

TEST REPORT

Technical Repo	ort:	(6621)115-1288		May 13, 2021
Date Received: Date Modified:		April 26, 2021 May 07, 2021		Page 1 of 8
	ROAD, FU	LY USING CO., LTD CUN TOWN, JINDONG INDU Sample(s) received is/are stat PAPER CUPCAKE LINER		, ZHEJIANG CHINA
		FAFER CUFCARE LINER		
Color:	COLOR	FUL	Style No(s):	/
Order No.:	/		PO No.:	/
Model No.:	/		Batch No.:	/
Age Grade:	/		Product End Use:	/
Vendor:	/		Retest No.:	/
Manufacturer:	JINHUA CO., LT	LANGMAI DAILY USING D	Supplier Reference:	/
Buyer:	/		Country of Origin:	CHINA
Test Period:	May 07,	2021 to May 13, 2021	Country of Destination:	/

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION
Sensory Test (Odour and Taste) for Paper and Paperboard in Contact with Foodstuffs – EC	PASS
No. 1935/2004, § 30 and 31 LFGB and BfR Recommendation	
Formaldehyde Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31	PASS
LFGB and BfR Recommendation	IASS
Extractable Heavy Metals Contents for Paper and Paperboard in Contact with Foodstuffs - §	PASS
30 and 31 LFGB and BfR Recommendation	I ASS
Specific Migration of Primary Aromatic Amine for Paper and Paperboard in Contact with	PASS
Foodstuffs – § 30 and 31 LFGB, BfR Recommendation	I ASS
Azo Dyestuff Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31	PASS
LFGB and BfR Recommendation	IASS
Migration of Dyes for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB	PASS
and BfR Recommendation	r Ass
Fastness of Fluorescence for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31	PASS
LFGB and BfR Recommendation	1 735

Bureau Veritas

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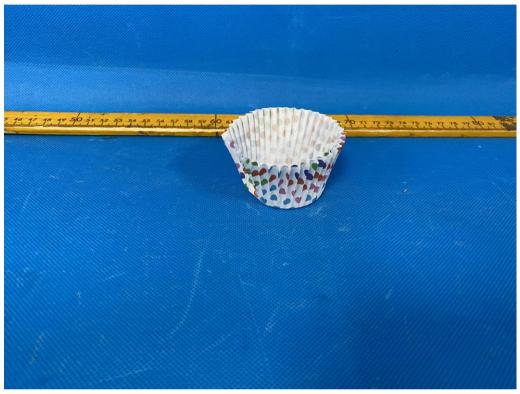
John

Hyde Bao PRODUCT LINE MANAGER(HARDLINE DIVISON)



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Photo of the Submitted Sample



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TEST RESULT

Sample Description Assigned by Laboratory

Test Item	Description	Client Claimed Material	
1	Colorful paper cupcake	PAPER	

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

Relative humidity in test vessel: 75%

Parameter	Result	— Maximum Allowable Limit
Odour	1	2.5 Scale
Off-flavour in Butter	0	2.5 Scale
Off-flavour in Chocolate	0	2.5 Scale
Off-flavour in Biscuits	0	2.5 Scale
Off-flavour in Water	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: 1) The odour is described as with individual scale of 2 or above as per the testing standard EN 1230-1.

2) Selected test was specified by client.



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

Devementar	Unit	Result	Maximum Allowable Limit	
Parameter	Unit	1	Maximum Anowable Limit	
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: 1) The limit refers to BfR Recommendation XXXVII.
 - 2) Selected test was specified by client.

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

Parameter	Unit	Result 1	Maximum Allowable Limit
Cadmium (Cd)	μg/l	<1	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 $\mu g/l = microgram per liter$ $\mu g/dm^2 = microgram per square decimeter$ mg/L = milligram per litermg/kg = milligram per kilogram

- Method: EN 645:1994 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP) and UV-Vis Spectrophotometer.
- Remark: 1) The limit refers to BfR Recommendation XXXVI.

2) Selected test was specified by client.



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

Domomotor	TI:::4	Result	Maximum
Parameter	Unit	1	Allowable Limit
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-		<2	
4,4'-diaminodiphenylmethane	ug/L		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 645:1994, LC-MSMS analysis.

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

2) Selected test was specified by client.



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

Parameter	TIn:4	Result	Maximum Allawahla Limit	
Parameter	Unit	1	— Maximum Allowable Limit	
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, EN 14362-3:2017

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.

3.*The presence of these colorants cannot be confirmed by the method stated as above. The result of p-aminoazobenzene shown is analysed and confirmed by §64 LFGB B 82.02-9.

4.** Conducting the official method 4, 4-diaminodiphenylmethane has been detected. Please note that detected aromatic amines must stem from azodyes but not from other materials e.g. Polyurethane. If forbidden amines are built by others materials (e.g. Polyurethane) the sample doesn't fail according to the European Legislation. By extracting the sample directly without applying the reduction step 4, 4-Diisocyanatodiphenylmethane has been detected.

5. Selected test was specified by client.



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

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

Donomotor	Simulant Used	Result	Maximum Allowable Limit
Parameter		1	Maximum Anowable Linin
	Distilled water	Grade 5	No loss theory Constants
Migration of Dyes	Olive Oil	Grade 5	No less than 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: 1) The limit refers to BfR Recommendation XXXVI.

2) Selected test was specified by client.

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

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 al ameter	Simulant Useu	1	Maximum Anowable Limit
Fastness of	Distilled water	Grade 5	No less than Grade 5
Fluorescence	Olive Oil	Grade 5	No less than 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

Remark: Selected test was specified by client.

END