1H-pyrazole-4-carboxamide

Synonyms. M700F048

Molecular weight: 529.4 g/mol

Molecular formula: $C_{23}H_{20}F_5N_3O_6$

Physical state/ Appearance: Solid, beige

Storage conditions: Ambient (RT)

Detailed data of the test substance were found in the raw data and at Ecology and Environmental Analytics of the Agricultural Center Limburgerhof of BASF SE, Ludwigshafen, Germany.

3.5. STABILITY, HOMOGENEITY AND CONCENTRATION CONTROL ANALYSES OF THE TEST ITEM PREPARATIONS

Stability in vehicle:	The stability of the radioactive test items in the vehicle was verified in the experiments by LSC and Radio-HPLC (see 4.1).
Homogeneity and achieved concentrations:	The homogeneity and achieved radioactivity concentrations of the test item preparations were verified by liquid scintillation counting in the experiments (see 4.1).

The analyses of the test substance preparations were carried out by Experimental Toxicology and Ecology, Biokinetic Laboratory, BASF SE, Ludwigshafen, Germany.

3.6. HPLC ANALYSIS OF RADIOCHEMICAL PURITY

The stability, homogeneity and correctness of the concentration of the test item preparations as well as the radiochemical purity of ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F) were checked via HPLC (HP1100) under the following conditions:

Column:	Phenomenex Luna 5 μ c18 (2) 100 A, 250 x 3mm	
Eluent:	A	Acetonitile/ Formic acid (1000mL+1mL)
	B	highly deionised water / Formic acid (1000mL+1mL)
Gradient:	0 min: 90% B	
	10 min: 10% B	
	11 min: 90% B	
	16 min: 90 % B	
Flow:	0.8 ml/min	
Detection:	UV-Extinction at 200/220 nm HPLC Radioactivity Monitor LB 509 (Cell: YG 75-S6M)	

3.7. TEST SYSTEM

Animals:	Mice
Strain:	CrI:NMRI
Origin:	Charles River Laboratories, Research Models and Services, Germany GmbH, Sandhofer Weg 7, 97633 Sulzfeld
Sex:	Male
Age:	At least about 5 weeks at the date of administration
Weight:	30.50 ± 1.22 g (mean ± SD; body weight was determined prior to dosing)
Rationale:	Recognized by international guidelines as the recommended test system. Study data have to be interpreted in the context of other data from the same test system.

3.8. HUSBANDRY

Room:	Animals were kept under conventional hygienic conditions in an air-conditioned room at 20 - 24°C and 30 - 70% relative humidity. These parameters were maintained under central control. Lighting: natural day/night rhythm with additional artificial light as required during working hours.
Identification, Caging:	<p>During acclimatization and prior to the experiment animals were housed in groups in Macrolon cages type M III.</p> <p>During the experiments animals were housed in groups in steel wire mesh cages (Becker & Co., Castrop-Rauxel, FRG).</p> <p>All cages were labeled with the project number, animal number, and dosed animals with the dose and time of application.</p> <p>The bedding was assayed for contaminants (chlorinated hydrocarbons and heavy metals). The values given in Lab</p>

	<p>Animal, Nov.–Dec. 1979, pp 24–33, were served as the guideline for maximum tolerable contaminants.</p>
Enrichment:	<p>During acclimatization:</p> <p>Nest-building material: wood wool (Typ NBF E-011); Abbedd® Lab. and Vet. Service GmbH Vienna, Austria.</p> <p>Wooden gnawing blocks (Typ NGM E-022); Abedd® Lab. and Vet. Service GmbH Vienna, Austria.</p> <p>PLEXX mouse tunnel (red, transparent) EMSICON Jung GmbH, Forstinning, Germany.</p> <p>The items used for enrichment were regularly assayed for contaminants (chlorinated hydrocarbons and heavy metals).</p>
Diet:	<p>Kliba lab diet (mouse / rat “GLP”) pelleted.</p> <p>Origin: Provimi Kliba SA, 4303 Kaiseraugst, Switzerland ad libitum prior to and during the experiment.</p>
Water:	<p>Tap water ad libitum</p>
Analysis of diet:	<p>The food used in the study was assayed for chemical and microbial contaminants. Fed. Reg. Vol. 44, No. 91 of May. 09, 1979, p 27354 (EPA), was served as the guideline for maximum tolerable contaminants. According to recommendations of the GV-SOLAS, the total amount of bacteria has not exceed $1 \cdot 10^5$ per g food.</p> <p>In view of the aim and duration of this study, the level and type of contaminants founded in commercial feed was considered not to influence the results of the study.</p>
Analysis of water:	<p>The drinking water was regularly assayed for chemical contaminants by the municipal authorities of Frankenthal and by the Environmental Analytics Water/Steam Monitoring of BASF SE as well as for microbiological contaminants by a contract laboratory. The Drinking Water Regulation served as the guideline for maximum tolerable contaminants.</p> <p>In view of the aim and duration of the study there were no special requirements exceeding the specifications of drinking water.</p>

