10.2.e

Study N° 22973

Physical and chemical properties and low temperature storage stability of PMV-01

REPORT

[redacted] [redacted]

Project : DCM / FO 22973 / Ch.5324 / 2012 / A
Study starting : June 25, 2012
Study completion : July 17, 2012

Centre wallon de Recherches agronomiques

TEST FACILITY
Centre wallon de Recherches agronomiques
Département Agriculture et Milieu naturel
Unité Physico-chimie et Résidus des Produits Phytopharmaceutiques et des Biocides
Bât. Carson, Rue du Bordia, 11 - B-5030 GEMBLOUX - Tél : ++ 32 (0)81 62 52 62 - Fax : ++ 32 (0)81 62 52 72
pesticides@cra.wallonie.be - http://www.cra.wallonie.be

Wallonie

Authenticity and confidentiality statement

Study plan number : 22973.

10.1.c Wob juncto 63.2.d Vo 1107/2009

Project : DCM / FO 22973 / Ch.5324 / 2012 / A.

Test item : PMV-01 [redacted]

Study director [redacted] 10.2.e

Study title : Physical and chemical properties and low temperature storage stability of PMV-01.

We, the undersigned, hereby declare that the work described in this report was performed under our supervision in accordance with the agreed study plan, and that the report provides a true and accurate record of the results obtained.

The information contained in this report is confidential and must not be discussed without the written consent of **De Ceuster N.V.**.
The Plant Protection Products and Biocides Physico-chemistry and Residues Unit of CRA-W undertakes not to disclose any of the results, work practices or functions of **De Ceuster N.V.** conveyed to the Plant Protection Products and Biocides Physico-chemistry and Residues Unit of CRA-W during the course of this study.

5030 - GEMBLOUX, July 17, 2012.

10.2.e

[redacted] [redacted]

Statement of GLP compliance

10.1.c
wob juncto
63.2.d Vo
1107/2009

Study plan number : 22973.

Project : DCM / FO 22973 / Ch.5324 / 2012 / A.

Test item : PMV-01 [redacted] Pepino mosaic virus, CH2 strain, isolate 1906) SC.

10.2.e

Study director : [redacted]

Study title : Physical and chemical properties and low temperature storage stability of PMV-01.

This study was performed in compliance with the OECD Principles of Good Laboratory Practice.

The characterisation of the test item was not performed in this study. A certificate of analysis was provided by the sponsor (non GLP certificate).

The Plant Protection Products and Biocides Physico-chemistry and Residues Unit of CRA-W has been certified for GLP compliance since October 1994.

July 17, 2012.

10.2.e

[redacted]

Statement of Quality Assurance

10.1.c Wob juncto 63.2.d Vo 1107/2009

Study plan number : 22973.

Project : DCM / FO 22973 / Ch.5324 / 2012 / A.

Test item : PMV-01 [redacted] Pepino mosaic virus, CH2 strain, isolate 1906) SC.

Quality assurance : Lic. Vanessa HERION
Valérie DE COCK.

Study title : Physical and chemical properties and low temperature storage stability of PMV-01.

The following inspections have been carried out in relation to this study :

Quality control	Date of inspection	Date reported to study director	Date reported to test facility manager
Study plan	June 25, 2012	June 25, 2012	June 26, 2012
Critical phase PA-U10-METDESCR	June 27, 2012	June 27, 2012	June 28, 2012
Raw data and draft report	July 10, 2012	July 10, 2012	July 12, 2012
Report	July 17, 2012	July 17, 2012	July 17, 2012

In addition the repetitive procedures and analytical methods are covered by process based inspections and were inspected within the framework of other similar GLP studies.

Similarly an inspection of the facility where this study was conducted was carried out on an annual basis.

I, Quality Assurance Inspector, hereby declare that the work described in this report is in accordance with the agreed study plan, and that the results in the report totally and accurately reflect the raw data.

July 17, 2012.

[redacted]

10.2.e

Quality Assurance Inspector.

Table of contents

List of figures

Appendices

Summary of results

10.1.c Wob juncto 63.2.d Vo 1107/2009

Test item : PMV-01.

Type of formulation : suspension concentrate (SC).

Active substance content (nominal concentration) : [redacted] **Pepino mosaic virus, CH2 strain, isolate 1906**.

