



TEST REPORT

**BUREAU
VERITAS**

LAB NO. : (6616)159-1511
DATE : June 16, 2016
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Applicant:
NINGBO JIANGBEI SHENYU INDUSTRY AND TRADE CO., LTD
NO.257, TONGHUI ROAD INDUSTRIAL AREA C JIANGBEI NINGBO

Date of Submission: June 7, 2016
Test Period: June 7, 2016 to June 16, 2016

Sample Description: Sample(s) received is(are) stated to be Paper Straw
Test Item(s): Details see page 3

Manufacturer: / Style No(s): /
Buyer: / PO No.: /
Country of Origin: / Country of Destination: /

Overall Conclusion : The sample(s) **MEET** the respective requirements for the below tested items as stated in German § 30 and 31 LFGB (Food and Feed Code) for materials in contact with foodstuffs.

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION
Sensory Test (Odour and Taste) for Paper and Paperboard in Contact with Foodstuffs – EC No. 1935/2004, § 30 and 31 LFGB	PASS
Extractable Heavy Metals Contents for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Pentachlorophenol Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Formaldehyde Content for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB and BfR Recommendation	PASS
Migration of Dyes for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Fastness of Fluorescence for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Specific Migration of Primary Aromatic Amine for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB, BfR Recommendation	PASS
Azo Dyestuff Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS

REMARK

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BUREAU VERITAS
CONSUMER PRODUCTS SERVICES DIVISION (SHANGHAI)

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RW/2016

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Photo of the Submitted Sample





TEST RESULT

Sample Description Assigned by Laboratory:

Test Item	Description	Client Claimed Material
1	Color paper straw	Paper

I. Sensory Test (Odour and Taste) for Paper and Paperboard in Contact with Foodstuffs – EC No. 1935/2004, § 30 and 31 LFGB

Relative humidity in test vessel: 75%

Parameter	Result	Maximum Allowable Limit
	1	
Odour in Water	0	2.5 Scale
Off-flavour in Water	0	2.5 Scale
Odour in Chocolate	0	2.5 Scale
Off-flavour in Chocolate	0	2.5 Scale
Conclusion	PASS	-

Note: Scale for odour: 0 = no perceptible odour;
1 = odour just perceptible (still difficult to define);
2 = moderate odour;
3 = moderately strong odour;
4 = strong odour
Scale for off-flavour: 0 = no perceptible off-flavour;
1 = off-flavour just perceptible (still difficult to define);
2 = moderate off-flavour;
3 = moderately strong off-flavour;
4 = strong off-flavour

Method: EN 1230-1:2001 and EN 1230-2: 2001

Remark: The odour is described as with individual scale of 2 or above as per the testing standard EN 1230-1.

II. Extractable Heavy Metals Contents for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		1	
Cadmium (Cd)	ug/g	<0.05	0.5
Lead (Pb)	ug/g	<0.05	3
Mercury (Hg)	ug/g	<0.05	0.3
Chromium III (Cr III)	ug/dm ²	<1	4
Chromium VI (Cr VI)	ug/dm ²	<0.5	Not Detected(<0.5)
Conclusion	-	PASS	-

Note: “<” = less than
ug/g = microgram per gram
ug/dm² = microgram per square decimeter

Method: EN 645:1994 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP) and UV-Vis Spectrophotometer.

Remark: The limit refers to BfR Recommendation XXXVI.



TEST RESULT

III. Pentachlorophenol Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		1	
PCP	mg/kg	<0.1	0.15
Conclusion	-	PASS	-

Note: “<” = less than
mg/kg = milligram per kilogram

Method: §64 LFGB B82.02-8:2001 modified as of 01.02.2005. versions.

Remark: 1) The limit refers to BfR Recommendation XXXVI.
2) Selected test was specified by client.

IV. Formaldehyde Content for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		1	
Formaldehyde	mg/dm ²	<0.5	1
Conclusion	-	PASS	-

Note: “<” = less than
mg/dm² = milligram per square decimeter

Method: EN 645:1994 and analysis by EN 1541:2001.

Remark: The limit refers to BfR Recommendation XXXVII.

V. Migration of Dyes for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Simulant Used	Result	Maximum Allowable Limit
		1	
Migration of Dyes	Distilled water	Grade 5	No less than Grade 5
	3% Acetic acid	Grade 5	
	Saliva simulant	Grade 5	
	Rectified olive oil	Grade 5	
Conclusion	-	PASS	-

Note: Scale: 5 = negligible or no change or staining;
4 = slightly changed or stained;
3 = noticeably changed or stained;
2 = considerably changed or stained;
1 = much changed or stained

Method: EN 646: 2001, Procedure B: short time contact

Remark: The limit refers to BfR Recommendation XXXVI.



