

**Test Report No.:** 244325359a 001 Page 1 of 19

**Client:** Zhejiang y.g. nonwoven fabric Co., Ltd.

**Contact Information:** No.1168 Cangdong Road, Xincang, Pinghu, Jiaxing, Zhejiang, China  
Alice@ygnonwoven.com

**Identification/Model No(s):** PLA NONWOVEN

**Sample Receiving Date:** 2021-04-05

**Sample Obtaining Method:** Sending by customer

**Condition at Delivery:** Test item complete and undamaged

**Testing Period:** 2021-04-21 to 2021-10-14

**Place of Testing:** Chemical laboratory Shanghai& Kunshan, Textile laboratory Shanghai

**Test Specification:**

**Test Result:**

With reference to DIN EN13432:2000 and ASTM D6400-19,

Testing according to customer's specification for the following parameters:

Heavy Metals and Other Toxic Substances	Pass
Volatile Solids Content	Pass
Total Dry Solid Content	Please refer to page 3
Total Organic Carbon	Please refer to page 3
Mass per Unit Area	Please refer to page 4
Thickness Check	Please refer to page 5
Qualitative Identification by Fourier Transform Infrared Spectroscopy	Please refer to page 6
Quantitative Aerobic Disintegration Test	Pass

**Other Information:**

Procedure No.:3351872

For and on behalf of  
TÜV Rheinland (Shanghai) Co., Ltd.



2021-10-22

Lucy Lu/Technical Supervisor

Date

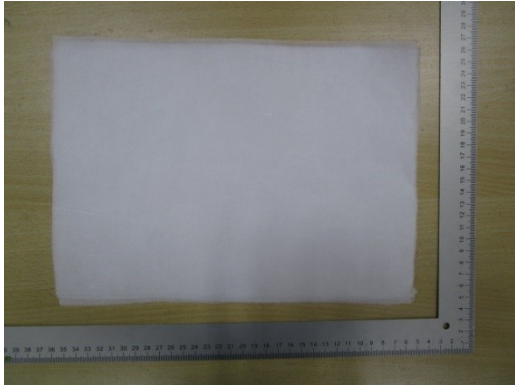
Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.  
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products. "Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

**Test Report No.:** 244325359a 001

Page 2 of 19

**Picture and Detailed Description of the Test Sample**



**M001**



**M002**

**Material List:**

Material No.	Material	Color	Location	Remark
M001	Fabric	White	Refer to photo	-
M002	Fabric	White	Refer to photo	Sample for disintegration

**Test Report No.:** 244325359a 001

Page 3 of 19

**1 Heavy Metals and Other Toxic Substances**

**Test Method:** For Fluorine (F) content, refer to EN 15408:2011.

For other contents, refer to EN ISO 17294-2:2016.

**Test Result:**

Test Parameter	Unit	Reporting Limit	Test No.
			Material No.
			T001
			M001
Test Parameter	Unit	Reporting Limit	Test Result
Zn	mg/kg	5	<RL
Cu	mg/kg	5	<RL
Ni	mg/kg	5	<RL
Cd	mg/kg	0.25	<RL
Pb	mg/kg	5	<RL
Hg	mg/kg	0.20	<RL
Cr	mg/kg	5	<RL
Mo	mg/kg	0.25	<RL
Se	mg/kg	0.25	<RL
As	mg/kg	0.25	<RL
F	mg/kg	50	<RL
Co	mg/kg	3	<RL

Abbreviation: mg/kg=milligram per kilogram

<RL = Less than reporting Limit

Test Report No.: 244325359a 001

Page 4 of 19

**Remark :**

1. The requirement is following ASTM D6400-19 and DIN EN 13432: 2000 annex A.
2. The concentrations of regulated metals and other toxic substances in the plastic product or material shall be less than 50 % of those prescribed for sludges, fertilizers and composts in the country where the final product will be placed on the market or disposed of ,refer to below Table 1 for examples.

Table 1 — Examples of maximum concentrations of regulated metals and other toxic substances

Values given in mg/kg of dry material

Element	ASTM D6400/ASTM D6868		EN13432 c / AS4736/AS5810 d	NF T51-800 e	China f	Japan g
	US a	Canada b				
Zn	1400	463	150	150	—	180
Cu	750	189	50	50	—	60
Ni	210	45	25	25	—	30
Cd	17	5	0.5	0.5	1.5	0.5
Pb	150	125	50	50	50	10
Hg	8.5	1	0.5	0.5	2.5	0.2
Cr	—	265	50	50	150	50
Mo	—	5	1	1	—	—
Se	50	4	0.75	0.75	—	—
As	20.5	19	5	5	15	5
F	—	—	100	100	—	—
Co	—	38	—	38	—	—

<sup>a</sup> The maximum metal concentrations given here for the US are 50 % of those prescribed by 40 CFR 503.13, Table 3 (as per ASTM D6400 requirements).

<sup>b</sup> The maximum metal concentrations for Canada are those prescribed in 6.1 of BNQ 9011-911-I/2007.

<sup>c</sup> The maximum metal concentrations for the EC are 50 % of those prescribed in ecological criteria for the award of the Community eco-label to soil improvers (EC OJ L 219, 7.8.1998, p. 39).

<sup>d</sup> The maximum metal concentrations given here for Australia refers to EN 13432, Table A.1.

<sup>e</sup> The maximum metal concentrations given here for France refers to EN 13432, Table A.1. except for Co, and the maximum concentration for Co is prescribed in BNQ 9011-911-I/2007.

<sup>f</sup> The maximum metal concentrations for China are 50 % of those prescribed by CJ/T 3059-1996 for Quality of Composts.

<sup>g</sup> The maximum metal concentrations for Japan are 10 % of those prescribed in the Fertilizer Control Law (Ministry of Agriculture, Forestry and Fisheries) and Guidelines for Quality of Composts (Central Union of Agricultural Co-operatives).

3. BPI's new standard for fluorinated chemicals went into effect on January 1, 2020. Products may no longer be claimed as BPI Certified, whether on the product itself, or on a product's packaging or marketing materials, unless it meets all conditions of the rule, including no intentionally added fluorinated chemicals (as demonstrated in Safety Data Sheets) and a test report showing less than 100 ppm total fluorine.