10.1.c Wob juncto 63.2.a Vo 1107/2009 juncto 39.2.a Vo 178/2002

Batch number [redacted]

Manufacture date : [redacted]

Expiry date : [redacted]

Tests	Methods	Initially	After 7 days at 0°C ± 2°C in a closed glass bottle (CIPAC MT 46.3)
Appearance of the test item	PA-U10-METDESCR visual method	**Physical state at ambient temperature** : liquid with some particles in the bottom. homogeneous after gentle shaking but the particles fall quite quickly **Colour** : dark green. **Odour :** [redacted].	**Physical state at ambient temperature** : liquid with some particles in the bottom. homogeneous after gentle shaking but the particles fall quite quickly **Colour** : dark green. **Odour :** [redacted]. **No modification of appearance**
Appearance of the finished package	PA-U10-METDESCR visual method	Commercial brown translucent PET bottle of 1 L. Closing : with a screw white plastic cap. Sealing : with a small plastic tongue well closed bottle without deterioration or special anomaly. no observable sign of test item contamination on the outer surface. no leak during shaking or turning. no noticeable odour before opening of the package.	-
pH of the test item	CIPAC MT 75.3	**5.89**	-
pH at 1 % in water	CIPAC MT 75.3	**6.52**	-
Density at 20°C ± 0.5°C	CIPAC MT 3.3.2	**1.0004 g/mL**	-
and relative density	Calculation	$D_4^{20} = 1.0004$	-

Tests	Methods	Initially	After 7 days at 0°C ± 2°C in a closed glass bottle (CIPAC MT 46.3)
Viscosity of liquids Temperatures : 20°C ± 0.5°C 40°C ± 0.5°C	CIPAC MT 192	**No Newtonian flow behaviour** **64.3 mPa.s to 4.4 mPa.s [10.58 – 665 s^{-1}]** **64.3 mPa.s to 3.6 mPa.s [10.58 – 665 s^{-1}]** **Dependent on the shear rate applied to the sample**	- -
Persistent foaming in CIPAC water D Temperature : 30°C ± 2°C Concentration : 2.5 % v/v after 10 seconds after 1 minute after 3 minutes after 12 minutes	CIPAC MT 47.2	 **15 mL** **12 mL** **10 mL** **ring (< 0.5 mL)**	 - - - -
Wet sieve test (material retained on a 75 µm test sieve)	CIPAC MT 185	**0.033 % w/w**	**0.029% w/w**

General information

Guidelines :

- EU legislation concerning pesticide technical and formulated products and more particularly :
  - Directive 91/414/EEC
  - Directive 2001/36/EC of May 16, 2001 amending the directive 91/414/EEC concerning the placing of plant protection products on the market.
  - Directive 94/37/EC
  - Commission Regulation (EU) No 545/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for plant protection products.
  - Commission Regulation (EU) No 440/2008 of 30 May 2008 (EU methods)
  - Draft working document concerning the date requirements for active substances of plant protection products made from plants or plant extracts – SANCO/10472/2003 rev .5 (July 06/2004).
- Manual on the development and use of FAO and WHO specifications for pesticides, second revision of the first edition, 2010, Rome.
- CIPAC methods recommended by EU, FAO and WHO.
- OECD guidelines.
- Standard Operating Procedures and methods from the Plant Protection Products and Biocides Physico-chemistry and Residues Unit of the Walloon Agricultural Research Centre (CRA-W).

Sponsor :

De Ceuster N.V.
Fortsesteenweg 30
2860 Sint-Katelijne-Waver
BELGIUM

Study monitor : [redacted] 10.2.e

Study director : [redacted]
Walloon Agricultural Research Centre (CRA-W)
Agriculture and Natural Environment Department (D3)
Plant Protection Products and Biocides
Physico-chemistry and Residues Unit (U10)
Carson Building
Rue du Bordia, 11
B - 5030 - GEMBLOUX
BELGIUM
[redacted]

Quality Assurance : [redacted]
Walloon Agricultural Research Centre (CRA-W)
Agriculture and Natural Environment Department (D3)
Plant Protection Products and Biocides
Physico-chemistry and Residues Unit (U10)
Carson Building
Rue du Bordia, 11
B - 5030 - GEMBLOUX
BELGIUM
[redacted]

Technical personnel : [redacted]

Secretariat [redacted]

Archivist : [redacted]

Time schedule : Study plan
- signed by the study director on June 25, 2012.
- signed by the study monitor on June 29, 2012.

