

## Test Report

Number: GZHH00312661

Applicant: \*\*\*\*\* PACKAGING CO LTD

Date: Feb 15, 2019

Attn: VINA

### Sample Description:

One (1) set of submitted sample said to be :

Item Name : **Paper Straw**

Country of Origin : China

Tested sample



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### Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

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To be continued

Authorized by:  
For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch, Hardlines



Ben N.L. Lin  
General Manager



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### Conclusion:

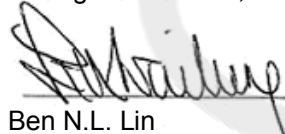
Regarding the tested parameters and based on the provided material information, the submitted sample complied with the food contacting requirements for German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31, Regulation (EU) 10/2011 and Regulation (EC) 1935/2004.

Based on the assessment of the submitted sample and the information provided, the following tests had been conducted :

<u>Tested parameters</u>	<u>Result</u>
Sensory test	Pass
Migration of Pb, Cd, Hg	Pass
Extractable Cr content of paper	Pass
Migration of colorant on paper and paperboard	Pass
Fastness of fluorescent whitening agents	Pass
Specific migration of primary aromatic amines	Pass
Specific migration of Benzophenone and 4-Methylbenzophenone	Pass
Glyoxal content	Pass
Azocolourants content	Pass

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Tested component(s) of submitted sample set	Resolution AP(2002) 1 - migration of Benzophenone and 4-Methylbenzophenone content on Paper and Paperboard	Pass
	BfR XXXVI "Paper and Paperboard for Food Contact" on formaldehyde content	Pass
	Resolution AP (2002)1 Paper and Board Material and Articles Intended to Come into Contact with Foodstuffs on pentachlorophenol (PCP) content	Pass

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For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch, Hardlines



Ben N.L. Lin  
General Manager



**Test Report**

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Tests Conducted

1 Detection Of Amines Derived From Azocolourants and Azodyes

By Gas Chromatographic - Mass Spectrometric (GC-MS) And High Performance Liquid Chromatographic (HPLC) Analysis.

Test Method : EN 14362-1 : 2012 for Textile Material  
 EN ISO 17234-1: 2010 for Leather Material  
 EN 14362-3 : 2012 & EN ISO 17234-2: 2011 for 4-Aminoazobenzene

	Test item	Cas No.	Result (mg/kg)
			Tested Component
			(1)
1	4-Aminodiphenyl	92-67-1	ND
2	Benzidine	92-87-5	ND
3	4-Chloro-o-Toluidine	95-69-2	ND
4	2-Naphthylamine	91-59-8	ND
5	o-Aminoazotoluene	97-56-3	ND
6	2-Amino-4-Nitrotoluene	99-55-8	ND
7	p-Chloroaniline	106-47-8	ND
8	2,4-Diaminoaniline	615-05-4	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	ND
10	3,3'-Dichlorobenzidine	91-94-1	ND
11	3,3'-Dimethoxybenzidine	119-90-4	ND
12	3,3'-Dimethylbenzidine	119-93-7	ND
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	ND
14	p-Cresidine	120-71-8	ND
15	4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	ND
16	4,4'-Oxydianiline	101-80-4	ND
17	4,4'-Thiodianiline	139-65-1	ND
18	o-Toluidine	95-53-4	ND
19	2,4-Toluylenediamine	95-80-7	ND
20	2,4,5-Trimethylaniline	137-17-7	ND
21	o-Anisidine	90-04-0	ND
22	4-Aminoazobenzene	60-09-3	ND

ND = Not detected (less than reporting limit)  
 Reporting limit = 5mg/kg  
 Requirement = 30mg/kg (Max.)

Tested component(s): (1) White paper with red printing (straw).

Remark: As requested by the applicant, Azocolourants content test were conducted only on components listed in this report. Other components were not tested.

Date sample received: Jan 29, 2019  
 Testing period: Jan 29, 2019 to Feb 01, 2019

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2 Sensory Evaluation

With reference to §64 LFGB L00.90-6.

Sample was cleaned according to the product's instruction manual or in the absence of such manual with water. Food simulant was filled in the sample under below mentioned time and temperature. Odour and taste was evaluated with 6 panelists using control sample of food simulant.