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VI. Fastness of Fluorescence for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Simulant Used	Result	Maximum Allowable Limit
		1	
Fastness of Fluorescence	Distilled water	Grade 5	No less than Grade 5
	3% Acetic acid	Grade 5	
	Saliva simulant	Grade 5	
	Rectified olive oil	Grade 5	
Conclusion	-	PASS	-

Note: Scale: 5 = negligible or no change or staining;
4 = slightly changed or stained;
3 = noticeably changed or stained;
2 = considerably changed or stained;
1 = much changed or stained

Method: EN 648: 2006, Procedure B: short time contact

VII. Specific Migration of Primary Aromatic Amine for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB, BfR Recommendation

Test Condition: 24 h at 23 °C

Parameter	Unit	Result	Maximum Allowable Limit
		1	
2,4,5-Trimethylaniline	ug/L	<2	2
2,6-Dimethylaniline	ug/L	<2	2
4,4"-Methylenedianiline	ug/L	<2	2
4,4-Diaminodiphenylether	ug/L	<2	2
4-Chloro-o-Toluidine	ug/L	<2	2
4-Methoxy-m-phenylenediamine	ug/L	<2	2
Benzidine	ug/L	<2	2
o-Toluidine	ug/L	<2	2
p-Phenylenediamine*	ug/L	<10	10
2,4-Dimethylaniline*	ug/L	<10	10
2,4-Toluenediamine*	ug/L	<10	10
2,6-Toluenediamine*	ug/L	<10	10
2-Methoxy-5-Methylaniline*	ug/L	<10	10
3,3-Dimethylbenzidine*	ug/L	<10	10
4,4-Methylenedi-o-toluidine*	ug/L	<10	10
4-Aminobiphenyl*	ug/L	<10	10
4-Chloroaniline*	ug/L	<10	10
Aniline*	ug/L	<10	10
m-Phenylenediamine*	ug/L	<10	10
o-Anisidine*	ug/L	<10	10
Sum of *marked compounds	ug/L	<10	10
Conclusion	-	PASS	-

Note: "<" = less than
ug/L = microgram per liter

Method: EN 645:1994, LC-MS analysis.

Remark: The limit refers to BfR Recommendation XXXVI.



TEST RESULT

VIII. Azo Dyestuff Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		1	
o-Toluidine	mg/kg	<10	30
2-Methoxyaniline	mg/kg	<10	30
p-Chloroaniline	mg/kg	<10	30
p-Kresidine	mg/kg	<10	30
2,4,5-Trimethylaniline	mg/kg	<10	30
4-Chloro-o-Toluidine	mg/kg	<10	30
2,4-Toluylenediamine	mg/kg	<10	30
2,4-Diaminoanisole	mg/kg	<10	30
2-Naphthylamine	mg/kg	<10	30
2-Amino-4-nitrotoluene	mg/kg	<10	30
4-Aminodiphenyl	mg/kg	<10	30
p-Aminoazobenzene	mg/kg	<10*	30
4,4'-Oxydianiline	mg/kg	<10	30
Benzidine	mg/kg	<10	30
4,4'-Diaminodiphenylmethane	mg/kg	<10	30
o-Aminoazotoluene	mg/kg	<10	30
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	mg/kg	<10	30
3,3'-Dimethylbenzidine	mg/kg	<10	30
4,4'-Thiodianiline	mg/kg	<10	30
3,3'-Dichlorobenzidine	mg/kg	<10	30
4,4'-Methylene-bis-(2-chloraniline)	mg/kg	<10	30
3,3'-Dimethoxybenzidine	mg/kg	<10	30
Conclusion	-	PASS	-

Note: mg/kg = milligram per kilogram
“<” = less than
“>” = more than

Method: EN 14362-1:2012

Remark : 1. The limit refers to BfR Recommendation XXXVI.
2.*Azo colorants that are able to form p-aminoazobenzene, generate aniline and 1,4-phenylenediamine under the condition of this method. Aniline and 1,4-phenylenediamine are not detected under the condition of this method.

END



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Annex

Remark: The client declares that the above tested material except colorant will be used in below styles.

Description	
	