Analysis on the test item as received and after 7 days at 0°C ± 2°C
- from June 27 until July 04, 2012.

Archives : All the documentation relating to this study will be kept under the test item number in the archives of the Plant Protection Products and Biocides Physico-chemistry and Residues Unit of the Walloon Agricultural Research Centre (CRA-W), presently located at 11, rue du Bordia, B - 5030 - GEMBLOUX, BELGIUM, for a period of at least 10 years starting on the study completion date, unless instructions to the contrary are received from the sponsor.

Archived documents include as minimum :

- study plan and amendment
- all correspondence
- protocols
- raw data
- report
- Quality Assurance Inspection reports.

An aliquot of the remaining original test item after analysis will be stored by the test facility at room temperature in the original container under shelter from direct sunlight for a period of at least 5 years starting on the study completion date. After this period, it will be destroyed unless instructions to the contrary are received from the sponsor.

10.1.c Wob juncto 63.2.d Vo 1107/2009

REPORT

1 Study objective

The purpose of this study was to determine some physical and physico-chemical properties and the low temperature storage stability of the formulated product **PMV-01**, a formulation suspension concentrate (SC) [redacted] Pepino mosaic virus, CH2 strain, isolate 1906.

The tests and the storage for 7 days at 0°C have been carried out by the Plant Protection Products and Biocides Physico-chemistry and Residues Unit of the Walloon Agricultural Research Centre (CRA-W).

This GLP report deals with all the results of the study.

2 Materials

2.1 Analytical standard

Not relevant for this study.

2.2 Test item

10.1.c Wob juncto 63.2.d Vo 1107/2009

Name : PMV-01.

Type of formulation* : suspension concentrate (SC).

Active substances contents* (nominal concentrations) : [redacted] **Pepino mosaic virus, CH2 strain, isolate 1906.**

Supplier : De Ceuster N.V., Fortsesteenweg 30, 2860 Sint-Katelijne-Waver, Belgium.

Containers : 2 PET bottles of 1 litre (commercial pack)

Batch number* : [redacted]

Manufacture date* : [redacted]

Expiry date* [redacted].

10.1.c Wob juncto 63.2.a Vo 1107/2009 juncto 39.2.a Vo 178/2002

Certificate of analysis (supplied by the sponsor) : of June 25, 2012 (see copy on page **24**).

Receipt date at the test facility : June 22, 2012.

Registration number at the test facility : Ch.5324.

* : information supplied by the sponsor.

Storage ***:*** before the analysis : at 4°C ± 3°C in the original container under shelter from direct sunlight.
during the analysis, a sub-sample has been kept at room temperature.

The GLP Principles require that the sponsor provides to the study director the active substance content, the batch number, the estimated expiry date and the stability and homogeneity of the active substance of test item in the vehicle (when applicable) unless the determination of these items is planned in the study. The shipment of the test item until the receipt at the test facility is under the responsibility of the sponsor.

3 Analytical method

3.1 Appearance of the test item

Test facility method PA-U10-METDESCR (visual method).
Physical state, odour and colour of the test item.
Direct inhalation is assumed to present a hazard and is prohibited. However if an odour is detected and identified, it is noted.
Statement of claying and redispersibility.

3.2 Appearance of the commercial type pack

Test facility method PA-U10-METDESCR (visual method).
Description of the commercial package, influence of the test item on the commercial package and vice versa.
Statement on compatibility between the test item and the package.

3.3 pH of the test item

CIPAC method MT 75.3, CIPAC Handbook J - pg. 131.
- Apparatus : METROHM 713 pH meter.
- Calibration of the pH meter with commercial pH buffer solutions (pH 2, 4, 7 and 9) at recorded solution temperature (solutions at room temperature).

3.4 pH at 1 % in water

CIPAC method MT 75.3, CIPAC Handbook J - pg. 131.
- Apparatus : METROHM 713 pH meter.
- Calibration of the pH meter with commercial pH buffer solutions (pH 2, 4, 7 and 9) at recorded solution temperature (solutions at room temperature).
- Concentration : 1 g test item / 100 mL.
- Water : freshly boiled and cooled distilled water.