**Test Report No.:** 244325359a 001

Page 5 of 19

**2 Volatile Solids Content****Test Method:** Refer to DIN EN 13432:2000.**Test Result:**

Test No.	Material No.	Unit	Requirement	Result
T001	M002	%	≥50	99.9

Abbreviation: % = Percentage

**Remark :**

1. The requirement is following DIN EN 13432: 2000 annex A.

**3 Total Dry Solids Content****Test Method:** Refer to DIN EN 13432:2000.**Test Result:**

Test No.	Material No.	Unit	Result
T001	M002	%	99.4

Abbreviation: % = Percentage

**4 Total Organic Carbon****Test Method:** In-house method, analyzed by TOC-analyzer.**Test Result:**

Test No.	Material No.	Unit	Report Limit	Result
T001	M002	%	0.1	44.0

Abbreviation: % = Percentage

&lt;RL=Less than report Limit

**Test Report No.:** 244325359a 001

Page 6 of 19

**5 Mass per Unit Area**

**Test Method:** Refer to EN 12127:1997, measured by balance.

**Test Result:**

		Test No.:	T001
		Material No.:	M001
Trial	Unit	Test Result	
1	g/m <sup>2</sup>	48.3	
2	g/m <sup>2</sup>	53.1	
3	g/m <sup>2</sup>	53.1	
4	g/m <sup>2</sup>	52.1	
5	g/m <sup>2</sup>	47.1	
6	g/m <sup>2</sup>	55.6	
7	g/m <sup>2</sup>	49.8	
8	g/m <sup>2</sup>	52.8	
9	g/m <sup>2</sup>	48.8	
10	g/m <sup>2</sup>	61.4	
<b>Average</b>	g/m <sup>2</sup>	52.2	
<b>SD</b>	g/m <sup>2</sup>	4.17	

Abbreviation: g/m<sup>2</sup> denotes gram per square meter.

SD=standard deviation,  $S = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}}$

**Remark :**

Equipment Uncertainty: U=0.002g (k=2)

**Test Report No.:** 244325359a 001

Page 7 of 19

**6 Thickness Check**

**Test Method:** The thickness of 10 samples have been measured in the same position by vernier caliper.

**Test Result:**

		<b>Test No.:</b>	T001
		<b>Material No.:</b>	M001
<b>Trial</b>	<b>Unit</b>	<b>Test Result</b>	
1	mm	0.22	
2	mm	0.23	
3	mm	0.22	
4	mm	0.22	
5	mm	0.23	
6	mm	0.21	
7	mm	0.22	
8	mm	0.21	
9	mm	0.22	
10	mm	0.22	
<b>Average</b>	mm	0.22	
<b>SD</b>	mm	0.007	

Abbreviation: mm = millimeter

SD=standard deviation,  $S = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}}$

**Remark :**

Equipment Uncertainty: U=0.01mm (k=2)

Test Report No.: 244325359a 001

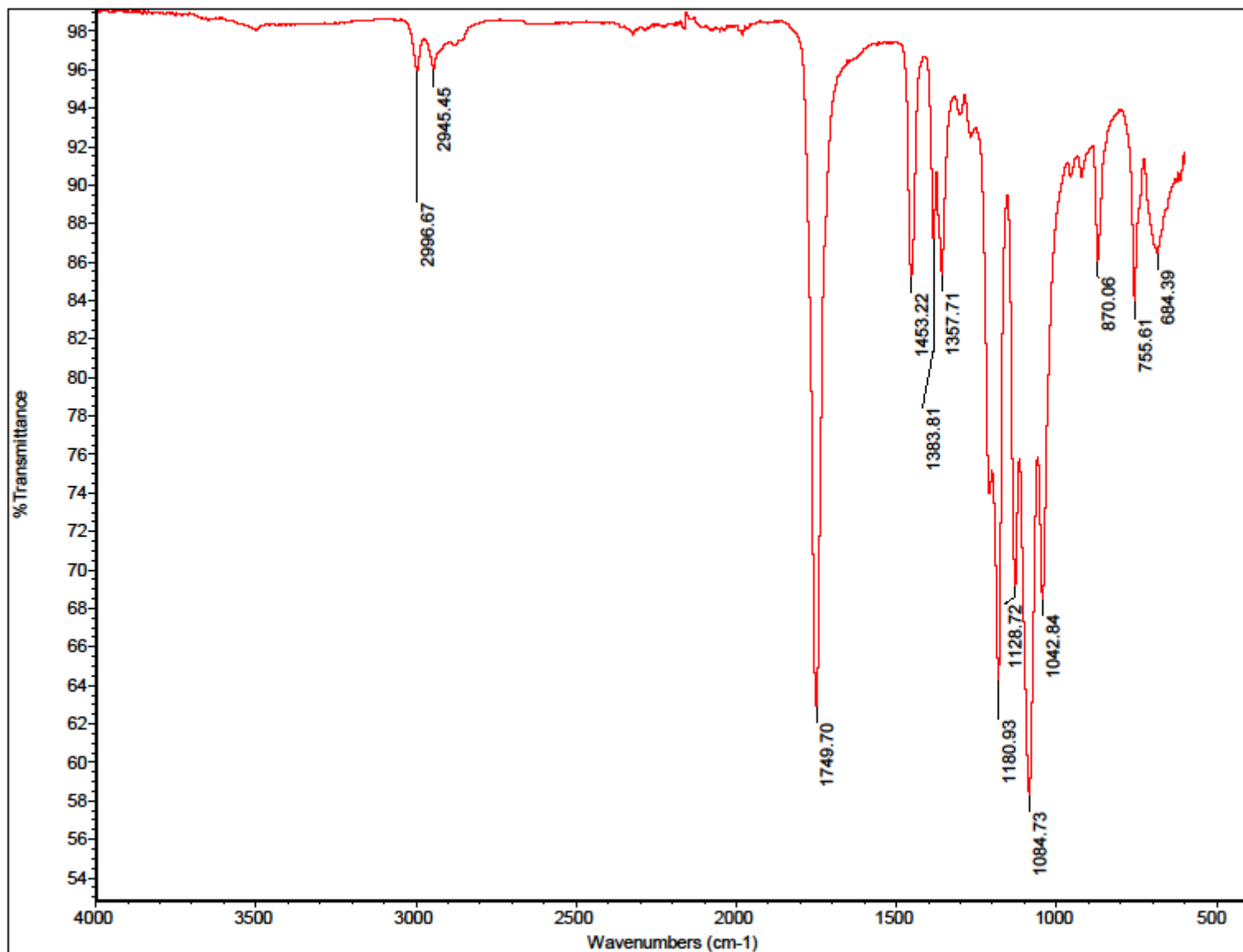
Page 8 of 19

7 Qualitative Identification by Fourier Transform Infrared Spectroscopy

Test Method: Determination by Fourier Transform Infrared Spectroscopy

Test Result:

Picture of IR Spectrometry for M001





Test Report No.: 244325359a 001

Page 9 of 19

## 8 Disintegration

### 8.1 General Test Information

Test Method: Refer to ISO 16929:2021

Ovens: The ovens used for this test contain of a heating system and a flow-rate adjustable air providing system. The temperature of the compost can be determined at any time. The volume of the composting oven is 60 liters.

O<sub>2</sub>-determination: An instrument (CY-C12) is used for determining the concentration of oxygen in the exhaust gas directly.

### 8.2 Blank Compost

#### 8.2.1 Composition of Blank Compost

The biowaste contains of a mixture of 6.7kg soil (peilei), 1.7kg onions, 1.7kg carrots, 1.7kg pepper, 0.3kg sawdust, 4.2kg rice and 4.2kg soybeans.

Mass for rice and soybeans is wet mass after soaking the rice and the soybeans in water for 12 hours.

