

Dated: 2023-02-07



**Applicant** : The Dreamfarm Pty ltd

7 Amy St, Albion, QLD 4010, Australia

Sample Description : Ograte

**End use** : Food grater

**Style No.** : DFOG3352, DFOG3369

Supplier / Manufacturer : Wellbase Industrial Ltd

Buyer : The Dreamfarm Pty Ltd

Country of Origin : China

Country of Destination : Australia, USA, Europe, Japan

Test Sample Receipt Date, Location : 2022-11-28, Shenzhen

Test Period, Location : From 2022-12-12 to 2023-01-31, Shenzhen

Test Result(s) : Refer to Section 3

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# **Purpose Of Examination / Conclusion:**

No.	Test Item(s)	Conclusion						
	As specified by client, to test per the selected requirement(s) for the tested item(s) as stated							
	in the German Food & Feed Acts LFGB (§ 30 & 31) and Regulation (EC) No.1935/2004							
1.	Overall Migration	Pass						
2.	Specific Migration of PAA	Pass						
3.	Specific Migration of PAAs	Pass						
4.	Specific Migration of Heavy Metals	Pass						
5.	Total Chromium, Vanadium, Zirconium and Hafnium Content	Pass						
6.	Peroxide Value	Pass						
	Sensory Test							
7.	Test for compliance with German Food and Feed Acts LFGB Section 31	Pass						
	and Regulation (EC) No. 1935/2004 Article 3(1)							
8.	Extractable 23 Heavy Metals	Pass						
<u> </u>	Test as specified in EDQM Technical Guide PA/PH/EMB (13) 9	1 400						
	Total Chromium Content							
9.	Test for compliance with the selected requirement(s) in the General	Pass						
٥.	Recognized As Safe (GRAS) specification according to United State Food	1 433						
	and Drug Administration (US FDA) Regulations on stainless steel							
	FDA CFR Title 21 Part 177.1520 (Excluding Density)							
10.	Test for compliance with the selected requirement(s) in U.S. F.D.A.	Pass						
	C.F.R. 21. Part 177.1520							

### Remarks:

- (1) The results relate only to the items tested.
- (2) Samples are tested as received.
- (3) The test items and samples were specified by the client
- (4) "Pass" means the measured result is within a limit, even when extended by expanded uncertainty. "Fail" means the measured result is beyond a limit, even when extended by expanded uncertainty. "Inconclusive" means the measured result can be within or beyond a limit when extended by expanded uncertainty. The confidence level of the expended uncertainty for "Pass", "Fail" and "Inconclusive" is 95%.

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TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch TÜV SÜD Group

Prepared by:

Reviewed by:

gestical



Shu, Steven Senior Project Coordinator

Steven Sh

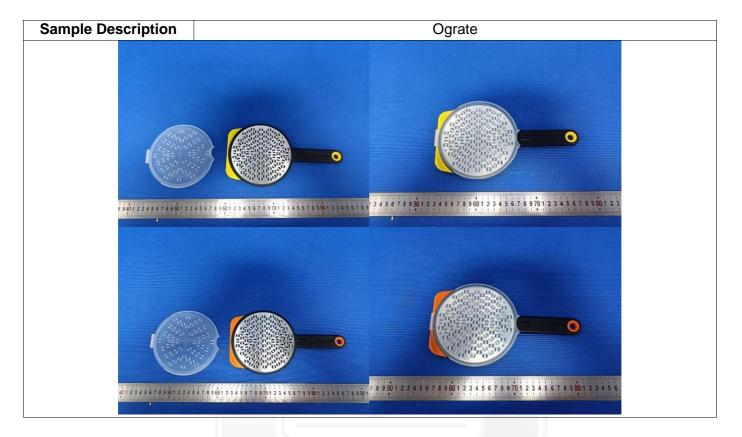
Huang, Jessica Senior Project Coordinator

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## 1. Photo of the Submitted Sample:



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# 2. List of Materials as identified by the Laboratory:

T. No.	Sample	Colour and Description	Photograph
T1	<b>No.</b> 001	Black plastic	2345678950123456789601234567897012345678980123
T2	002	Silver metal	2345678950123456789601234567897012345678980123
Т3	003	Whole product	2345678950123456789601234567897012345678980123

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### 3. Test Result

# 3.1 Overall Migration

Test method: With reference to EN 1186-3:2022.