Selection of animals:	Animals were selected based on health status and in order to provide a narrow range of body weights.
Health status and clinical examinations:	The health status of the animals was checked prior to and during the experiments.
Total number of animals in study:	3 animals

3.9. DOSE SELECTION, DOSE GROUP

By request of the sponsor, the following dose level was selected:

Oral administration:	Target dose	1000 mg/kg bw
	¹⁴ C-Reg.No. 5570265	and 2 MBq /animal
	(Metabolite of BAS 700 F)	

Rationale for dose selection:

The study was designed to obtain data on kinetics and to demonstrate that the test item reaches the systemic circulation and the bone marrow.

The resulting doses were assessed to be tolerated by the animals, based on repeated dose studies with Reg.No. 5570265 (Metabolite of BAS 700 F).

3.10. PREPERATION OF THE TEST ITEM

A stock solution of the radiolabeled test item ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F) was prepared in Acetonitrile and unlabeled Reg.No. 5570265 (Metabolite of BAS 700 F) was added to achieve a nominal concentration of 100 mg/mL. The Acetonitrile was evaporated and the mixture was solved in corn oil. 10 mL/kg bw were dosed. The target quantity of radioactivity per animal was about 2 MBq.

3.11. ADMINISTRATION OF TEST MATERIAL

10 ml/kg body weight of a preparation was administered to mice by gavage.

3.12. STUDY DESIGN

The study was designed to obtain data on kinetics and to demonstrate that the test item reaches the systemic circulation and the bone marrow.

3.12.1. Experiment 1:

Animals:	3 males
Dosing:	1000 mg / kg bw orally by gavage
Analysis:	<ul style="list-style-type: none">- Sacrifice by decapitation in isoflurane anaesthesia 5 hours post dosing- Collection of blood/plasma; Separation of blood cells and plasma- Collection of bone marrow from the two femors- Section of the liver- Analysis of total radioactive residues in liver, plasma, blood cells and bone marrow

3.13. ANALYSIS AND MEASUREMENTS

3.13.1. Sampling and Sampleweight

The body weight was determined on the day of application prior dosing. The weights of all samples were determined.

3.13.2. Total radioactivity in biological material

In the Laboratory for Biokinetics (GV/TB), the radioactivity was determined in the following sample: blood cells, plasma, bone marrow, liver.

The samples were prepared for analysis using conventional methods described in standard operating procedures, any additional measures/deviations from standard practice were detailed in the raw data. Radioactivity was counted in a liquid scintillation counter. Total radioactivity was measured.

3.14. DATA PROCESSING

- Calculations

Depending on the preparation of the samples the appropriate formulas were chosen.

Key of abbreviations	Dimension
DPM = disintegrations per minute (abs. or per sample)	[DPM]
LSC = weight of sample, prepared for liquid scintillation counting (LSC)	[g]
SOL = weight of soluene	[g]
FRE = weight of freeze drying sample	[g]
SAM = weight of organs/Tissue	[g]
AQU = weight of double distilled water	[g]
ACT = specific activity of test article	[DPM/ μ g]
EQUITIS = equivalents of test article per tissue weight	[μ g/g]
D _{rad} = dose of radioactivity administered	[DPM]

Formula I

$$\% \text{ of } D_{rad} = \frac{\sum_{n=1}^n DPM_n / LSC_n}{n} \times \frac{SOL}{FRE} \times (SAM + AQU) \times \frac{100}{D_{rad}}$$

Formula II

$$EQUITIS = \frac{\sum_{n=1}^n DPM_n / LSC_n}{n} \times \frac{SAM + AQU}{SAM \times ACT}$$

Formula III

$$DPM = \left(\left(TRR \left[\frac{\mu g}{g} \right] \right) * \left(Spec.activity \left[\frac{MBq}{g} \right] * 60 \right) * Pool_{sampleweight} [g] \right)$$

Formula IV

$$\% Dose = \left(DPM \left(Radioact.dose \left[\frac{MBq}{animal} \right] * 60000000 \right) \right) * 100\%$$

3.15. RETENTION OF RECORDS

GLP-relevant records and materials are stored at BASF SE for at least the period of time specified in the GLP principles. Details concerning responsibilities or locations of archiving can be seen from the respective SOPs and from the raw data.