I. Test condition:

<u>Food simulant</u> Water	<u>Test temperature</u> 23°C	<u>Test duration</u> 24hours
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II. Result:

Test Item	Result	Limit
	(1)	
Appearance of simulant	Clear and colourless	Clear and colourless
Odour of simulant	1	< 3.0 (No significant deterioration)
Taste of simulant	1	< 3.0 (No significant deterioration)

Evaluation Scale: 0= no aberration, neutral  
 1= very slight deterioration, barely perceivable  
 2= slight deterioration  
 3= significant deterioration  
 4= strong deterioration

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
 Testing period : Jan 29, 2019 to Feb 02, 2019

3 Migration of Heavy Metal Content

As per EN 645:1993, BS EN 12497:2005 and BS EN 12498:2005.

Substance	Result (mg/dm <sup>2</sup> )	Reporting Limit (mg/ dm <sup>2</sup> )	Limit (mg/dm <sup>2</sup> )
	(1)		
Lead (Pb)	ND	0.001	0.003
Cadmium (Cd)	ND	0.001	0.002
Mercury (Hg)	ND	0.001	0.002

ND = Not detected(less than reporting limit)

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Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

#### 4 Extractable Chromium Content

With reference to BfR XXXVI/2 "Paper And Paperboard for Baking Purposes" and sample preparation with reference to EN645:1993, determined by Inductively Coupled Plasma Mass Spectrophotometer(ICP-MS).

<u>Substance</u>	<u>Result (mg/dm<sup>2</sup>)</u> (1)	<u>Limit (mg/dm<sup>2</sup>)</u>
Chromium	ND	0.4
Chromium (Cr III)	ND	0.004
Chromium (Cr VI)	ND	ND

Reporting limit=0.001mg/dm<sup>2</sup>  
ND = Not detected (less than reporting limit)

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

#### 5 Glyoxal Test for Paper and Paperboard Food Contacting Materials/Articles

As per DIN 54603:2008-08 and EN 645:1993, by UV-Visible Spectrophotometer analysis.

<u>Test component</u>	<u>Result (mg/dm<sup>2</sup>)</u>	<u>Report limit (mg/dm<sup>2</sup>)</u>	<u>Requirement (mg/dm<sup>2</sup>)</u>
(1)	ND	0.5	1.5

ND = Not detected (less than reporting limit)

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 12, 2019

#### 6 Primary Aromatic Amines for Paper and Paperboard

As per EN 645:1993 , determined by Spectrometric and Chemical analysis.

<u>Tested Sample / Component</u>	<u>Result (mg/kg)</u>	<u>Reporting Limit (mg/kg)</u>	<u>Limit (mg/kg)</u>
(1)	ND	0.01	ND

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Number: GZHH00312661

### Tests Conducted

ND = Not detected (less than reporting limit)

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

#### 7 Colour Fastness of Dyed Paper and Board

As per BS EN 646:2006 paper and board intended to come into contact with foodstuffs-determination of colour fastness of dyed paper and board.

Procedure applied: Short time contact

Side tested : both side

<u>Test Fluid</u>	<u>Evaluation Against Grey Scale</u> (1)
Deionized Water	No staining (Grade 5)
Aqueous Acetic Acid 3.0% (m/v)	No staining (Grade 5)
Saliva Simulant 5g/L	No staining (Grade 5)
Rectified Olive Oil	No staining (Grade 5)

Requirement : No staining. (Grade 5)

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

#### 8 Fastness of Fluorescent whitening agents

As per BS EN 648:2006 procedure B (short time contact).

Side tested: both side

<u>Test Fluid</u>	<u>Evaluation against Fluorescent Whitened Agent Paper</u> (1)
Deionized Water	No staining (Grade 5)
Aqueous Acetic Acid 3.0% (m/v)	No staining (Grade 5)
Saliva Simulant 5g/L	No staining (Grade 5)
Rectified Olive Oil	No staining (Grade 5)

Limit: No staining (Grade 5).

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

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9 Specific Migration of Benzophenone and 4-Methybenzophenone

As per EN 645:1993 , followed by Gas Chromatography-Mass Spectrometer(GC/MS) analysis.

Test item	Result (mg/kg)	Reporting limit (mg/kg)	Limit (mg/kg)
	Tested component		
	(1)		
Benzophenone	ND	0.1	0.6
4-Methybenzophenone	ND	0.1	0.6

ND = Not detected

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

10 Formaldehyde Content

As per BS EN1541:2001 and EN 645:1993 / EN 647 :1993, by UV-Visible Spectrophotometer analysis.