#### 8.2.2 Conditions of Blank Compost in Beginning of Test

<u>Conditions</u>	
Water content (%)	63.0
Volatile solids of total dry mass (%)	62.0
C-N-ratio	21
pH-Value	6.8

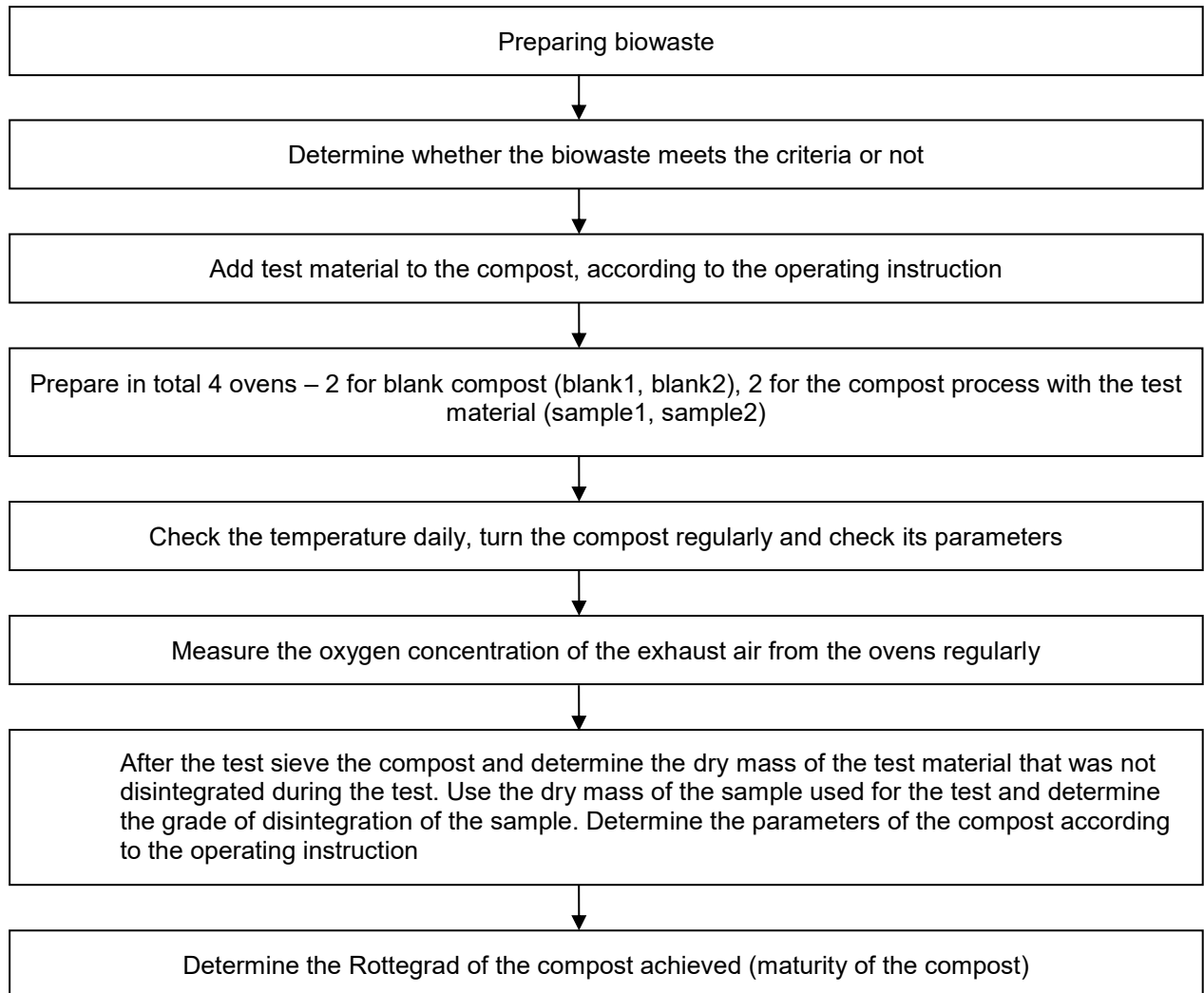
### 8.3 Set Up of the Testing

The whole mixture is composted in the oven. No nets are used during this test.

Wet mass of the blank compost: 20.5kg

Sample compost: 205.0g sample pieces in 5cm×5cm are added to the blank compost to make the sample compost.

#### 8.4 Flow Chart of Experiment



Test Report No.: 244325359a 001

Page 11 of 19

**8.5 Results****8.5.1 Amount of Test Material after the Process of Disintegration****Sample 1**

Parameter	Unit	Result
Total dry mass of the sample used for the test	g	205.0
Total dry mass of sample (>2mm-fraction) after the test:	g	0
Degree of disintegration	%	100

**Sample 2**

Parameter	Unit	Result
Total dry mass of the sample used for the test	g	205.0
Total dry mass of sample (>2mm-fraction) after the test:	g	0
Degree of disintegration	%	100

The amount of sample found after sieving the final compost through a 2mm sieve, washing and drying the material, is less than 10% of the sample amount placed in the biowaste at the beginning of the test. The physical breakdown during the composting process was successful.

**8.5.2 Test Results of the Compost after Disintegration****8.5.2.1 Wet Mass of the Compost Achieved after Disintegration**

Parameter	Unit	Result
Wet mass of the compost (blank 1)	kg	9.3
Wet mass of the compost (blank 2)	kg	8.9
Wet mass of the compost (sample 1)	kg	8.9
Wet mass of the compost (sample 2)	kg	8.5

**8.5.2.2 Parameters of the Compost Achieved after Disintegration by Analyzing the <10mm Fraction**

Parameter	Unit	Blank 1	Blank 2	Sample 1	Sample 2
Total dry solids	%	56.3	57.3	59.3	58.6
Volatile solids	%	57.5	58.6	60.1	59.3
pH	-	6.3	6.4	6.3	6.4
Phosphorus	mg/kg	8030	8030	6970	7020
Nitrite as N	mg/kg	0.20	0.24	0.34	0.27
Electrical conductivity#	mS/m	228	223	159	193
Total nitrogen as N	g/kg	22.3	23.3	19.6	19.8
Nitrate as N	mg/kg	37.7	36.0	16.3	17.1
Ammonium nitrogen as N	mg/kg	1788	1793	503	535
Potassium	mg/kg	22200	21300	22500	21200

**Test Report No.:** 244325359a 001

Page 12 of 19

Magnesium	mg/kg	7310	7100	8610	7150
Volumetric density	Kg/L	0.69	0.72	0.72	0.70
Total organic carbon	%	24.1	25.2	22.0	23.8

There is no obvious deviation on the tested parameters between the composts obtained after the test on disintegration.

# The tests on the parameters of the final compost after disintegration are subcontracted to an external lab which is accredited in accordance with ISO/IEC 17025:2017.

### 8.5.2.3 Rottegrad of the Compost Achieved after Disintegration

The Rottegrad is a parameter for determining the maturity of the compost obtained after the test on disintegration. After 84 days the final compost is placed in Dewar vessels for 72 hours. The highest temperature during these 72 hours is used for comparing with the limits for the different Rottegrads (see table below).

As mature compost does not undergo a significant self-heating process anymore, the temperature shall be below 30°C.

