- Report -

Hydrolysed proteins

Ready Biodegradability
Modified Sturm Test

acc. to OECD 301 B Guideline / CO_2 Evolution Test
for Testing of Chemicals (1992)

Sponsor
SICIT Group SPA
Via Arzignano 80
Chiampo (VI)
Italy

Author
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Test Facility
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Study ID

acc. to GLP

190311BY / AST18671

Study completion date
2020-02-27

Responsibilities

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Management	Dr. Christian Maeß (Chemist)
Head of QAU	Gudrun Möhrmann-Kalabokidis (Biologist) gudrun.moehrmann-kalabokidis@noack-lab.de
Study director	Dirk Scheerbaum (Biologist) Address see above dirk.scheerbaum@noack-lab.de

Statement of GLP Compliance

Title	Hydrolysed proteins Ready Biodegradability, Modified Sturm Test
Guideline	OECD 301 B / CO_2 Evolution Test (adopted July 17, 1992)
Test Item	Hydrolysed proteins (batch number: 19070125)
Test Facility	Noack Laboratorien GmbH Käthe-Paulus-Str.1, 31157 Sarstedt, Germany Phone: (+49) 050 66 / 706 70, Fax: (+49) 05066 / 706 789 E-mail: info@noack-lab.de

I declare that this study was conducted and reported in compliance with the present OECD, EC and German principles of Good Laboratory Practice.

2020-02-27
(Date)

(Dirk Scheerbaum, Study Director)

Statement of the Quality Assurance Unit

Title	Hydrolysed proteins Ready Biodegradability, Modified Sturm Test
Guideline	OECD 301 B / CO_2 Evolution Test (adopted July 17, 1992)
Test Item	Hydrolysed proteins (Batch number: 19070125)
Study director	Dirk Scheerbaum

The study was verified and reported to the study director and test facility management as follows. The inspection(s) of the experimental phase of this study type is (are) part of a process-based inspection programme. The next date(s) with respect to the experimental phase of this study is (are) reported.

Inspected study phase		Inspection date	Date of report
Study plan		2019-09-17	2019-09-17
Study plan amendment		2019-10-24	2019-10-24
Experimental phase	Test item / Weighing out	2019-11-21	2019-11-21
	Disposal	2019-12-20	2019-12-20
Report		2020-02-07 2020-02-11 2020-02-12	2020-02-07 2020-02-11 2020-02-12

The reported results accurately and completely reflect the raw data of the study. Also methods, procedures, and observations are accurately and completely described in the report.

The accordance of the study with its study plan and the principles of Good Laboratory Practice is guaranteed.

2020-02-27
(Date)

(Dr. Ines Stanetzek)

Table of Contents

List of Tables and Figures

List of Abbreviations and Definitions

CFU	Colony forming unit
Date (notation)	YYYY-MM-DD (Year-Month-Day)
Degr.	Degradation
dw	Dry weight
$HgCl_2$	Mercury (II) chloride
mv	Mean value
QAU	Quality Assurance Unit
$ThCO_2$	Theoretical carbon dioxide (mg) is the quantity of carbon dioxide calculated to be produced from the known or measured carbon content of the test compound when fully mineralized; also expressed as mg carbon dioxide evolved per mg test compound.
TOC	Total organic carbon of a sample is the sum of the organic carbon in solution and in suspension; also expressed as mg carbon per mg test compound.

1 Summary

The ready biodegradability of the test item Hydrolysed proteins (batch no.: 19070125) was determined with a non-adapted activated sludge over a test period of 28 days in the Modified Sturm Test. The study was conducted from 2019-10-24 to 2019-11-22, according to OECD 301 B at the test facility. The test item was tested at a concentration of 39 mg/L with 2 replicates corresponding to a carbon content (TOC) of 10.1 mg C/L in the test vessels. The test vessels were incubated at low light conditions and at a temperature of 22 ± 2 °C.
The biodegradation of the test item was followed by titrimetric analysis of the quantity of CO_2 produced by the respiration of bacteria. The degradation was stopped on day 28 by acidification of the test solutions. The last titration was made on day 29 after residual CO_2 had been purged from the test solutions over a period of 24 hours. The percentage CO_2 production was calculated in relation to the theoretical CO_2 production ($ThCO_2$) of the test item. The biodegradation was calculated for each titration time.