3.5 Viscosity of liquids by rotational viscometry (dynamic viscosity)

CIPAC method MT 192, CIPAC Handbook L - pg.145.
Method based on OECD guidelines 114.
- Apparatus : rotative viscosimeter RHEOMAT 15T-FC.
  Contraves with coaxial cylinders.
  Bowl A.
- Temperatures : 20°C ± 0.5°C and 40°C ± 0.5°C.

3.6 Density at 20°C ± 0.5°C and relative density

CIPAC method MT 3.3.2 (density bottle method), CIPAC Handbook F - pg. 19.
Method equivalent to EEC method A.3 published in the Commission Regulation (EC) No. 440/2008.
- Temperature : 20°C ± 0.5°C.

The relative density D_4^{20} is calculated from the result obtained for the density at 20°C ± 0.5°C and from the water density at 4°C (1.00000) : D_4^{20} = density / 1.

3.7 Persistent foaming

CIPAC method MT 47.2, CIPAC Handbook F - pg. 152.
- Concentration (the highest) : at the highest concentration of use : 2.5% v/v
  corresponding to 4 L / 160 L water
- Water : CIPAC water D,
  CIPAC method MT 18.1.4, CIPAC Handbook F - pg. 62.
- Temperature : 30°C ± 2°C.

Determination of the volume of foam after 10 seconds ± 1 second, 1 minute, 3 minutes and 12 minutes ± 10 seconds.

3.8 Wet sieve test

CIPAC method MT 185, CIPAC Handbook K - pg. 149.
- Test sieve : 75 µm.

3.9 Storage for 7 days at 0°C ± 2°C

CIPAC method MT 46.3.1, CIPAC Handbook J - pg. 128.
- Test : 7 days at 0°C ± 2°C.
- Storage of the test item : in a closed glass bottle.

10.1.c Wob
juncto 63.2.a
Vo 1107/2009
juncto 39.2.a
Vo 178/2002

4 Results

4.1 Determination on the test item as received

[Bottle 1/2]

Dates of analysis : from June 27 until July 04, 2012.

4.1.1 Appearance of the test item

Date of analysis : June 27, 2012.

Physical state : liquid with some particles in the bottom.
homogeneous after gentle shaking but the particles fall quite quickly

Colour : dark green.

Odour : [redacted]

4.1.2 Appearance of the finished package

Date of analysis : June 27, 2012.

Outside aspect

- Description : Commercial brown translucent PET bottle of 1 litre
  closing : with a screw white plastic cap.
  external diameter : ± 9 cm.
  height (with cap) : ± 22.5 cm.
  sealing : with a small plastic tongue

- well closed bottle without deterioration or special anomaly.
- no observable sign of test item contamination on the outer surface.
- no leak during shaking or turning.
- no noticeable odour before opening of the package.

Inside aspect

- no observable alteration of package material by the test item.

Weighing (at the receipt of the test item on June 22, 2012)

bottle 1/2 : 1072.3 g
[for analysis on the test item as received and for low temperature storage of 7 days at 0°C]
bottle 2/2 : 1070.4 g [spare sample]

4.1.3 pH of the test item

Date of analysis : June 27, 2012.

Temperature : 19°C.

Determination	pH
1	5.90
2	5.88
Mean	**5.89**

4.1.4 pH at 1 % in water

Date of analysis : June 27, 2012.

Temperature : 21°C.

Determination	pH
1	6.53
2	6.50
Mean	**6.52**

4.1.5 Density at 20°C ± 0.5°C and relative density

Date of analysis : June 27, 2012.

Determination	Density (g/mL)	Relative density D_4^{20}
1	1.0007	1.0007
2	1.0000	1.0000
Mean	**1.0004**	**1.0004**

4.1.6 Viscosity of liquids at 20°C

Date of analysis : June 27, 2012.

Temperature : 20°C ± 0.5°C.
Bowl A.