Sample 001 migration ratio(S/V): 10dm<sup>2</sup>/L

[Reporting Limit: 3mg/dm<sup>2</sup>]

		Result(s) [mg/dm <sup>2</sup> ]			Maximum
Simulant (s) Used	Test Condition		001	Maximum Permissible Limit	
,		1 <sup>st</sup> migration	2 <sup>nd</sup>	3 <sup>rd</sup> migration	[mg/dm <sup>2</sup> ]
		migration	migration	migration	
3% Acetic acid	40°C for 0.5 hour	<3.00	<3.00	<3.00	10
50% Ethanol	40°C for 0.5 hour	<3.00	<3.00	<3.00	10
95% Ethanol	40°C for 0.5 hour	<3.00	<3.00	<3.00	10
Iso-octane	20°C for 6 min	5.53	<3.00	<3.00	10
Stability: Comply	. //				

## 3.2 Specific Migration of PAA

Test method: With reference to EN13130-1:2004, followed by Kunststoffe im Lebensmittelverkehr,

Book 2, Teil B II,XXI

Test condition: 3% Acetic acid, 40°C for 0.5 hour

Sample 001 migration ratio(S/V): 6dm<sup>2</sup>/L

		Maximum			
Test Item(s)	001			Permissible Limit	
	1 <sup>st</sup> migration	2 <sup>nd</sup> migration	3 <sup>rd</sup> migration	[mg/kg]	
Total Primary Aromatic Amine	<0.01	<0.01	<0.01	0.01	
Stability: Comply					

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### 3.3 Specific Migration of PAAs

Test method: With reference to EN 13130-1:2004, followed by LC/MS/MS

Test condition: 3% Acetic acid, 40°C for 0.5 hour

Sample 001 migration ratio(S/V): 6dm<sup>2</sup>/L

			Maximum		
Test Item(s)	CAS No.		001		Permissible
, ,		1 <sup>st</sup> migration	2 <sup>nd</sup> migration	3 <sup>rd</sup> migration	Limit[mg/kg]
4-aminobiphenyl	92-67-1	ND	ND	ND	ND(DL:0.002)
benzidine	92-87-5	ND	ND	ND	ND(DL:0.002)
4-chloro-o-toluidine	95-69-2	ND	ND	ND	ND(DL:0.002)
2-naphthylamine	91-59-8	ND	ND	ND	ND(DL:0.002)
o-aminoazotoluene	97-56-3	ND	ND	ND	ND(DL:0.002)
5-nitro-o-toluidine	99-55-8	ND	ND	ND	ND(DL:0.002)
4-chloroaniline	106-47-8	ND	ND	ND	ND(DL:0.002)
4-methoxy-m- phenylenediamine	615-05-4	ND	ND	ND	ND(DL:0.002)
4,4'- diaminodiphenylmethane	101-77-9	ND	ND	ND	ND(DL:0.002)
3,3'-dichlorobenzidine	91-94-1	ND	ND	ND	ND(DL:0.002)
3,3'-dimethoxybenzidine	119-90-4	ND	ND	ND	ND(DL:0.002)
3,3'-dimethylbenzidine	119-93-7	ND	ND	ND	ND(DL:0.002)
4,4'-methylenedi-o-toluidine	838-88-0	ND	ND	ND	ND(DL:0.002)
p-cresidine	120-71-8	ND	ND	ND	ND(DL:0.002)
4,4'-methylene-bis- (2-chloro-aniline)	101-14-4	ND	ND	ND	ND(DL:0.002)
4,4'-oxydianiline	101-80-4	ND	ND	ND	ND(DL:0.002)
4,4'-thiodianiline	139-65-1	ND	ND	ND	ND(DL:0.002)
o-toluidine	95-53-4	ND	ND	ND	ND(DL:0.002)
4-methyl-m- phenylenediamine	95-80-7	ND	ND	ND	ND(DL:0.002)
2,4,5-trimethylaniline	137-17-7	ND	ND	ND	ND(DL:0.002)
o-anisidine	60-09-3	ND	ND	ND	ND(DL:0.002)
4-amino azobenzene	90-04-0	ND	ND	ND	ND(DL:0.002)
1,3-phenylenediamine	108-45-2	ND	ND	ND	ND(DL:0.002)
2,4-Dimethylaniline	95-68-1	ND	ND	ND	ND(DL:0.002)*
2,6-dimethyl-aniline	87-62-7	ND	ND	ND	ND(DL:0.002)*
Aniline	62-53-3	ND	ND	ND	ND(DL:0.002)*
p-Phenylenediamine	106-50-3	ND	ND	ND	ND(DL:0.002)*
1,5-Napthalenediamine	2243-62-1	ND	ND	ND	ND(DL:0.002)*
2,6-toluenediamine	823-40-5	ND	ND	ND	ND(DL:0.002)*
Stability: Comply					