To check the activity of the test system sodium benzoate was used as **functional control.** The percentage degradation of the functional control reached the pass level of 60 % within 8 days and a maximum biodegradation of 94 % on day 28.

In the toxicity control containing both test and reference item a biodegradation of 69 % was determined within 14 days, with 77 % after 28 days. The biodegradation of the reference item was not inhibited by the test item in the toxicity control.

In the **abiotic control** containing both test item and $HgCl_2$ the biodegradation was ≤ 3%.

The biodegradation of the **test item** is shown graphically in Figure 1 in comparison to the readily degradable functional control, the toxicity control and the abiotic control. The mean of replicates reached the 10 % level (beginning of biodegradation) within 4 days. Both test item replicates reached the 60 % pass level within 14 days. The mean biodegradation on day 28 was 84 %. The 10-day window was fulfilled.

Under the test conditions the test item is readily biodegradable within the 28 day period of the study.

Table 1: **Biodegradation of the Test Item Hydrolysed proteins in Comparison to the Functional Control, Toxicity Control and Abiotic Control**

	Biodegradation [%] Study Day [d]			
	6	14	20	28
Test Item, 1st Replicate	42	63	70	83
Test Item, 2nd Replicate	51	72	78	84
Functional Control	58	82	86	94
Toxicity Control test item + reference item	36	69	72	77
Abiotic Control	0	0	0	3

2 Characterisation Data of the Test Item

2.1 Test Item Properties

Test item	Hydrolysed protein
Batch number	19070125
CAS No.	9015-54-7
Purity (certified)	44.1% w/w (calculated)
TOC*	26.0 %
Appearance	Brown liquid
Expiry date	2024-02-18
Recommended storage	Protect the product from direct sunlight. Store the product in the original container at room temperature.

The test item and the information concerning the test item were provided by the sponsor.
** The TOC was determined at the test facility.*

2.2 Test Facility Actions

Receipt	2019-06-12
Identification parameters	Name, batch number, state and color
Retention sample	At least 1 g has been retained on 2019-06-14 and stored at 6 ± 2 °C.
Storage at test facility	18 – 25 °C, dark, in tightly closed original container

3 Method

Test guideline	OECD 301 B / CO_2 Evolution Test (adopted July 17. 1992) The study was performed in compliance with GLP. For the respective guidelines, please refer to section 9.
Type and purpose of the study	Study of ready biodegradability over a period of at least 28 days with a non-adapted activated sludge in order to check the rate of biodegradation in % by determination of evolved CO_2.

3.1 Test System and Pre-treatment

Test system	Inoculum of the aqueous phase of non-adapted activated sludge
Reasons for the selection of the test system	Activated sludge from the sewage plant at Hildesheim is well suited as it receives predominantly municipal sewage and hardly any industrial chemical waste.
Source	Municipal sewage treatment plant, 31137 Hildesheim, Germany
Receipt	2019-10-21
Pre-treatment	The activated sludge was washed twice with chlorine free tap water. After the second washing the settled sludge was resuspended in mineral salts medium and was maintained in an aerobic condition by aeration with CO_2 free air for two days before test start. Further treatment see section ‘preparation of the test vessels’. 4.45 mL/L of this mixture were used to initiate inoculation (25.1 mg/L dw).
Colony forming units in the test vessel	Approx. 10^7 - 10^8 CFU/L

3.2 Experimental Procedure

Functional control

Reference item	Sodium benzoate
Test facility ID	70025_1
Batch number	BCBQ5652V
CAS No.	532-32-1
Purity	99.6 %
Expiry date	2021-11-15
Replicates	Single
Test concentration	20 mg/L
$ThCO_2$	2.13 mg CO_2/mg
ThTOC	0.58 mg C/mg
Carbon content in the vessel	11.6 mg C/L

Test Item

Test Item	Hydrolysed proteins
Replicates	Duplicates
Test concentration	39 mg/L
TOC	0.260 mg C/mg
ThCO2	0.954 mg CO2/mg
Carbon content in the vessel	10.1 mg C/L
Pre-treatment	None

Toxicity control	Test item and reference item in test concentration
Replicates	Single
Inoculum control	Test medium without test and/or reference item
Replicates	Duplicates
Abiotic control	Test item in test concentration, without inoculum, poisoned with 10 mL/L $HgCl_2$ solution (10 g/L)
Replicates	Single