DETERMINATION 1

Speed		Shear rate D (s^{-1})	Shear stress τ % (Pa by scale unity)	Factor η % (mPa.s by scale unity)	Reading (%)		Dynamic viscosity η (mPa.s)	
steps	(rpm)				↓	↑	↓	↑
1	5.59	10.58	0.17912	16.93	3.8	3.8	**64.3**	**64.3**
2	7.51	14.20		12.61	3.8	3.8	**47.9**	**47.9**
3	9.89	18.69		9.59	3.8	3.8	**36.4**	**36.4**
4	13.19	24.9		7.18	3.8	3.8	**27.3**	**27.3**
5	17.40	32.9		5.45	3.8	3.8	**20.7**	**20.7**
6	25.1	47.4		3.78	3.8	3.8	**14.4**	**14.4**
7	33.7	63.7		2.81	3.8	3.8	**10.7**	**10.7**
8	44.3	83.8		2.14	4.0	3.8	**8.6**	**8.1**
9	59.1	111.7		1.603	4.2	3.8	**6.7**	**6.1**
10	78.0	147.4		1.215	4.2	3.8	**5.1**	**4.6**
11	113.2	214		0.837	4.2	3.8	**3.5**	**3.2**
12	152.0	287		0.623	4.8	4.8	**3.0**	**3.0**
13	200	378		0.474	7.0	7.0	**3.3**	**3.3**
14	267	504		0.355	10.0	10.0	**3.6**	**3.6**
15	352	665		0.269	16.2	16.2	**4.4**	**4.4**

DETERMINATION 2

Speed		Shear rate D (s^{-1})	Shear stress τ % (Pa by scale unity)	Factor η % (mPa.s by scale unity)	Reading (%)		Dynamic viscosity η (mPa.s)	
steps	(rpm)				↓	↑	↓	↑
1	5.59	10.58	0.17912	16.93	3.8	3.8	**64.3**	**64.3**
2	7.51	14.20		12.61	3.8	3.8	**47.9**	**47.9**
3	9.89	18.69		9.59	3.8	3.8	**36.4**	**36.4**
4	13.19	24.9		7.18	3.8	3.8	**27.3**	**27.3**
5	17.40	32.9		5.45	3.8	3.8	**20.7**	**20.7**
6	25.1	47.4		3.78	3.8	3.8	**14.4**	**14.4**
7	33.7	63.7		2.81	3.8	3.8	**10.7**	**10.7**
8	44.3	83.8		2.14	3.8	3.8	**8.1**	**8.1**
9	59.1	111.7		1.603	3.8	3.8	**6.1**	**6.1**
10	78.0	147.4		1.215	3.8	3.8	**4.6**	**4.6**
11	113.2	214		0.837	4.2	4.0	**3.5**	**3.3**
12	152.0	287		0.623	5.0	4.8	**3.1**	**3.0**
13	200	378		0.474	7.0	7.0	**3.3**	**3.3**
14	267	504		0.355	9.8	10.0	**3.5**	**3.6**
15	352	665		0.269	16.4	16.6	**4.4**	**4.5**

SEE EXAMPLE OF CURVE ON PAGE 23.

Dynamic viscosity η (mPa.s) = factor η **%** . reading **(%)**

MEAN VALUES

Speed steps	Shear rate D (s^{-1})	Shear stress τ % (Pa by scale unity)	Factor η % (mPa.s by scale unity)	Dynamic viscosity η (mPa.s)	
				↓	↑
1	10.58	0.17912	16.93	**64.3**	**64.3**
2	14.20		12.61	**47.9**	**47.9**
3	18.69		9.59	**36.4**	**36.4**
4	24.9		7.18	**27.3**	**27.3**
5	32.9		5.45	**20.7**	**20.7**
6	47.4		3.78	**14.4**	**14.4**
7	63.7		2.81	**10.7**	**10.7**
8	83.8		2.14	**8.4**	**8.1**
9	111.7		1.603	**6.4**	**6.1**
10	147.4		1.215	**4.9**	**4.6**
11	214		0.837	**3.5**	**3.3**
12	287		0.623	**3.1**	**3.0**
13	378		0.474	**3.3**	**3.3**
14	504		0.355	**3.6**	**3.6**
15	665		0.269	**4.4**	**4.5**

CONCLUSION : no Newtonian flow behaviour.
Dynamic viscosity at 20°C ± 0.5°C was 64.3 mPa.s to 4.4 mPa.s, dependent on the shear rate applied to the sample.