3.16. ANIMAL WELFARE

This study was performed in an AAALAC-approved laboratory in accordance with the German Animal Welfare Act and the European Council Directive 86/609/EEC.

4. RESULTS AND DISCUSSION

Data discussed in the following sections are presented in tables 1 and 2.

4.1. STABILITY, HOMOGENEITY AND CONCENTRATION CONTROL ANALYSES OF THE TEST SUBSTANCE PREPARATIONS

The analytical investigations performed in the context of this study demonstrated the stability and the homogeneity of ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F) in the vehicle for the performed experiment. The concentration of the test item preparation of 841.1 mg/kg bw and was confirmed by analysis.

The analysis were performed by LSC-measurements and by HPLC.

4.2. BIODYNAMICS INVESTIGATIONS

Values of the amounts of residual radioactivity after a single oral administration of ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F) to each 3 male mice 5h post dosing are presented in table 1 and 2.

After single oral administration of ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F) to male mice at a nominal dose level of 1000 mg/kg bw and an actual dose level of 841.1 mg/kg bw (828.4-861.3 mg/kg bw for single animals), the mean total radioactive residues (TRR) in bone marrow were 0.0002% of dose (0.0001-0.0002 % of dose for single animals) corresponding to a mean tissue concentration of 1.61 µg Eq/g (1.03-2.18 µg Eq/g for single animals). In liver 0.230 % of dose (0.113-0.456 % of dose for single animals) corresponding to a mean tissue concentration of 32.82 µg Eq/g (14.97-67.19 µg Eq/g for single animals) were found. In blood cells 0.0005 % of dose (0.0002-0.0010% of dose for single animals) corresponding to a mean tissue concentration of 0.59 µg Eq / g (0.34-1.05 µg Eq/g for single animals) were found. The residues in plasma were 0.0011 % of dose (0.0002-0.0022 % of dose for single animals) corresponding to mean tissue concentrations of 1.51 µg Eq / g (0.72-2.95 µg Eq/g for single animals).

5. CONCLUSION

The current study demonstrates that radioactive residues of ^{14}C - Reg.No. 5570265 (Metabolite of BAS 700 F) are present in the systemic circulation and in bone marrow 5h after single oral application of the test item at a nominal dose level of 1000 mg/kg bw.

6. TABLES

TABLE 1: RADIOACTIVE RESIDUES (% OF DOSE) IN PLASMA, BLOOD CELLS AND BONE MARROW SAMPLES OF MALE NMRI MICE TREATED WITH ¹⁴C-REG.NO. 5570265 (METABOLITE OF BAS 700 F) AT A DOSE LEVEL OF ACTUALLY 1000 MG/KG BW

Results are expressed in % of dose

Animal No.	1	2	3	MEAN	SD
Animal weight [g]	29.1	31.1	31.3	30.5	1.22
Spec. activity [MBq/g]	---	---	---	74.12	---
Dose admin. [mg/kg bw]	861.3	833.7	828.4	841.1	17.7
Radioact. dose [MBq/animal]	1.86	1.92	1.92	1.90	0.03
Bloodcells	0.0003	0.0010	0.0002	0.0005	0.0004
Plasma	0.0007	0.0022	0.0002	0.0011	0.0010
Bonemarrow	0.0001	0.0002	0.0002	0.0002	0.0000
Liver	0.113	0.456	0.121	0.230	0.196

TABLE 2: RADIOACTIVE RESIDUES ($\mu\text{g EQ/G}$) IN PLASMA, BLOOD CELLS AND BONE MARROW SAMPLES OF MALE NMRI MICE TREATED WITH ^{14}C -REG.NO. 5570265 (METABOLITE OF BAS 700 F) AT A DOSE LEVEL OF ACTUALLY 1000 MG/KG BW

Results are expressed in $\mu\text{g Eq/g}$

Animal No.	1	2	3	MEAN	SD
Animal weight [g]	29.1	31.1	31.3	30.5	1.22
Spec. activity [MBq/g]	-	-	-	74.12	-
Dose admin. [mg/kg bw]	861.3	833.7	828.4	841.1	17.7
Radioact. dose [MBq/animal]	1.86	1.92	1.92	1.90	0.03
Bloodcells	0.34	1.05	0.39	0.59	0.40
Plasma	0.86	2.95	0.72	1.51	1.25
Bonemarrow	1.03	1.63	2.18	1.61	0.58
Liver	16.31	67.19	14.97	32.82	29.77