Test Method

Duration	28 days
Application	Once at test start
Test vessels	5000 mL, brown glass
Volume of the test medium	3000 mL
Test medium	Mineral salts medium acc. to OECD 301 B / CO_2 Evolution Test
Test temperature	Nominal 22 ± 2 °C, actual: 19.0 – 22.5 °C
Dispersion treatment	Continuous stirring
Aeration	30 - 100 mL/min
Photoperiod	Low light conditions (brown glass bottles)

Preparation of the test vessels

The concentration of the test item and the theoretical CO_2 production ($ThCO_2$) were calculated based on the carbon content.

The following incubation vessels were prepared:

- two for the inoculum control	(C_1, C_2)
- one for the functional control	(R_1)
- two for the test item concentration	(P_1, P_2)
- one for the toxicity control	(T_1)
- one for the abiotic control	(A_1)

Supplemental replicates of the test item and the inoculum control were prepared for the measurement of ammonium and nitrate at test start.

The necessary amounts of ultrapure water, mineral salts medium and inoculum were placed in each incubation vessel. The vessels were aerated for 24 h with CO_2 free air. After 24 h the CO_2 adsorption vessels were connected to the air outlets of the incubation vessels via a series of 3 gas wash bottles, each containing 100 mL of a 0.0125 mol/L $Ba(OH)_2$ solution.

The test item and reference item were weighed out. The test item was weighed out into small beakers. A defined amount of ultrapure water was added to the test item. The test item dispersions and the reference item were transferred to the respective incubation vessels with ultrapure water. The vessels were made up to 3 L with ultrapure water and connected to the system for the production of CO_2 free air.

On day 28, 1 mL 37 % HCl was added to each of the vessels. Aeration was continued for further 24 h and the quantity of CO_2 released was determined.

3.3 Type and Frequency of Measurements

The room temperature was recorded continuously throughout the test.

Quantification of ammonium and dissolved nitrate in the test item and the inoculum control were carried out at test start and at test end (test end after acidification).

Determination of CO_2 was carried out by titration subsequent to complete absorption of the released CO_2 in an alkaline solution (0.0125 mol/L $Ba(OH)_2$). For each titration the first gas wash bottle was removed and a new bottle was connected to the last one.

Back titration of the residual $Ba(OH)_2$ with 0.05 N HCl was carried out three times a week during the first ten days and thereafter twice weekly.

On day 28 the pH of all solutions was measured prior to acidification.

3.4 Equipment

DOC-Analysator Multi N/C 3100, ANALYTIK JENA
pH-Meter, Multi 350i, WTW
Thermohygrograph, LUFFT
Ultrasonic bath, SONOREX, BANDELIN
Analytical balance, SARTORIUS
Balance, KERN
Dispensette, BRAND
Digital Buret, continous RS, VITLAB
Medo compressor, FA. REBIE
Magnetic stirrer Mono, VARIOMAG
Multipette X-Stream, EPPENDORF
Spectralphotometer NANOCOLOR® $^{UV}/_{VIS}$, MACHEREY-NAGEL
Test Kits: AMMONIUM 50, AMMONIUM 3, NITRAT 50, all by MACHEREY-NAGEL
Various Pipettes

4 Evaluation

The theoretical production of carbon dioxide ($ThCO_2$) of the test item and functional control is calculated by the carbon content (1) and the molecular formula (2), respectively.

$$\mathbf{ThCO_2\ [mgCO_2/mg] = 3.67 \cdot TOC\ [mgC/mg\ test\ item]} \quad (1)$$

$$\mathbf{ThCO_2\ [mgCO_2/mg] = \frac{C\text{-}Atoms \cdot molecular\ weight\ of\ CO_2}{molecular\ weight\ of\ reference\ item}} \quad (2)$$

The produced CO_2 is calculated by (3):

$$\mathbf{1\ mL\ HCl\ (c = 0.05\ mol/L) = 1.1\ mg\ CO_2} \quad (3)$$

The net amount of CO_2 produced is calculated by correcting the results of the test item and functional control for endogenous CO_2 production of the inoculum controls.