Note 1. ND denotes Not Detected and less than Detection Limit (Detection Limit=0.002mg/kg).

2. \* denotes Limit specified by client

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#### **Specific Migration of Heavy Metals** 3.4

Test method: With reference to EN13130-1:2004, followed by ICP-MS.

Test condition: 3% Acetic acid, 40°C for 0.5 hour

Sample 001 migration ratio(S/V): 6dm<sup>2</sup>/L

		Result(s) [mg/kg	]	- Maximum
Test Item(s)		001		Permissible Limit
rest item(s)	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	[mg/kg]
	migration	migration	migration	[1119/119]
Lithium (Li)	<0.1	<0.1	<0.1	0.6
Aluminium (Al)	<0.1	<0.1	<0.1	1
Chromium (Cr)	ND	ND	ND	ND (DL:0.01)
Manganese (Mn)	<0.1	<0.1	<0.1	0.6
Iron (Fe)	<5	<5	<5	48
Cobalt (Co)	<0.01	<0.01	<0.01	0.05
Nickel (Ni)	<0.01	<0.01	<0.01	0.02
Copper (Cu)	<1	<1	<1	5
Zinc (Zn)	<1	<1	<1	5
Arsenic (As)	ND	ND	ND	ND (DL:0.01)
Cadmium (Cd)	ND	ND	ND	ND (DL:0.002)
Antimony (Sb)	<0.01	<0.01	<0.01	0.04
Barium (Ba)	<0.1	<0.1	<0.1	1
Mercury (Hg)	ND	ND	ND	ND (DL:0.01)
Lead (Pb)	ND	ND	ND	ND (DL:0.01)
Lanthanum (La)	<0.01	<0.01	<0.01	0.05
Europium (Eu)	<0.01	<0.01	<0.01	0.05
Gadolinium (Gd)	<0.01	<0.01	<0.01	0.05
Terbium (Tb)	<0.01	<0.01	<0.01	0.05
Sum of [La, Eu, Gd, Tb]	<0.04	<0.04	<0.04	0.05
Stability: Comply				

Note 1. DL denotes Detection Limit

2. ND denotes Not Detected and less than Detection Limit.

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## 3.5 Total Chromium, Vanadium, Zirconium and Hafnium Content

Test method: Microwave digestion, followed by AAS or ICP-OES analysis

Test Item(s)	Result(s)[mg/kg] 001	Maximum Permissible Limit [mg/kg]
Chromium content	<2.0	10
Vanadium content	<15.0	20
Zirconium content	<15.0	100
Hafnium Content	<15.0	100

## 3.6 Peroxide Value

Test method: With reference to Bundesgesundheitsbl. 40 (1997), 412.