Parameter	Amount of Compost (kg)	Temperature after 72 h (°C)	Rottegrad
Blank 1	1.0	27.7	V
Blank 2	1.0	28.2	V
Sample 1	1.0	28.1	V
Sample 2	1.0	27.8	V

#### Reference:

Maximum Temperature	> 60°C	50.1°C to 60°C	40.1°C to 50°C	30.1°C to 40°C	≤30°C
Rottegrad	I	II	III	IV	V

Validity parameter: The compost shall have a Rottegrad of IV to V after 12 weeks. This validity parameter has been fulfilled.

**Test Report No.:** 244325359a 001

Page 13 of 19

**8.5.3 Appearance of Compost and Sample**



**Before test**



**After test**

**Blank**



**Before test**

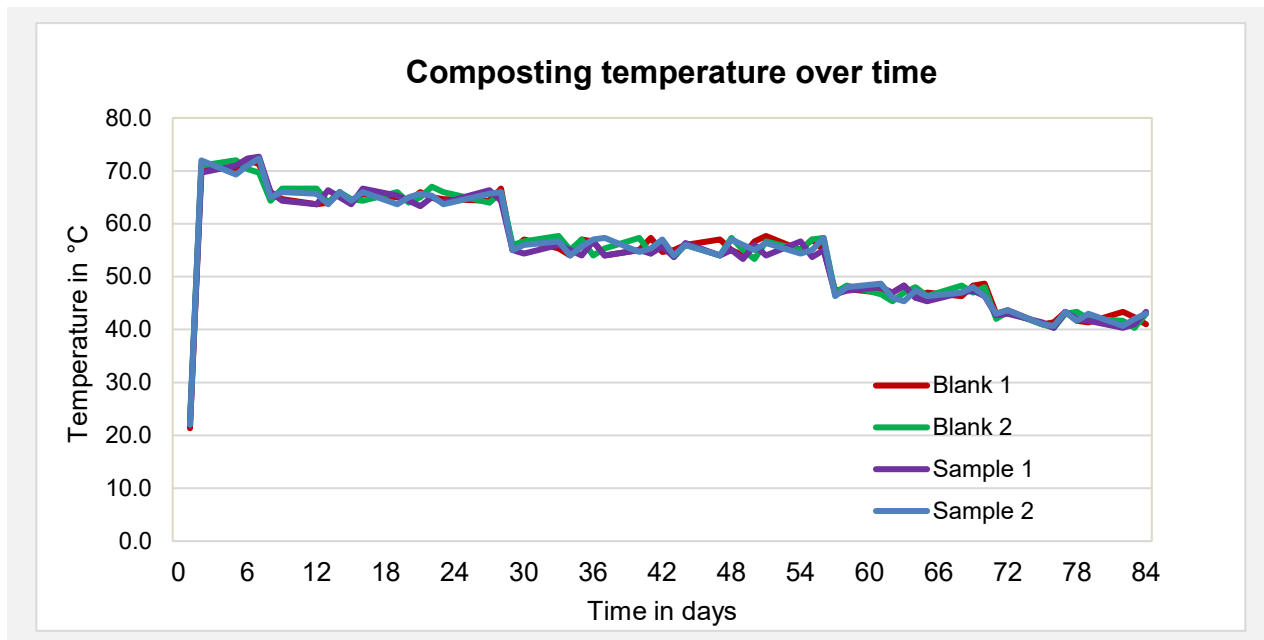


**After test**

**Sample**

8.6 Diagrams

8.6.1 Course of the Temperature during the Test



Temperature over time

Validity parameter: Following minimum and maximum temperatures shall be respected in the ovens during the test.

- Days 2–7: between 60 °C and 75 °C
- Days 8–28: between 55 (±5) °C and 65 (±5) °C
- Days 29–56: between 50 (±5) °C and 60 (±5) °C
- Days 57–70: below 50 °C
- Days 71–84: below 45 °C

This requirement has been fulfilled. For single values please see below table.

Temperature of the compost during the test (°C)

Day	Blank 1	Blank 2	Sample 1	Sample 2
1	21.3	23.0	22.0	22.0
2	71.0	71.0	69.7	72.0
5	70.0	72.0	71.0	69.3
6	72.0	70.3	72.3	71.0
7	71.3	69.7	72.7	72.3
8	66.0	64.3	66.0	65.0
9	64.7	66.7	64.3	66.0
12	63.7	66.7	63.7	65.7
13	64.0	64.0	66.3	63.7