List of abbreviations

%	per cent
bw	body weight
cm	centimeter
DPM	disintegrations per minute
eq	equivalents
g	gram
h	hour
LSC	liquid scintillation counter
MBq	Mega-Becquerel
mg	milligram
n.s.	no sample
SD	standard deviation
µg	microgram
µl	microliter
mm	millimeter
mmol	millimol
HPLC	high pressure liquid chromatography



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7. APPENDICES

Appendix 2: Certificate of Analysis of the non radiolabeled test substance Reg.No. 5570265 (Metabolite of BAS 700 F)

BASF SE
APR/DA - Analytics

BASF Agricultural Center Limburgerhof - P.O. Box 120, D-67114 Limburgerhof, Germany

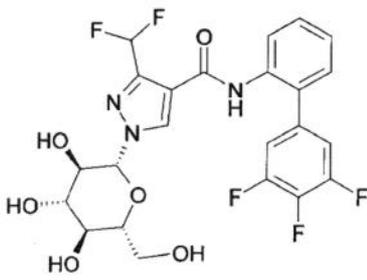
09/0008-5

14.04.09

Certificate of Analysis

Reg.No. : 5570265 Batch No. : L81-110
Substance Type : ME Date of Production : March 18, 2009
Date of Initial Analysis : April 03, 2009 Study Code : ASAP09_069

Purity : 94,3 % (tolerance ± 1.0%)

	CL-No.	
	CAS No.	
	Core Project	700F
	Internal (Metabolite) Code	M700F048
	Molecular Formula	C ₂₃ H ₂₀ F ₅ N ₃ O ₆
	Molecular Weight	529,4

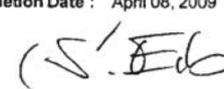
IUPAC-Name : 3-(difluoromethyl)-1-(β-D-glucopyranosyl)-N-(3',4',5'-trifluorobiphenyl-2-yl)-1H-pyrazole-4-carboxamide
Determination by : HPLC, determination of water (coulometric) and volatiles(GC)
Impurities specified : 1.7% alpha-glucoside (Sesam No. SES12950); 1.2% Reg. No. 4108373 (ethyl acetate); 0.47% water
Homogeneity : given
Additional Information
Storage Advice : keep at room temperature (typically +25°C) or cooler
Expiration Date : April 01, 2011

Recipients should ensure that the label information on the corresponding substance container(s) correspond(s) with that on this Certificate of Analysis

Study Director : Baumann, Ernst, Dr.

Study Completion Date : April 08, 2009

Issued on : April 14, 2009

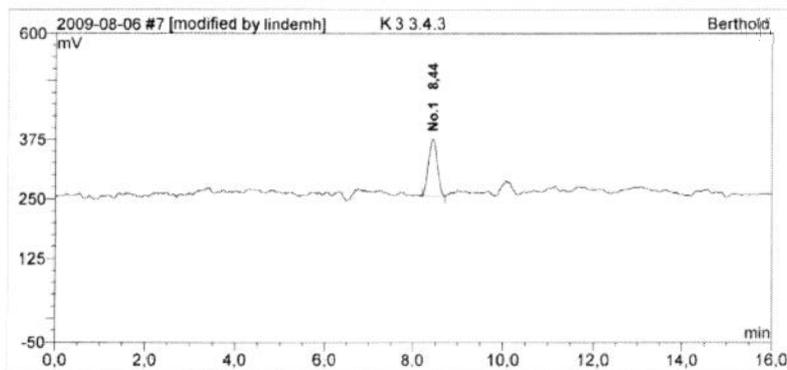
Issued by : 

Appendix 3: Sample HPLC-chromatogram ¹⁴C-Reg.No. 5570265 (Metabolite of BAS 700 F)

Project-No.: 02B0250/096008

BASF SE
Experimental Toxicology and Ecology

Sample Name:	K 3 3.4.3		
Injection Volume [μ L]:	5,0	Recording Time:	06.08.09 09:39
Vial Number:	24	Run Time [min]:	16,00
Sample Type:	unknown	Quantif. Method:	Quantifizierung
Control Program:	09-0250		



No.	Ret. Time min	Area mV*s	Height mV	Area Sum mAU*s	Rel. Area %
1	8.4402	1609,8244	119,5324		100,0