



TEST REPORT

Technical Report: (6624)183-0762

July 22, 2024

Date Received: July 01, 2024

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Date Modified: July 09, 2024

BRUCE LEE

JINHUA LANGMAI DAILY USING CO., LTD.

88 HUAFENG ROAD, FUCUN TOWN, JINDONG INDUSTRIAL AREA, JINHUA,
ZHEJIANG, CHINA

Sample Description:

Sample(s) received is/are stated to be:

PAPER CUPCAKE LINER

Color: PRINTING

Style No(s): /

Order No.: /

PO No.: /

Model No.: /

Batch No.: /

Age Grade: /

Product End Use: /

Vendor: /

Retest No.: /

Manufacturer: JINHUA LANGMAI DAILY USING CO.,
LTD.

Supplier Reference: /

Buyer: /

Country of Origin: CHINA

Test Period: July 09, 2024 to July 22, 2024

Country of Destination: /



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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 and BfR Recommendation	PASS
Fastness of Fluorescence for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Extractable Heavy Metals Contents for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Pentachlorophenol Content for Material 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
Specific Migration of Primary Aromatic Amine for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB, BfR Recommendation	PASS
Azo Dye stuff Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation	PASS
Total Residue Content (Hot Water Extraction) 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



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BVCPS (SHANGHAI) GENERAL CONTACT INFORMATION FOR THIS REPORT

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BUREAU VERITAS

CONSUMER PRODUCTS SERVICE DIVISION (SHANGHAI)

Laboratory Test location:

No. 368, Guangzhong Road, Zhuanqiao Town, Minhang, Shanghai.

No. 168, Guanghua Road, Zhuanqiao Town, Minhang, Shanghai.

Hyde Bao

PRODUCT LINE MANAGER (HARDLINE DIVISION)



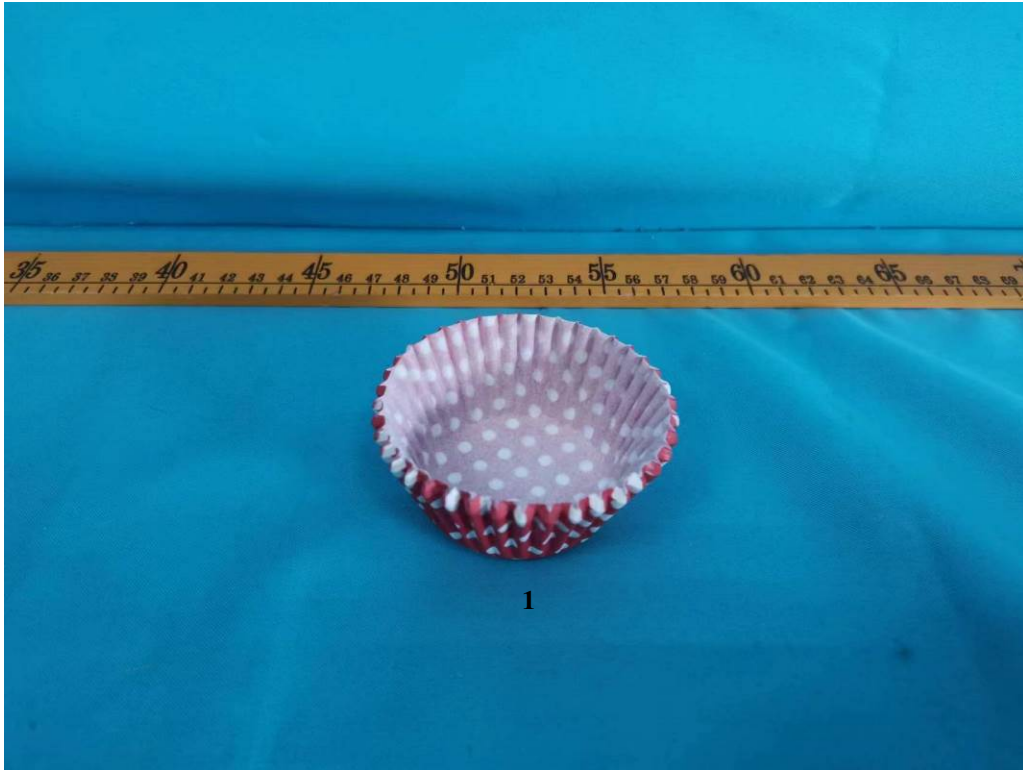
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Photo of the Submitted Sample



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TEST RESULT

Sample Description Assigned by Laboratory:

The test part of the sample was specified by client.

Test Item	Description	Client Claimed Material
1	Red/ white paper cupcake inner	/

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

Relative humidity in test vessel: 75%

Parameter	Result	Maximum Allowable Limit
	1	
Odour	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.