4.1.7 Viscosity of liquids at 40°C

Date of analysis : June 27, 2012.

Temperature : 40°C ± 0.5°C.
Bowl A.

DETERMINATION 1

Speed		Shear rate D (s^{-1})	Shear stress τ % (Pa by scale unity)	Factor η % (mPa.s by scale unity)	Reading (%)		Dynamic viscosity η (mPa.s)	
steps	(rpm)				↓	↑	↓	↑
1	5.59	10.58	0.17912	16.93	3.8	3.8	**64.3**	**64.3**
2	7.51	14.20		12.61	3.8	3.8	**47.9**	**47.9**
3	9.89	18.69		9.59	3.8	3.8	**36.4**	**36.4**
4	13.19	24.9		7.18	3.8	3.8	**27.3**	**27.3**
5	17.40	32.9		5.45	3.8	3.8	**20.7**	**20.7**
6	25.1	47.4		3.78	3.8	3.8	**14.4**	**14.4**
7	33.7	63.7		2.81	3.8	3.8	**10.7**	**10.7**
8	44.3	83.8		2.14	3.8	3.8	**8.1**	**8.1**
9	59.1	111.7		1.603	3.8	3.8	**6.1**	**6.1**
10	78.0	147.4		1.215	3.8	3.8	**4.6**	**4.6**
11	113.2	214		0.837	4.0	4.0	**3.3**	**3.3**
12	152.0	287		0.623	4.4	4.2	**2.7**	**2.6**
13	200	378		0.474	6.0	6.0	**2.8**	**2.8**
14	267	504		0.355	8.4	8.4	**3.0**	**3.0**
15	352	665		0.269	13.2	13.2	**3.6**	**3.6**

DETERMINATION 2

Speed		Shear rate D (s^{-1})	Shear stress τ % (Pa by scale unity)	Factor η % (mPa.s by scale unity)	Reading (%)		Dynamic viscosity η (mPa.s)	
steps	(rpm)				↓	↑	↓	↑
1	5.59	10.58	0.17912	16.93	3.8	3.8	**64.3**	**64.3**
2	7.51	14.20		12.61	4.0	4.0	**50.4**	**50.4**
3	9.89	18.69		9.59	4.0	4.2	**38.4**	**40.3**
4	13.19	24.9		7.18	4.2	4.4	**30.2**	**31.6**
5	17.40	32.9		5.45	4.4	5.0	**24.0**	**27.3**
6	25.1	47.4		3.78	5.0	5.0	**18.9**	**18.9**
7	33.7	63.7		2.81	5.2	5.2	**14.6**	**14.6**
8	44.3	83.8		2.14	5.4	5.6	**11.6**	**12.0**
9	59.1	111.7		1.603	5.8	6.0	**9.3**	**9.6**
10	78.0	147.4		1.215	6.2	6.2	**7.5**	**7.5**
11	113.2	214		0.837	3.8	3.8	**3.2**	**3.2**
12	152.0	287		0.623	4.2	4.2	**2.6**	**2.6**
13	200	378		0.474	6.0	6.0	**2.8**	**2.8**
14	267	504		0.355	8.6	8.4	**3.1**	**3.0**
15	352	665		0.269	13.0	13.0	**3.5**	**3.5**

SEE EXAMPLE OF CURVE ON PAGE 23.

Dynamic viscosity η (mPa.s) = factor η % . reading (%)

MEAN VALUES

Speed steps	Shear rate D (s^{-1})	Shear stress τ % (Pa by scale unity)	Factor η % (mPa.s by scale unity)	Dynamic viscosity η (mPa.s)	
				↓	↑
1	10.58	0.17912	16.93	**64.3**	**64.3**
2	14.20		12.61	**49.2**	**49.2**
3	18.69		9.59	**37.4**	**38.4**
4	24.9		7.18	**28.8**	**29.5**
5	32.9		5.45	**22.4**	**24.0**
6	47.4		3.78	**16.7**	**16.7**
7	63.7		2.81	**12.7**	**12.7**
8	83.8		2.14	**9.9**	**10.1**
9	111.7		1.603	**7.7**	**7.9**
10	147.4		1.215	**6.1**	**6.1**
11	214		0.837	**3.3**	**3.3**
12	287		0.623	**2.7**	**2.6**
13	378		0.474	**2.8**	**2.8**
14	504		0.355	**3.1**	**3.0**
15	665		0.269	**3.6**	**3.6**

CONCLUSION : no Newtonian flow behaviour.
Dynamic viscosity at 40°C ± 0.5°C was 64.3 mPa.s to 3.6 mPa.s, dependent on the shear rate applied to the sample.