**Test Report No.:** 244325359a 001

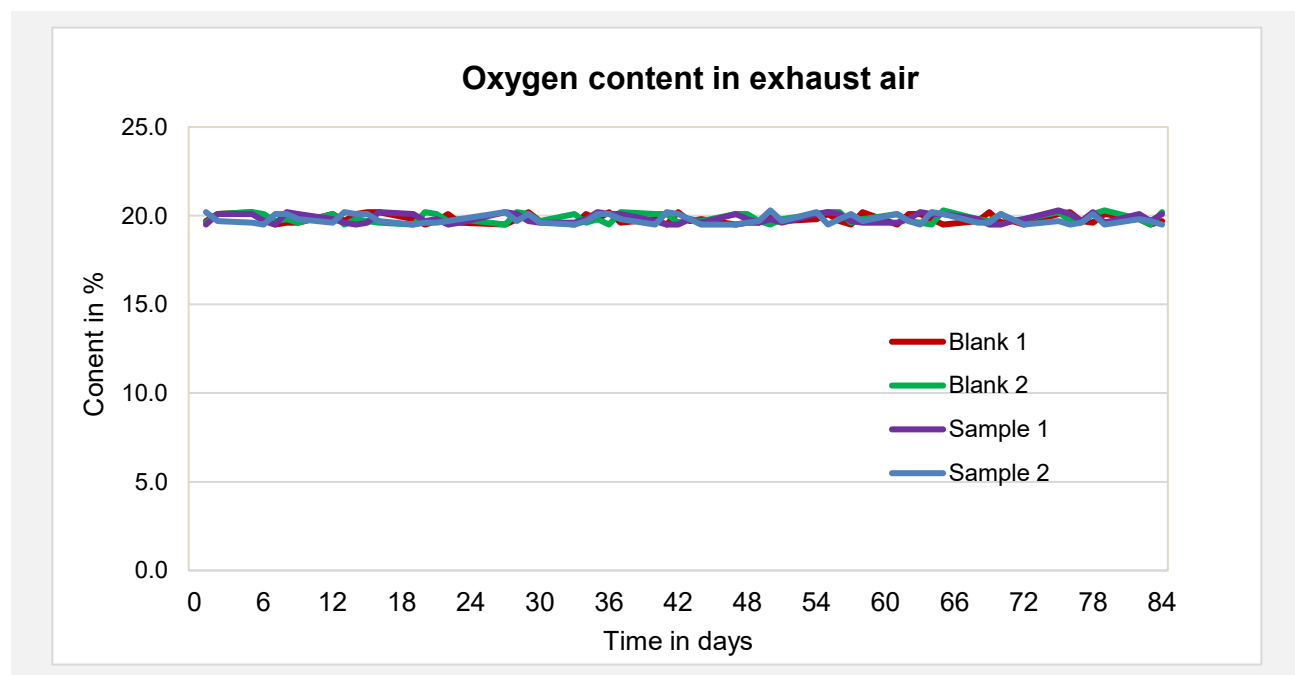
Page 15 of 19

14	66.0	66.0	65.0	66.0
15	64.0	64.7	63.7	64.3
16	65.7	64.3	66.7	66.0
19	65.0	66.0	65.3	63.7
20	64.3	64.0	64.3	65.0
21	66.0	65.0	63.3	65.7
22	65.0	67.0	65.0	65.3
23	64.7	66.0	64.0	63.7
27	64.3	64.0	66.3	65.7
28	66.7	66.0	64.3	66.0
29	55.0	56.0	55.0	55.0
30	57.0	56.7	54.3	56.0
33	55.3	57.7	56.0	56.7
34	54.0	55.0	55.0	54.0
35	57.0	57.0	54.0	55.7
36	56.7	54.0	56.7	57.0
37	54.0	55.3	54.0	57.3
40	55.0	57.3	55.0	54.7
41	57.3	54.3	54.3	55.3
42	54.7	56.7	55.7	57.0
43	55.0	53.7	53.7	54.0
44	56.0	56.0	56.3	56.0
47	57.0	54.0	54.0	54.0
48	55.0	57.3	55.0	57.0
49	54.0	55.0	53.3	56.0
50	56.7	53.3	56.0	55.0
51	57.7	56.7	54.0	56.3
54	55.0	55.0	56.7	54.3
55	57.0	57.0	53.7	55.0
56	55.0	57.3	55.0	57.3
57	47.3	47.0	46.7	46.3
58	47.7	48.3	47.3	48.0
61	47.0	46.7	48.0	48.7
62	47.0	45.3	47.0	46.0
63	48.3	47.0	48.3	45.3
64	46.0	48.0	46.0	47.3

65	47.0	46.3	45.3	46.3
68	46.3	48.3	47.0	47.0
69	48.3	47.0	47.3	48.0
70	48.7	48.0	46.3	46.3
71	43.0	42.0	42.7	43.0
72	43.7	43.3	43.0	43.7
75	41.0	41.0	41.3	41.0
76	41.3	40.3	40.3	40.7
77	43.3	43.0	43.3	43.3
78	41.7	43.3	42.0	41.7
79	41.3	42.0	41.7	43.0
82	43.3	41.7	40.3	40.7
83	42.3	40.3	41.0	42.0
84	41.0	43.0	43.3	43.0

3 days before the test was finished the heating function of the ovens was switched off. This caused the decreasing temperature after 81 days. The reason for switching off the heating function is, that the final compost will be used for determining the Rottegrad. Here the self-heating process of the final compost is determined, so we need to allow the compost to cool down to its natural temperature.

**8.6.2 Course of the Concentration of Oxygen in the Exhaust Gas during the Test**



*Concentration of oxygen over time*

**Validity parameter:** For ensuring aerobic conditions, the concentration of oxygen in the exhaust gas never falls below 10%. This requirement has been fulfilled. For single values please see below table.



Test Report No.: **244325359a 001**

Page 17 of 19

*Concentration of oxygen in the exhaust gas (%)*

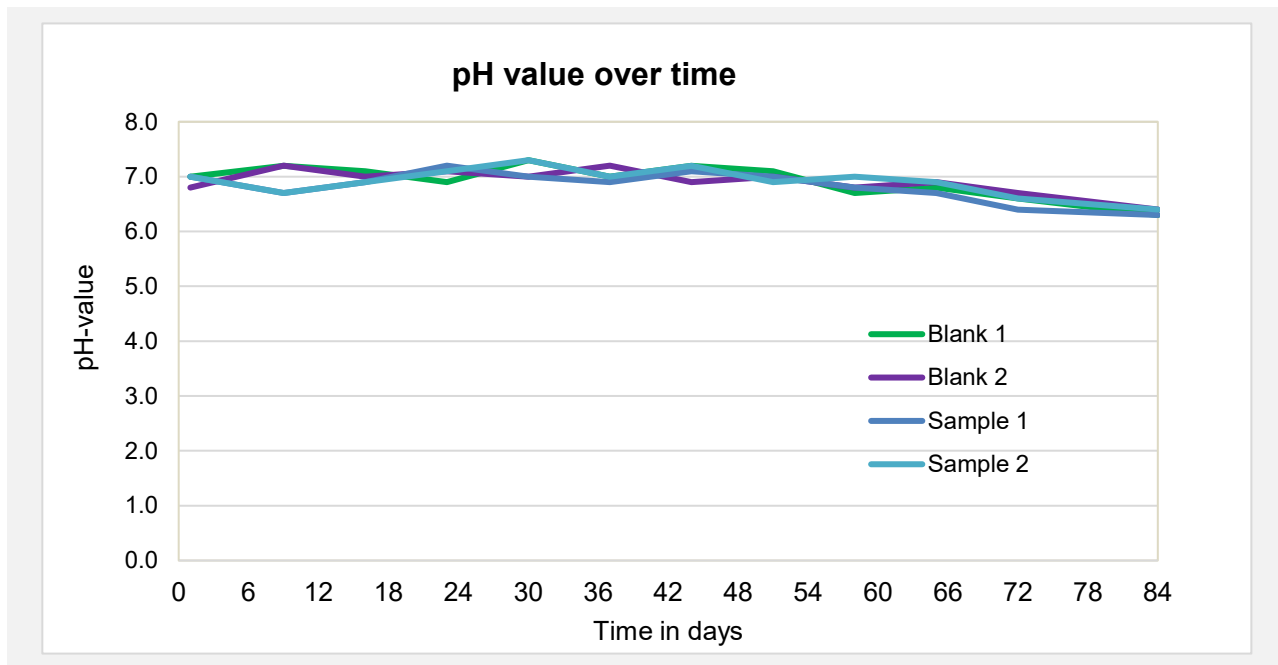
Day	Blank 1	Blank 2	Sample 1	Sample 2
1	19.7	19.6	19.5	20.2
2	20.1	20.1	20.1	19.7
5	20.2	20.2	20.1	19.6
6	19.8	20.1	19.7	19.5
7	19.5	19.7	19.5	20.1
8	19.6	19.8	20.2	20.1
9	19.6	19.6	20.1	19.8
12	20.1	20.1	19.8	19.6
13	19.7	19.5	19.6	20.2
14	20.1	19.8	19.5	20.1
15	20.2	19.7	19.6	20.1
16	20.2	19.6	20.2	19.7
19	19.8	19.5	20.1	19.5
20	19.5	20.2	19.7	19.6
21	19.7	20.1	19.8	19.6
22	20.1	19.7	19.5	19.7
23	19.6	19.8	19.6	19.8
27	19.5	19.5	20.2	20.2
28	19.8	20.2	20.1	19.7
29	20.2	20.1	19.7	20.1
30	19.7	19.7	19.6	19.6
33	19.5	20.1	19.6	19.5
34	20.1	19.6	19.8	19.7
35	19.8	19.8	20.2	20.1
36	20.2	19.5	20.1	20.1
37	19.6	20.2	20.1	19.8
40	19.8	20.1	19.7	19.5
41	19.5	20.1	19.5	20.2
42	20.2	19.6	19.5	20.1
43	19.7	19.8	19.8	19.8
44	19.8	19.7	19.6	19.5
47	19.5	20.1	20.1	19.5
48	19.6	20.1	19.8	19.6
49	19.6	19.7	19.6	19.7