Toot Itom(a)	Result(s)	Maximum Darmiacible Limit
Test Item(s)	001	Maximum Permissible Limit
Peroxide Value	Absent	Absent

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## 3.7 Sensory test

Test method: With reference to DIN 10955:2004

The submitted sample was simulated in distilled water at 40°C for 0.5 hour. After this treatment treated water was examined by panels with regard to any divergence in smell and taste.

Sample(s)	Testing Parameter	Grading result(s)	Recommended level
003	Transfer of taste	0	<3
003	Transfer of smell	0	<3

Note: 1. Available grading are listed as follow:

Grading 0: No perceptible taste/smell deviation

1: Just perceptible taste/smell deviation

2: Weak taste/smell deviation

3: Clear taste/smell deviation

4: Strong taste/smell deviation



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#### 3.8 **Extractable Heavy Metal**

Test method: The sample was simulated in 0.5% Citric acid at 40°C for 0.5 hour. The heavy metal content of extracting solution was then analysed using by ICP-MS.

Toot Itom(s)	-	s)[mg/kg]	Maximum Permissible Limit [mg/kg]*	
Test Item(s)		02		
	3 <sup>rd</sup> migration	1 <sup>st</sup> + 2 <sup>nd</sup> migration	3 <sup>rd</sup> migration	1 <sup>st</sup> + 2 <sup>nd</sup> migration
Silver	<0.01	<0.02	0.08	0.56
Aluminium	<0.01	<0.02	5	35
Cobalt	<0.01	<0.02	0.02	0.14
Chromium	<0.010	<0.020	0.250	1.75
Copper	<0.01	<0.02	4	28
Iron	<1.0	<2.0	40	280
Magnesium	<0.01	<0.02		
Manganese	<0.10	<0.20	1.8	12.6
Molybdenum	<0.01	<0.02	0.12	0.84
Nickel	<0.01	<0.02	0.14	0.98
Tin	<1.0	<2.0	100	700
Titanium	<0.01	<0.02		
Vanadium	<0.001	<0.002	0.01	0.07
Zinc	<0.10	<0.20	5	35
Arsenic	<0.001	< 0.002	0.002	0.014
Barium	<0.01	<0.02	1.2	8.4
Beryllium	<0.001	<0.002	0.01	0.07
Cadmium	<0.001	<0.002	0.005	0.035
Mercury	<0.001	<0.002	0.003	0.021
Lithium	<0.010	<0.020	0.048	0.336
Lead	<0.001	<0.002	0.010	0.07
Antimony	<0.01	<0.02	0.04	0.28
Thallium	<0.0001	<0.0002	0.0001	0.0007

Note: 1. \* denotes specification was quoted from Technical guide on metal and alloys used in food contact materials

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### 3.9 Total Chromium Content

Test for compliance with the selected requirement(s) in the General Recognized As Safe (GRAS) specification according to United State Food and Drug Administration (US FDA) Regulations on stainless steel

Test Method: Digested by acid and analyzed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)

Toot Itom(a)	Result(s)[%]	Limit
Test Item(s)	002	[%]
Total Chromium Content	18.19	Not less than 16%

## 3.10 FDA 21 CFR Part 177.1520 (Excluding Density)

Test for compliance with the selected requirement(s) in U.S. F.D.A. C.F.R. 21. Part 177.1520

Test Item(s)	Result(s) 001	FDA Specification
Melting Point (°C)*	167.0~170.4	160-180
n-Hexane extractives at reflux temperature, w/w (%)	1.30	6.4
Xylene extractives (%) at 25°C, w/w (%)	3.33	9.8

Note: Specification is quoted from US FDA 21 CFR Part 177.1520 (C) 1.1a Polypropylene.

-- END OF TEST REPORT--