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

Test Condition: Procedure D – Hot contact with fatty food: 30 min at (120 ± 3) °C in oil
Procedure D – Hot contact with moisture food: 30 min at (90 ± 3) °C in water

Parameter	Simulant Used	Result	Maximum Allowable Limit
		1	
Fastness of Fluorescence	Distilled water	Grade 5	No less than Grade 5
	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: 2018



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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)	µg/l	1.03	5
Lead (Pb)	µg/l	<2	10
Chromium III (Cr III)	µg/dm ²	<1	4
Chromium VI (Cr VI)	µg/dm ²	<0.5	Not Detected
Aluminum (Al)	mg/kg	<0.5	1
Conclusion	-	PASS	-

Note: “<” = less than
µg/l = microgram per liter
µg/dm² = microgram per square decimeter
mg/kg = milligram per kilogram

Method: EN 647:1994 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP) and UV-Vis Spectrophotometer.

Remark: The limit refers to BfR Recommendation XXXVI.

Pentachlorophenol Content for Material 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.

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 647:1994 and analysis by EN 1541:2001.

Remark: The limit refers to BfR Recommendation XXXVI.

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

Test Condition: 2 hours at 80 °C (hot water)

Parameter	Unit	Result	Maximum Allowable Limit
		1	
4-aminobiphenyl / 4-biphenylamine	ug/L	<2	2
o-anisidine / 2-methoxyaniline	ug/L	<2	2
Benzidine	ug/L	<2	2
4-Chloro-aniline / p-chloroaniline	ug/L	<2	2
4-Chloro-o-toluidine	ug/L	<2	2
4,4'-Diaminodiphenylether / 4,4'-oxydianiline	ug/L	<2	2
4,4'-Methylenedianiline / 4,4'-diamino-diphenylmethane	ug/L	<2	2
4,4-Methylenedi-o-toluidine / 3,3'-dimethyl-4,4'-diaminodiphenylmethane	ug/L	<2	2
2-Methoxy-5-methylaniline / p-cresidine	ug/L	<2	2
4-Methoxy-m-phenylenediamine / 2,4-diaminoanisole	ug/L	<2	2
o-Toluidine / 2-aminotoluene	ug/L	<2	2
2,4-Toluenediamine	ug/L	<2	2
3,3-Dimethylbenzidine	ug/L	<2	2
2,4,5-Trimethylaniline	ug/L	<2	2
Aniline*	ug/L	<2	10
2,4-Dimethylaniline / 2,4-xylidine*	ug/L	<2	10
2,6-Dimethylaniline / 2,6-xylidine*	ug/L	<2	10
m-Phenylenediamine / 1,3-phenylenediamine*	ug/L	<2	10
p-Phenylenediamine / 1,4-phenylenediamine*	ug/L	<2	10
2,6-Toluenediamine*	ug/L	<2	10
1,5-Diaminenaphthalene*	ug/L	<2	10
2-naphthylamine	ug/L	<2	2
o-aminoazotoluene/ 4-amino-2',3'-dimethylazobenzene/ 4-o-tolylazo-o-toluidine	ug/L	<2	2
5-nitro-o-toluidine*	ug/L	<2	10
3,3'-dichlorobenzidine	ug/L	<2	2
3,3'-dimethoxybenzidine / o-dianisidine	ug/L	<2	2
4,4'-methylene-bis-(2-chloro-aniline) / 2,2'-dichloro-4,4'-methylene-dianiline	ug/L	<2	2
4,4'-thiodianiline	ug/L	<2	2
4-amino azobenzene	ug/L	<2	2
Sum of primary aromatic amines with *	ug/L	<2	10
Conclusion	-	PASS	-

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

Method: EN 647:1994, LC-MS analysis.

Remark: The limit refers to BfR Recommendation XXXVI.

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 14362-1:2017

Remark: 1. The limit refers to BfR Recommendation XXXVI.



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Total Residue Content (Hot Water Extraction) for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		1	
Total residue	mg/dm ²	8.10	10
Conclusion	-	PASS	-

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

Method: EN 647:1994.

Remark: The limit refers to BfR Recommendation XXXVI/1.

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

Test Condition: Procedure D – Hot contact with fatty food: 30 min at (120 ± 3) °C in oil
Procedure D – Hot contact with moisture food: 30 min at (90 ± 3) °C in water

Parameter	Simulant Used	Result	Maximum Allowable Limit
		1	
Migration of Dyes	Distilled water	Grade 5	No less than Grade 5
	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: 2018

Remark: The limit refers to BfR Recommendation XXXVI.

END