**Test Report No.:** 244325359a 001

Page 18 of 19

50	20.1	19.5	19.8	20.3
51	19.7	19.8	19.6	19.7
54	19.8	20.1	20.1	20.2
55	20.1	20.2	20.2	19.5
56	19.7	20.2	20.1	19.8
57	19.5	19.6	19.7	20.1
58	20.2	19.8	19.6	19.7
61	19.5	20.1	19.6	20.1
62	20.1	19.7	19.8	19.7
63	20.1	19.6	20.2	19.5
64	19.8	19.5	20.1	20.2
65	19.5	20.3	20.1	20.1
68	19.7	19.8	19.8	19.6
69	20.2	19.7	19.5	19.6
70	19.6	20.1	19.5	20.1
71	19.7	19.7	19.7	19.8
72	19.5	19.8	19.8	19.5
75	20.1	20.2	20.3	19.7
76	20.2	19.7	20.1	19.5
77	19.7	19.7	19.7	19.6
78	19.6	20.1	20.2	20.1
79	20.1	20.3	19.6	19.5
82	19.8	19.8	20.1	19.8
83	19.5	19.5	19.7	19.7
84	19.7	20.2	20.1	19.5

**8.6.3 Graph of Development of pH Value of the Compost during Composting Process**



*pH Value over time*

Validity parameter: The pH-value never falls below 5 and raises to a value above 7 during the test. This requirement has been fulfilled. For single values please see below table.

*pH value of the compost during the test*

Day	Blank 1	Blank 2	Sample 1	Sample 2
1	7.0	6.8	7.0	7.0
9	7.2	7.2	6.7	6.7
16	7.1	7.0	6.9	6.9
23	6.9	7.1	7.2	7.1
30	7.3	7.0	7.0	7.3
37	7.0	7.2	6.9	7.0
44	7.2	6.9	7.1	7.2
51	7.1	7.0	7.0	6.9
58	6.7	6.8	6.8	7.0
65	6.8	6.9	6.7	6.9
72	6.6	6.7	6.4	6.6
84	6.3	6.4	6.3	6.4