The biodegradation is calculated from the ratio theoretical CO_2 production to net CO_2 production in the following equation (4):

$$\mathbf{Degradation\ [\%] = \frac{net\ CO_2 \cdot 100}{ThCO_2\ [mg\ CO_2/3L]}} \quad (4)$$

Software

Excel, MICROSOFT CORPORATION
SigmaPlot (Windows), SPSS CORPORATION

All data were computer generated and rounded for presentation from the fully derived data. Consequently, if calculated manually based on the given data minor variations may occur from these figures.

5 GLP

Chronological test description	- Pre-treatment of the non-adapted activated sludge - Preparation of the test solutions and aeration for 24 h with CO_2 free air - Weighing out of the test item (experimental starting) and weighing out of the reference item - Application - Incubation - Determination of CO_2 by titration - Determination of the pH-values on day 28 and acidification - Last titration on day 29 - Evaluation of the data

Dates

Study initiation	2019-09-30
Study plan amendment	2019-10-24
Experimental starting	2019-10-24
Experimental completion	2019-11-22
Study completion	Please refer to page 1

Deviations from the guideline	None
Deviations from the Study plan	The temperature dropped down to 19 °C three times overnight. This deviation is considered to have no impact on the quality and integrity of the study.
Archiving	The following will be retained in the archive of the test facility for at least 15 years: • all raw data • study plan • final report • all records performed by the quality assurance programme including master schedules • samples of test and reference items The test facility may use a GLP contract archive.

6 Results

6.1 Carbon Content of the Test Item

Based on the carbon content a $ThCO_2$ of 0.954 mg CO_2/mg test item was calculated. A test concentration of 39 mg/L, corresponding to a carbon content of 10.1 mg C/L in the test vessels was selected.

6.2 Colony Forming Units of the Inoculum

Colony forming units (CFU) of the inoculum for the Modified Sturm Test were determined prior to test start by standard dilution plate count: approx. 1.50×10^9 CFU/L, corresponding to approx. 0.67×10^7 CFU/L in the test vessel.

6.3 CO_2-Production and Biodegradation

The total amount of CO_2 produced in 28 days was analysed by titration in 12 measurements. The 28 d-values are shown in comparison to the readily degradable functional control in summarized form in Table 2.
The results of the net CO_2-production and biodegradation rate of each measurement are given in Table 3 to Table 4.

Table 2: **CO_2-Production and Biodegradation after 28 Days for the Test Item**

CO_2-Production		Functional Control	Test Item		Toxicity Control Test Item + Reference Item	Abiotic Control
			1	2		
Net	[mg/3 L]	120.4	92.5	93.2	184.3	3.7
	[mg/L]	40.1	30.8	31.1	61.4	1.2
Theor.	[mg/3 L]	127.8	111.6		239.4	111.6
	[mg/L]	42.6	37.2		79.8	37.2
Degradation [%]		94	83	84	77	3

The adaptation phase of the **functional control** changed within 4 days into the degradation phase (degradation ≥ 10 %). The course of the degradation was rapid and the functional control reached the pass level of 60 % within 8 days and a maximum biodegradation of 94 % on day 28. The validity criterion degradation ≥ 60 % after 14 days is fulfilled.

In the **toxicity control** containing both test item and reference item a biodegradation of 69 % was determined within 14 days, with 77 % after 28 days. The biodegradation of the reference item was not inhibited by the test item in the toxicity control.

In the **abiotic control** containing both test item and $HgCl_2$ the biodegradation was ≤ 3%.

The biodegradation of the **test item** is shown graphically in Figure 1 in comparison to the readily degradable functional control, the toxicity control and the abiotic control. The mean of replicates reached the 10 % level (beginning of biodegradation) within 4 days. Both test item replicates reached the 60 % pass level within 14 days. The mean biodegradation on day 28 was 84 %. The 10-day window was fulfilled for the replicates.

Under the test conditions the test item is readily biodegradable within the 28 day period of the study and fulfilled the 10-day-window.