4.1.8 Persistent foaming

Date of analysis : June 27, 2012.

Concentration : 2.5% v/v.
Temperature : 30°C ± 2°C.
Water : CIPAC water D.

	mL of foam after :			
Determination	**10 seconds**	**1 minute**	**3 minutes**	**12 minutes**
1	12	12	10	ring
2	18	12	10	ring
Mean	**15**	**12**	**10**	**ring**

Ring : volume < 0.5 mL.

4.1.9 Wet sieve test

Date of analysis : July 04, 2012.

Temperature of tap water : 17.1°C.
Flow rate of tap water : 4.75 L / min.

Determination	Material retained on a 75 µm test sieve (% w/w)
1	0.028
2	0.037
Mean	**0.033**

10.1.c Wob
juncto 63.2.a
Vo 1107/2009
juncto 39.2.a
Vo 178/2002

4.2 Determination after storage for 7 days at 0°C ± 2°C in a closed glass bottle

[sample coming from the commercial bottle 1/2]

Starting of storage : June 27, 2012.

End of storage : July 04, 2012.

Date of analysis : July 04, 2012.

4.2.1 Appearance of the test item

Date of analysis : July 04, 2012.

Physical state : liquid with some particles in the bottom.
homogeneous after gentle shaking but the particles fall quite quickly

Colour : dark green.

Odour : [redacted]

No modification of appearance.

4.2.2 Wet sieve test

Date of analysis : July 04, 2012.

Temperature of tap water : 17.1°C.
Flow rate of tap water : 4.75 L / min.

Determination	Material retained on a 75 µm test sieve (% w/w)
1	0.030
2	0.028
Mean	**0.029**

5 Amendment to the study plan

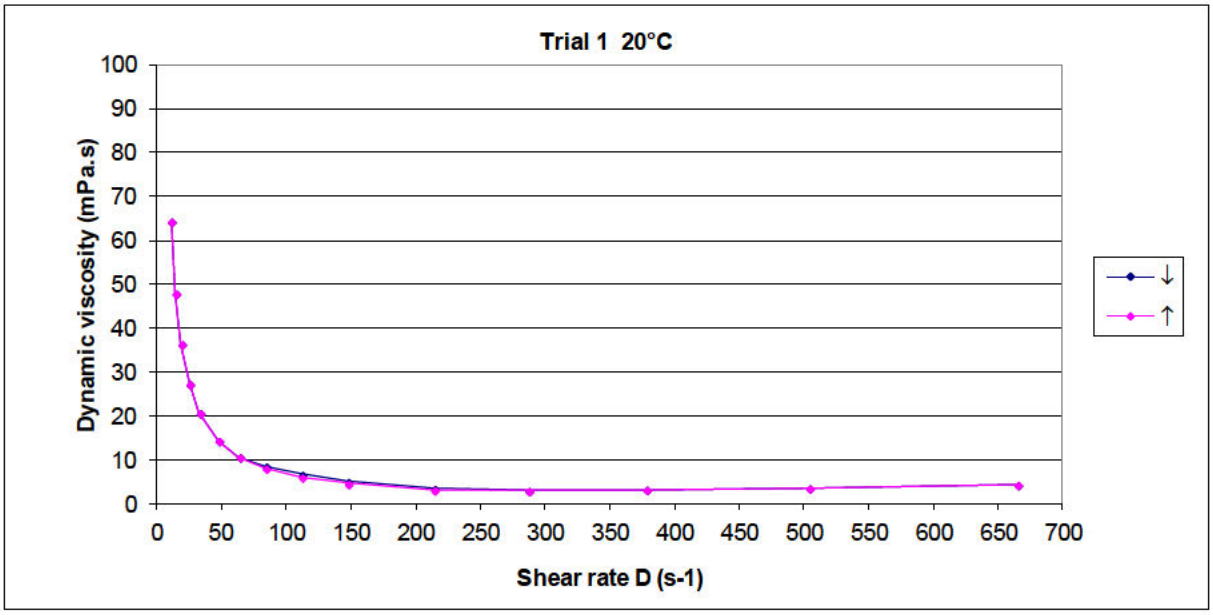
No amendment was issued for this study.