Test item	Result (mg/dm <sup>2</sup> )	Reporting Limit (mg/dm <sup>2</sup> )	Limit (mg/dm <sup>2</sup> )
	Tested component		
	(1)		
Formaldehyde	ND	0.1	1

ND = Not detected (less than reporting limit)

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Jan 31, 2019

11 Pentachlorophenol (PCP) Content

As per ISO15320: 2003, by Gas Chromatography Mass Spectrometric (GC/MS) analysis

Test item	Cas No.	Result (mg/kg)	Reporting limit (mg/kg)	Limit (mg/kg)
		Tested component		
		(1)		
Pentachlorophenol (PCP)	87-86-5	ND	0.10	0.15

ND = Not detected (less than reporting limit)

Tested component(s): (1) White paper with red printing (straw).

Date sample received : Jan 29, 2019  
Testing period : Jan 29, 2019 to Feb 02, 2019

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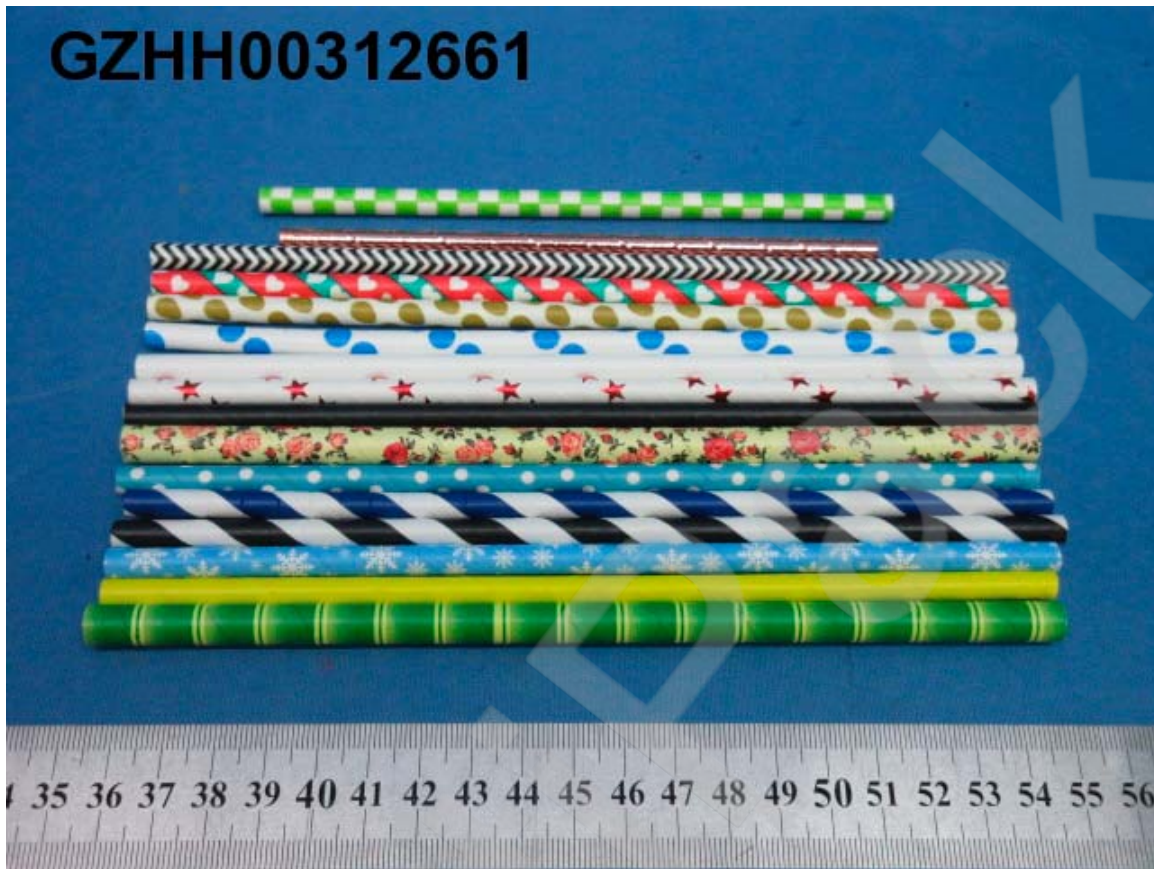


**Test Report**

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Tests Conducted

Reference photo



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End of report

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