Table 3: **CO_2-Production and Biodegradation in the Inoculum Control, the Functional Control and the Toxicity Control**

Study Day	Date	Inoculum Control	Functional Control			Toxicity Control		
		[mg CO_2/3 L]	[mg CO_2/3 L]		Degr.	[mg CO_2/3 L]		Degr.
		mv	Gross	Net Sum	[%]	Gross	Net Sum	[%]
1	2019-10-25	4.5	16.2	11.7	**9**	14.6	10.1	**4**
4	2019-10-28	16.1	53.6	49.2	**38**	53.6	47.6	**20**
6	2019-10-30	14.0	39.5	74.7	**58**	53.2	86.8	**36**
8	2019-11-01	13.0	27.8	89.5	**70**	51.7	125.5	**52**
11	2019-11-04	10.6	17.2	96.1	**75**	38.7	153.6	**64**
14	2019-11-07	13.2	22.3	105.2	**82**	24.0	164.4	**69**
18	2019-11-11	10.9	14.5	108.8	**85**	16.2	169.7	**71**
20	2019-11-13	6.2	7.9	110.5	**86**	8.5	172.0	**72**
25	2019-11-18	11.8	13.6	112.3	**88**	15.6	175.8	**73**
28	2019-11-21	5.6	8.4	115.1	**90**	8.3	178.5	**75**
29*	2019-11-22	1.4	6.7	120.4	**94**	7.1	184.3	**77**

Degr. = degradation mv = mean value *) results of last two gas wash bottles

In the **inoculum** control the total CO_2 production was 35.8 mg CO_2/L after 28 days.

Table 4: **CO_2-Production and Biodegradation in the Inoculum Control, the Test Item and the Abiotic Control**

Study Day	Date	Inoculum Control	Test Item						Abiotic Control		
			Replicate 1			Replicate 2					
		[mg CO_2/3	[mg CO_2/3 L]		Degr.	[mg CO_2/3 L]		Degr.	[mg CO_2/3 L]		Degr.
		mv	Gross	Net sum	[%]	Gross	Net sum	[%]	Gros	Net Sum	[%]
1	2019-10-25	4.5	8.1	3.6	**3**	10.3	5.8	**5**	2.4	0.0	**0**
4	2019-10-28	16.1	42.8	30.3	**27**	47.9	37.6	**34**	5.6	0.0	**0**
6	2019-10-30	14.0	30.6	46.9	**42**	33.1	56.7	**51**	5.5	0.0	**0**
8	2019-11-01	13.0	17.6	51.5	**46**	19.5	63.2	**57**	5.3	0.0	**0**
11	2019-11-04	10.6	15.0	55.9	**50**	21.6	74.2	**66**	5.3	0.0	**0**
14	2019-11-07	13.2	27.5	70.2	**63**	19.8	80.8	**72**	7.2	0.0	**0**
18	2019-11-11	10.9	16.4	75.7	**68**	15.2	85.1	**76**	6.6	0.0	**0**
20	2019-11-13	6.2	8.9	78.4	**70**	7.9	86.8	**78**	4.6	0.0	**0**
25	2019-11-18	11.8	16.7	83.3	**75**	15.3	90.3	**81**	8.8	0.0	**0**
28	2019-11-21	5.6	9.9	87.6	**78**	7.0	91.7	**82**	5.8	0.2	**0**
29*	2019-11-22	1.4	6.3	92.5	**83**	1.3	93.2	**84**	4.9	3.7	**3**

Degr. = degradation mv = mean value *) results of last two gas wash bottles

6.4 Water Parameters

On day 28 (2019-11-21) the pH-value of all solutions was measured prior to acidification. The results are given in Table 5.

Table 5: **pH-Values on Day 28**

Inoculum Control		Functional Control	Test Item		Toxicity Control	Abiotic Control
No. 1	No. 2	No.1	No. 1	No. 2	No. 1	No. 1
7.68	7.65	7.72	7.52	7.53	7.60	7.42

Determination of ammonium and dissolved nitrate was determined on 2019-10-24 (test start) and 2019-11-22 (after acidification). The results are given in Table 6.

Table 6: **Ammonium and Dissolved Nitrate at Test Start and Test End for the Test Item and Inoculum Control**

Replicate	**No.**	**Ammonium [mg/L]**		**Dissolved Nitrate [mg/L]**	
		Test Start	Test End	Test Start	Test End
Test Item	1	1.04	0.25	0	19.7
	2	-	0.35	-	19.3
Inoculum Control	1	0	0.39	0	8.18
	2	-	0.48	-	8.76

- = not determined

7 Validity Criteria

The study was performed according to guideline OECD 301 B and GLP principles.