6 Deviation to the study plan

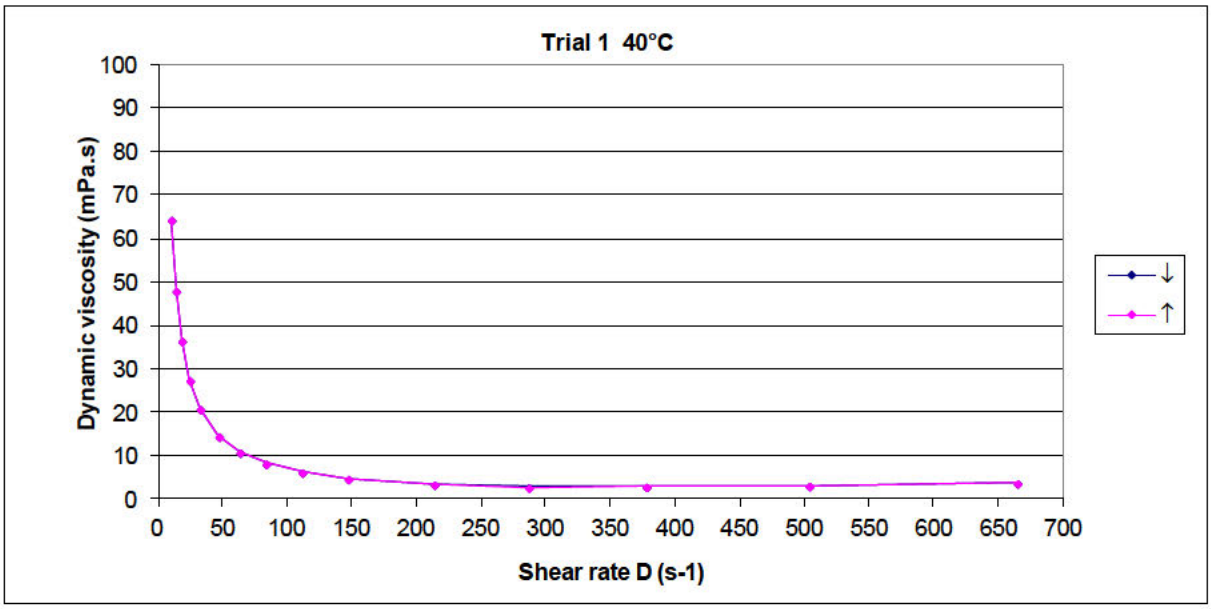
No deviation was issued for this study :

List of figures

Viscosity of liquids



Viscosity at 20°C ± 0.5°C



Viscosity at 40°C ± 0.5°C

10.1.c Wob juncto 63.2.a en d Vo 1107/2009 juncto 39.2.a Vo 178/2002

Appendices

[redacted]

STATEMENT OF GLP COMPLIANCE

Assessment of conformity with GLP according to the directive 2004/9/EC.
Date of inspection : 24→27 October 2011

According to the criteria specified in the article 5, § 8 of the Royal Decree of March 6, 2002 the General Director of the Scientific Institute of Public Health, endorses on the advice of the GLP Monitorate, that the Test Facility,

Unité Physico-chimie et Résidus des Produits phytopharmaceutiques et des Biocides
Centre wallon de Recherches agronomiques
Rue du Bordia, 11
5030 GEMBLOUX-Belgium
Registration No : C04

carries out physico-chemical, stability, residues, analytical chemistry and field studies with respect to the OECD and the EU principles of Good Laboratory Practices.

The Test Facility is regularly inspected within a cycle of 2 to 3 years.

[redacted]

Brussels,
18.01.2012

Scientific Institute of Public Health
Rue Juliette Wytsmanstraat 14, 1050 Brussels, BELGIUM
Tel : +32/(0)2-642.51.11 www.wiv-isp.be/glp Fax: +32/(0)2-642.50.01

Certificate of GLP endorsement from Belgian authorities