-End-

# General Terms and Conditions of Business of TÜV Rheinland in Greater China

	<b>Scope</b>		
1.1	These General Terms and Conditions of Business of TÜV Rheinland in Greater China ("GTBC") is made between the client and one or more member entities of TÜV Rheinland in Greater China as applicable as the case may be ("TÜV Rheinland"). The Greater China hereof refers to Mainland China, Hong Kong and Taiwan. The client hereof includes:	8.10	TÜV Rheinland shall have the right at all times to self-off any amount due or payable by the client, including but not limited to self-off any fees paid by the client under any contracts, agreement and/or orders/quotations reached with TÜV Rheinland.
	(i) a natural person capable to form legally binding contracts under the applicable laws who concludes the contract not for the purpose of a daily use;	<b>9. Acceptance of work</b>	
	(ii) the incorporated or unincorporated entity duly organized, validly existing and capable to form legally binding contracts under the applicable law.	9.1	Any part of the work result ordered which is complete in itself may be presented by TÜV Rheinland for acceptance as an installment. The client shall be obliged to accept it immediately.
1.2	The following terms and conditions apply to agreed services including consultancy services, information, inspection and testing services, as well as ancillary services and other secondary obligations provided within the scope of contract performance.	9.2	If acceptance is required or contractually agreed in an individual case, this shall be deemed to have taken place two (2) weeks after completion and handover of the work, unless the client refuses acceptance within this period stating at least one fundamental breach of contract by TÜV Rheinland.
1.3	Any standard terms and conditions of the client of any nature shall not apply and shall hereby be expressly excluded. No standard contractual terms and conditions of the client shall form part of the contract even if TÜV Rheinland does not explicitly object to them.	9.3	The client is not entitled to refuse acceptance due to insignificant breach of contract by TÜV Rheinland.
1.4	In the context of an ongoing business relationship with the client, this GTBC shall also apply to future contracts with the client without TÜV Rheinland having to refer to them separately in each individual case.	9.4	If acceptance is excluded according to the nature of the work performance of TÜV Rheinland, the client is not entitled to refuse acceptance.
		9.5	During the Follow-Audit stage, if the client was unable to make use of the time windows provided for within the scope of a certification procedure for auditing/performance by TÜV Rheinland and the certificate is therefore to be withdrawn (e.g. performance of surveillance audits), TÜV Rheinland is entitled to immediately charge a lump-sum compensation of 10% of the order amount as compensation for expenses. The client reserves the right to prove that the TÜV Rheinland has incurred no damage whatsoever or only a considerably lower damage than the above lump sum.
2.	<b>Quotations</b>	9.6	Insofar as the client has undertaken in the contract to accept services, TÜV Rheinland shall also be entitled to charge lump-sum damages in the amount of 10% of the order amount as compensation for expenses if the services were not fulfilled within one year after the order has been placed. The client reserves the right to prove that the TÜV Rheinland has incurred no damage whatsoever or only a considerably lower damage than the above mentioned lump sum.
	Unless otherwise agreed, all quotations submitted by TÜV Rheinland can be changed by TÜV Rheinland without notice prior to its acceptance and confirmation by the other party.	<b>10. Confidentiality</b>	
3.	<b>Coming into effect and duration of contracts</b>	10.1	For the purpose of these terms and conditions, "confidential information" means all know-how, trade secrets, documents, images, drawings, expirations, information, data, test results, reports, samples, project documents, pricing and financial information, customer and supplier information, and marketing techniques and materials, tangible or intangible, that are supplied, transferred or otherwise disclosed by one party (the "disclosing party") to the other party (the "receiving party"), in writing or orally, in printed or electronic format. Confidential information is expressly not the data and know-how collected, compiled or otherwise obtained by TÜV Rheinland (including personal and proprietary data of the client) within the scope of the provision of services by TÜV Rheinland. TÜV Rheinland is entitled to store, use, further develop and pass on the data obtained in connection with the provision of services for the purpose of developing services, improving services and for other purposes.
3.1	The contract shall come into effect for the agreed terms upon the quotation letter of TÜV Rheinland or a separate contractual document signed by both contracting parties, or upon the works requested by the client being carried out by TÜV Rheinland. If the client instructs TÜV Rheinland without receiving a quotation from TÜV Rheinland (quotation), TÜV Rheinland is, in its sole discretion, entitled to accept the order by giving written notice of such acceptance (including notice sent via electronic means) or by performing the requested services.		The disclosing party shall mark all confidential information disclosed in written form as confidential before passing it onto the receiving party. The same applies to confidential information transmitted by e-mail. If confidential information is disclosed orally, the receiving party shall appropriately inform in advance and the disclosing party shall confirm in writing the confidentiality nature of the information within five working days of oral disclosure. Where the disclosing party fails to do so within the stipulated period, the receiving party shall not take any confidentiality obligations hereunder towards the client. The client shall avoid using any third party platform and/or system (e.g. WeChat, Dingding, etc. Unauthorized by TÜV Rheinland) to send any confidential information to TÜV Rheinland. Instead, the client shall send any confidential information to company email of TÜV Rheinland employees through its company email. If the client suffers from any losses or damages due to any theft or leakages to be caused by the adoption of any unauthorized confidential information sharing methods mentioned above, TÜV Rheinland shall be waived for any compensation liabilities.
3.2	The contract term starts upon the coming into effect of the contract in accordance with article 3.1 and shall continue for the term agreed in the contract.	10.3	All confidential information which the disclosing party transmits or otherwise discloses to the receiving party and which is created during performance of work by TÜV Rheinland:
3.3	If the contract provides for an extension of the contract term, the contract term will be extended by the term provided for in the contract unless terminated in writing by either party with a six-week notice prior to the end of the contractual term.	a)	may only be used by the receiving party for the purposes of performing the contract, unless expressly otherwise agreed in writing by the disclosing party;
4.	<b>Scope of services</b>	b)	may not be copied, distributed, published or otherwise disclosed by the receiving party, unless this is necessary for fulfilling the purpose of the contract or TÜV Rheinland is required to pass on confidential information, inspection reports or documentation to the government authorities, judicial court, accreditation bodies or third parties that are involved in the performance of the contract;
4.1	The scope and type of the services to be provided by TÜV Rheinland shall be specified in the contractually agreed service scope of TÜV Rheinland by both parties. If no such separate service scope of TÜV Rheinland exists, then the written confirmation of order by TÜV Rheinland shall be decisive for the service to be provided.	c)	must be treated by the receiving party with the same level of confidentiality as the receiving party uses to protect its own confidential information, but never with a lesser level of confidentiality than that which is reasonably required;
4.2	The agreed services shall be performed in compliance with the regulations in force at the time the contract is entered into.	10.4	The receiving party may disclose any confidential information received from the disclosing party only to its employees and subcontractors who are involved in the performance of the contract. The receiving party undertakes to obligate its employees to observe the same level of secrecy as set forth in this confidentiality clause.
4.3	TÜV Rheinland is entitled to determine, in its sole discretion, the method and nature of the assessment unless otherwise agreed in writing or if mandatory provisions require a specific procedure to be followed.	10.5	Information for which the receiving party can furnish proof that:
4.4	On execution of the work there shall be no simultaneous assumption of any guarantee of the correctness (proper quality) and working order of either tested or examined parts nor of the installation as a whole and its upstream and/or downstream processes, organisations, uses and application in accordance with regulations or of the systems on which the installation is based. In particular, TÜV Rheinland shall assume no responsibility for the construction, selection of materials and assembly of installations examined, nor for their use and application in accordance with regulations, unless these questions are expressly covered by the contract.	a)	it was generally known at the time of disclosure or has become general knowledge without violation of this confidentiality clause by the receiving party; or
4.5	In the case of inspection work, TÜV Rheinland shall not be responsible for the accuracy or checking of the safety programmes or safety regulations on which the inspections are based, unless otherwise expressly agreed in writing.	b)	it was disclosed to the receiving party by a third party entitled to disclose this information; or
4.6	If mandatory legal regulations and standards or official requirements for the agreed service scope change after conclusion of the contract, with a written notice to the client, TÜV Rheinland shall be entitled to additional remuneration for resulting additional expenses.	c)	the receiving party already possessed this information prior to disclosure by the disclosing party; or
4.7	The services to be provided by TÜV Rheinland under the contract are agreed exclusively with the client. A contract of third parties with the services of TÜV Rheinland, as well as making available of and justifying confidence in the work results (test reports, test results, expert reports, etc.) is not part of the agreed services. This also applies if the client passes on work results - in full or in extracts - to third parties in accordance with clause 11.4.	d)	the receiving party developed it itself, irrespective of disclosure by the disclosing party, nor did it deemed to constitute "confidential information" as defined in this confidentiality clause.
5.	<b>Performance periods/dates</b>	10.6	All confidential information shall remain the property of the disclosing party. The receiving party hereby agrees to immediately (i) return all confidential information, including all copies, to the disclosing party, and/or (ii) on request by the disclosing party, to destroy all confidential information, including all copies, and confirm the destruction of this confidential information to the disclosing party in writing, at any time if so requested by the disclosing party but at the latest and without special request after termination or expiry of the contract. This does not extend to including reports and certificates prepared for the client solely for the purpose of fulfilling the obligations under the contract, which shall remain with the client. However, TÜV Rheinland is entitled to make file copies of such reports, certificates and confidential information that forms the basis for preparing these reports and certificates in order to evidence the correctness of its results and for general information purposes relevant to the client, regardless of the requirements of working procedures of TÜV Rheinland.