The validity criteria were fulfilled according to the guideline:

Table 7: **Validity Criteria**

Validity Criterion	Required	This study
Percentage degradation of the functional control	≥ 60 % by day 14	82 % on day 14
Total CO_2 evolution in the inoculum control at the end	< 40 mg/L	35.8 mg/L
Differences of extremes of replicate values of removal of the test item at the end of the test, at the plateau or at the end of the 10-d-window as appropriate	< 20 %	1 %
Percentage degradation of the toxicity control	≥ 25 % by day 14	69 % on day 14

8 Conclusion

Under the test conditions the test item is **readily biodegradable** within the 28 day period of the study and fulfilled the 10-day-window.

9 Literature

(1) OECD 301 B Guideline / CO_2 Evolution Test for Testing of Chemicals (adopted 17/7/1992)

(2) OECD Principles on Good Laboratory Practice (as revised in 1997), ENV/MC/Chem (98)17, Environment Directorate, OECD, Paris, 1999

(3) Directive 2004/10/EC, The OECD Principles of Good Laboratory Practice (GLP)

(4) Principles of Good Laboratory Practice – German Chemical Law (ChemG), Annex 1

10 Graph

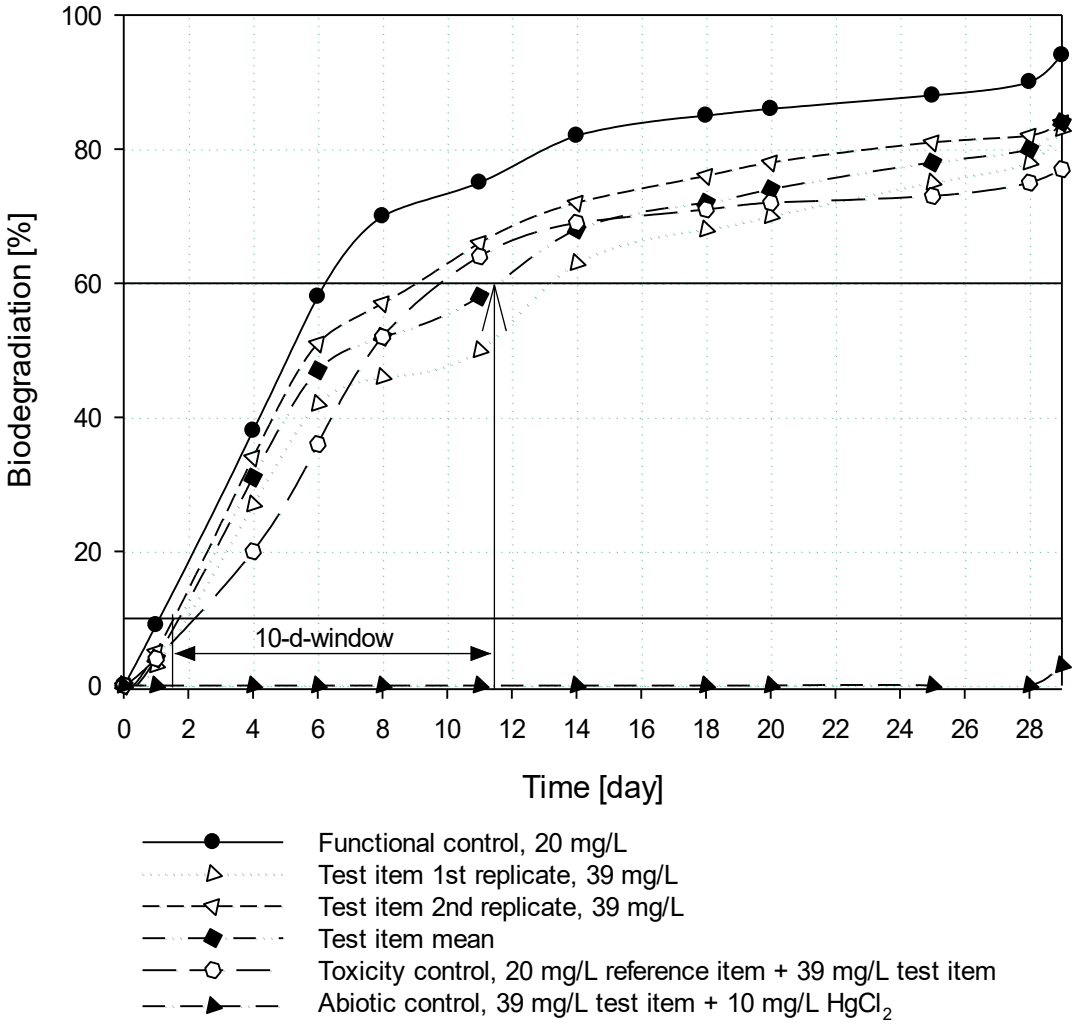

Figure 1: **Biodegradation Curve**

11 Certificate of Analysis

SICIT CHEMITECH S.p.A.
Capitale soc. int. vers. € 1.000.000,00

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Società Unipersonale
Registro delle Imprese di Vicenza, Codice Fiscale
e Partita IVA IT 02821790249 - R.E.A. 278043

CERTIFICATE OF ANALYSIS N. 19005485

Product:	HYDROLYSED PROTEINS
Code:	110590 DO.LA.11
Batch:	19070125
Production date:	18/02/2019
Expiry date:	18/02/2024
Destination:	Noack Laboratorien GmbH
Delivery date	06/06/2019
Packing:	plastic bottle 1 L

PARAMETERS	ANALYTICAL RESULTS	MEASURE UNIT	METHOD	SPECIFICATION
Aspect	Complies			brown coloured liquid
Solubility	>1000	g/l	EPA830-7840	
Dry matter	59,4	% w/w	TGA01	≥ 58,0
Density	1,27	g/ml	DEN01	
Total nitrogen	7,60	% w/w	CNLECO01	
Ammoniacal nitrogen	0,55	% w/w	N03	
Organic nitrogen	7,05	% w/w	calculated	≥ 6,50
Total carbon	24,4	% w/w	CNLECO01	≥ 20,0
Active Ingredient :				