5.1	The contractually agreed periods/dates of performance are based on estimates of the work involved which are prepared in line with the details provided by the client. They shall only be binding if work is confirmed as binding by TÜV Rheinland in writing.	10.7	From the start of the contract and for a period of three years after termination or expiry of the contract, the receiving party shall maintain strict secrecy of all confidential information and shall not disclose this information to any third parties or use it for itself.
5.2	If binding periods of performance have been agreed, these periods shall not commence until the client has submitted all required documents to TÜV Rheinland.	<b>11. Copyrights and rights of use, publications</b>	
5.3	Articles 5.1 and 5.2 also apply, even without express approval by the client, to all extensions of agreed periods/dates of performance not caused by TÜV Rheinland.	11.1	TÜV Rheinland shall retain all exclusive copyrights in the reports, expert reports/opinions, test reports/results, results, calculations, presentations etc. prepared by TÜV Rheinland, unless otherwise agreed by the parties in a separate agreement. As the owner of the copyrights, TÜV Rheinland is free to grant others the right to use the work results for individual or all types of use ("right of use").
5.4	TÜV Rheinland is not responsible for a delay in performance, in particular if the client has not fulfilled his duties to cooperate in accordance with clause 6.1 or has not done so in time and, in particular, has provided TÜV Rheinland with all documents and information required for the performance of the service as specified in the contract.	11.2	The client receives a simple, limited, non-transferable, non-assignable right of use to the contents of the work results produced within the scope of the contract, unless otherwise agreed by the parties in a separate agreement. The client may only use such reports, expert reports/opinions, test reports/results, results calculations, presentations etc. prepared within the scope of the contract for the contractually agreed purpose.
5.5	If the performance of TÜV Rheinland is delayed due to unforeseeable circumstances such as force majeure, strikes, business disruptions, governmental regulations, transport obstacles, etc., TÜV Rheinland is entitled to postpone performance for a reasonable period of time which corresponds at least to the duration of the hindrance plus any time period which may be required to resume performance.	11.3	The transfer of right of use of the generated work results regulated in clause 11.2 of the GTBC is subject to full payment of the remuneration agreed in favour of TÜV Rheinland.
6.	<b>The client's obligation to cooperate</b>	11.4	The client may use work results only complete and unshortened. The client may only pass on the work results in full unless TÜV Rheinland has given its prior written consent to the partial passing on of work results.
6.1	The client shall guarantee that all cooperation required on its part, its agents or third parties will be provided in good time and at no cost to TÜV Rheinland.	11.5	Any publication or duplication of the work results for advertising purposes or any further use of the work results beyond the scope regulated in clause 11.2 needs the prior written approval of TÜV Rheinland in each individual case.
6.2	Design documents, supplies, auxiliary staff, etc. necessary for performance of the services shall be made available free of charge by the client. Moreover, collaborative action of the client must be undertaken in accordance with legal provisions, standards, safety regulations and accident prevention instructions. And the client represents and warrants that:	11.6	TÜV Rheinland may revoke a once given approval according to clause 11.5 at any time without stating reasons. In this case, the client is obliged to stop the transfer of the work results immediately at his own expense and, as far as possible, to withdraw publications.
a)	it has required statutory qualifications;	11.7	The consent of TÜV Rheinland to publication or duplication of the work results does not entitle the client to use the corporate logo, corporate design or test/certification mark of TÜV Rheinland.
b)	the product, service or management system to be certified complies with applicable laws and regulations; and	<b>12. Liability of TÜV Rheinland</b>	
c)	it doesn't have any illegal and dishonest behaviour or is not included in the list of Enterprises with Serious Illegal and Dishonest Acts of People's Republic of China.	12.1	Respective of the legal basis, to the fullest extent permitted by applicable law, in the event of a breach of contractual obligations or tort, the liability of TÜV Rheinland for all damages, losses and reimbursement of expenses caused by TÜV Rheinland, its legal representatives and/or employees shall be limited to: (i) in the case of a contract with a fixed overall fee, three times the overall fee for the entire contract; (ii) in the case of a contract for annually recurring services, the agreed annual fee; (iii) in the case of a contract expressly charged on a time and material basis, a maximum of 20,000 Euro or equivalent amount in local currency; and (iv) in the case of a framework agreement that provides for the possibility of placing individual orders, three times of the fee for the individual order under which the damages or losses have occurred. Notwithstanding the above, in the event that the total and accumulated liability calculated according to the foregoing provisions exceeds 2.5 Million Euro or equivalent amount in local currency, the total and accumulated liability of TÜV Rheinland shall be only limited to and shall not exceed the said 2.5 Million Euro or equivalent amount in local currency.
If the client breaches the aforesaid representations and warranties, TÜV Rheinland is entitled to i) immediately terminate the contract/order without prior notice, and ii) withdraw the issued testing report/certificates if any.		12.2	The limitation of liability according to article 12.1 above shall not apply to damages and/or losses caused by malice, intent or gross negligence on the part of TÜV Rheinland or its vicarious agents. Such limitation shall not apply to damages for a person's death, physical injury or illness.
6.3	The client shall bear any additional cost incurred on account of work having to be redone or being delayed as a result of late, incorrect or incomplete information provided by or lack of proper cooperation from the client. Even where a fixed or maximum price is agreed, TÜV Rheinland shall be entitled to charge extra fees for such additional expense.	12.3	In cases involving a fundamental breach of contract, TÜV Rheinland will be liable even where minor negligence is involved. For this purpose, a "fundamental breach" is breach of a material contractual obligation, the performance of which permits the non-performance of the contract. Any claim for damages for a fundamental breach of contract shall be limited to the amount of damages reasonably foreseeable as a possible consequence of such breach of contract at the time of the breach (reasonably foreseeable damages), unless any other circumstances described in article 12.2 applies.
7.	<b>Prices</b>	12.4	TÜV Rheinland shall not be liable for the acts of the personnel made available by the client to support TÜV Rheinland in the performance of its services under the contract, unless such personnel made available is regarded as vicarious agent of TÜV Rheinland. If TÜV Rheinland is not liable for the acts of the personnel made available by the client under the foregoing provision, the client shall indemnify TÜV Rheinland against any claims made by third parties arising from or in connection with such personnel's acts.
7.1	If the scope of performance is not laid down in writing when the order is placed, invoicing shall be based on costs actually incurred. If no price is agreed in writing, invoicing shall be made in accordance with the price list of TÜV Rheinland valid at the time of performance.	12.5	Unless otherwise contractually agreed in writing, TÜV Rheinland shall only be liable under the contract to the client.
7.2	Unless otherwise agreed, work shall be invoiced according to the progress of the work.	12.6	The limitation periods for claims for damages shall be based on statutory provisions.
7.3	If the execution of an order extends over more than one month and the value of the contract or the agreed fixed price exceeds €2,500.00 or equivalent value in local currency, TÜV Rheinland may demand payments on account or in instalments.	12.7	None of the provisions of this article 12 changes the burden of proof to the disadvantage of the client.
8.	<b>Payment terms</b>	<b>13. Export control</b>	
8.1	All invoice amounts shall be due for payment without deduction on receipt of the invoice. No discounts and rebates shall be granted.	13.1	When passing on the services provided by TÜV Rheinland or parts thereof to third parties in Greater China or other regions, the client must comply with the respectively applicable regulations of national and international export control law.
8.2	Payments shall be made to the bank account of TÜV Rheinland as indicated on the invoice, stating the invoice and client numbers.	13.2	The performance of a contract with the client is subject to the proviso that there are no obstacles to performance due to national or international foreign trade legislations or embargos and/or sanctions.
8.3	In cases of default of payment, TÜV Rheinland shall be entitled to claim default interest at the applicable short term loan interest rate publicly announced by a reputable commercial bank in the country where TÜV Rheinland is located. At the same time, TÜV Rheinland reserves the right to claim further damages.		
8.4	Should the client default in payment of the invoice despite being granted a reasonable grace period, TÜV Rheinland shall be entitled to cancel the contract, withdraw the certificate, claim damages for non-performance and refuse to continue performance of the contract.		
8.5	The provisions set forth in article 8.4 shall also apply in cases involving returned cheques, cessation of payment, commencement of insolvency proceedings against the client's assets or cases in which the commencement of insolvency proceedings has been dismissed due to lack of assets.		
8.6	Objections to the invoices of TÜV Rheinland shall be submitted in writing within two weeks of receipt of the invoice.		
8.7	TÜV Rheinland shall be entitled to demand approximate advance payments.		
8.8	TÜV Rheinland shall be entitled to raise its fees at the beginning of a month if overheads and/or purchased costs have risen. In this case, TÜV Rheinland shall notify the client in writing of the rise in fees. This notification shall be issued one month prior to the date on which the rise in fees shall come into effect (period of notice of changes in fees). If the rise in fees remains under 5% per contractual year, the client shall not have the right to terminate the contract. If the rise in fees exceeds 5% per contractual year, the client shall be entitled to terminate the contract by the end of the period of notice of changes in fees. If the contract is not terminated, the changed fees shall be deemed to have been agreed upon by the time of the expiry of the notice period.		
8.9	Only legally established and undisputed claims may be offset against claims by TÜV Rheinland.		