Hydrolysed proteins	44,1	% w/w	calculated	
Free amino acids	9,23	% w/w	HP02	
Ashes	10,6	% w/w	TGA01	
Calcium	0,24	% w/w	HP04	
Sodium	4,07	% w/w	HP04	
Chloride	3,92	% w/w	HP04D	
Sulfate	1,08	% w/w	HP04D	
pH in 10% sol.	6,43		PH01	≥ 6,00 ≤ 7,00

APPROVED Date 10/06/2019 Quality Control Manager
Eliana Franco

12 GLP-Certificate

Gewerbeaufsicht in Niedersachsen

Staatliches Gewerbeaufsichtsamt Hildesheim

Gute Laborpraxis / Good Laboratory Practice

GLP-Bescheinigung / Statement of GLP Compliance

(gemäß / according to § 19 b Abs.1 Chemikaliengesetz)

Eine GLP-Inspektion zur Überwachung der Einhaltung der GLP-Grundsätze gemäß Chemikaliengesetz bzw. Richtlinie 2004/9/EG wurde durchgeführt in:

Assessment of conformity with GLP according to Chemikaliengesetz and Directive 2004/9/EC at:

☒ Prüfeinrichtung / Test facility ☐ Prüfstandort / Test site

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GERMANY

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

1 - Prüfungen zur Bestimmung der physikalisch-chemischen Eigenschaften und Gehaltsbestimmungen	1 - physical-chemical testing
4 - Ökotoxikologische Prüfungen zu Bestimmung der Auswirkungen auf aquatische und terrestrische Organismen	4 - environmental toxicity studies on aquatic and terrestrial organisms
5 - Prüfungen zum Verhalten im Boden, im Wasser und in der Luft, Prüfungen zur Bioakkumulation und zur Metabolisierung	5 - studies on behaviour in water, soil and air; bioaccumulation
6 - Prüfungen zur Bestimmung von Rückständen	6 - residue studies

Ort / Place	Datum der Inspektion / Date of Inspection (Tag.Monat.Jahr / month.day.year)
Sarstedt	**07. – 10. Juni 2016 & 13. Juli 2016 /**
Sarstedt	**Jun 07th – Jun 10th, 2016 & Jul 13th, 2016**

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

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

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

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

Hildesheim, 03.01.2017

Staatliches Gewerbeaufsichtsamt Hildesheim
Im Auftrage

Bahn

GEWERBEAUFSICHTSAMT HILDESHEIM