

Test Report

No: SHFDO121115995FD

Date: Dec 04 2012

Client name: NANJING ANBAO PAPER PRODUCTS CO., LTD
Client address: Addr. Airport Industrial Part, Shiqiu County, Lishui, Nanjing, Jiangsu

The following sample(s) was/were submitted by/ on behalf of the client as (except SGS reference No. & SGS job No. & Date of receipt & Testing period):

Sample name: paper cup
Batch No./Date: /
Manufacturer: Nanjing Anbao Paper Products Co., Ltd
SGS reference No.: NJFDO121001063FD/SHAFD1220272801
SGS job No.: SHFDO121115995FD
Date of receipt: Nov 19 2012
Testing period: Nov 19 2012 ~ Dec 04 2012

TEST(S) REQUESTED:

Selected test(s) as requested by applicant:
In accordance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments, European Commission Regulation (EU) No 10/2011 with amendments and BfR recommendations.

- 1) For material: Plastic -Overall migration
- 2) For material: Plastic - Lead(Pb) and Cadmium (Cd)
- 3) For material: Plastic - Polynuclear aromatic hydrocarbons(PAHs)
- 4) For material: Plastic - Specific Migration of Heavy Metal
- 5) Sensorial examination odour and taste test
- 6) For material: Plastic - Colour release

TEST METHOD(S)/TEST RESULT(S):

Please refer to next page

CONCLUSION:

The tested parameters comply with the permissible safety limit as specified in LFGB, Section 30 and 31 with amendments and Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on Materials and Articles intended to come into contact with aqueous foodstuff(PH>4.5),acidic foodstuff(PH≤4.5),alcoholic foodstuff .

Sign (on behalf of SGS)



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TEST METHOD(S):

- 1) With reference to EN1186-1:2002 for selection of test method; EN1186-9:2002 aqueous food simulants by article filling method.
- 2) Acidic digestion, analysis was performed by ICP-OES.
- 3) With reference to ZEK 01.4-08, analysis was performed by GC-MS.
- 4) with reference to EN13130-1:2004; analysis was performed by ICP-OES.
- 5) Sensory test with reference to DIN 10955:1983 (2004).
Test media: Distilled water;
No.of panelist: 6
- 6) With reference to Kunststoffe im Lebensmittelverkehr, Part B II IX.

TEST RESULT(S):

- 1) Overall migration

Simulant Used	Time	Temperature	Max. Permissible Limit	Result of 1 Overall Migration
10% Ethanol (V/V) Aqueous Solution	240.0 hr	20°C	10 mg/dm ²	< 3.0 mg/dm ²
3% Acetic Acid (W/V) Aqueous Solution	240.0 hr	20°C	10 mg/dm ²	3.8 mg/dm ²
20% Ethanol (V/V) Aqueous Solution	240.0 hr	20°C	10 mg/dm ²	< 3.0 mg/dm ²
50% Ethanol (V/V) Aqueous Solution	240.0 hr	20°C	10 mg/dm ²	< 3.0 mg/dm ²

Notes :

- (1) mg/dm² =milligram per square decimeter
- (2) °C =degree Celsius
- (3) < = less than
- (4) Analytical tolerance of aqueous simulants is 1 mg/dm²
- (5) Test condition & simulant were specified by client.

2)

Test Item(s)	Limit	MDL	Test result(s)
Total Lead mg/kg	Absent	2	Not detected
Total Cadmium mg/kg	Absent	2	Not detected

3)

Test Item(s)	Limit	MDL	Test result(s)
Sum of 18 PAHs mg/kg	Absent	-	Not detected
Naphthalene(NAP) mg/kg	Absent	0.2	Not detected
Acenaphthylene(ANY) mg/kg	Absent	0.2	Not detected
Acenaphthene(ANA) mg/kg	Absent	0.2	Not detected
Fluorene(FLU) mg/kg	Absent	0.2	Not detected
Phenanthrene(PHE) mg/kg	Absent	0.2	Not detected
Anthracene(ANT) mg/kg	Absent	0.2	Not detected
Fluoranthene(FLT) mg/kg	Absent	0.2	Not detected

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Pyrene(PYR) mg/kg	Absent	0.2	Not detected
Benzo(a)anthracene(BaA) mg/kg	Absent	0.2	Not detected
Chrysene(CHR) mg/kg	Absent	0.2	Not detected
Benzo(b)fluoranthene(BbF) and Benzo(j)fluoranthene(BjF) mg/kg	Absent	0.2	Not detected
Benzo(k)fluoranthene(BkF) mg/kg	Absent	0.2	Not detected
Benzo(a)pyrene(BaP) mg/kg	Absent	0.2	Not detected
Benzo(a)pyrene(BeP) mg/kg	Absent	0.2	Not detected
Indeno(1,2,3-c,d)pyrene(IPY) mg/kg	Absent	0.2	Not detected
Dibenzo(a,h)anthracene(DBA) mg/kg	Absent	0.2	Not detected
Benzo(g,h,i)perylene(BPE) mg/kg	Absent	0.2	Not detected

ZEK 01.4-08: Restraining maximum values for products

Parameter	Category 1	Category 2	Category 3
	Material intended to be put in the mouth or material for toys with normal skin contact for children aged < 36 months	Materials those are not included in Category 1, with predictable contact with the skin longer than 30 s. (long-term skin contact).	Materials those are not included in Category 1 or 2, with predictable skin contact up to 30 s (short-term skin contact).
Benzo(a)pyrene (mg/kg)	<0.2**	1	20
Sum of 18 PAH (mg/kg)*	<0.2**	10	200

Notes:

- * = Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAHs
- ** = In case that the maximum values exceed the limits of category 1, but are within the limits of category 2, one may confirm the suitability of the tested material which is intended to be put in the mouth by additional specific migration tests of PAH components based on DIN EN 1186ff/EN13130 and §64 LFGB 80.30-1. The conclusion of the migration test results must be made based on food law criteria.

4) Specific Migration of Heavy Metal

Simulant Used :3% Acetic Acid (W/V) Aqueous Solution

Test Condition :70°C 2.0hr

Test Item(s)	Max. Permissible Limit	MDL	Test Result
Barium mg/kg	1	0.25	ND
Cobalt mg/kg	0.05	0.05	ND
Copper mg/kg	5	0.25	ND
Iron mg/kg	48	0.25	ND
Lithium mg/kg	0.6	0.5	ND
Manganese mg/kg	0.6	0.25	ND
Zinc mg/kg	25	0.5	ND

Notes :

- (1) MDL = Method Detection Limit
- (2) ND = Not Detected (< MDL)
- (3) Test condition & simulant were specified by client.



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5) Sensorial examination

Test condition: 20°C 240 hours;
 Test media: Distilled water;
 No. of panelist: 6

Test item(s)	Limit(s)	Test result(s)
Sensorial examination odour (Point scale)	2.5	0
Sensorial examination taste (Point scale)	2.5	0

Notes:

- (1) Scale evaluation:
- 0: No perceptible odour
- 1: Odour just perceptible (still difficult to define)
- 2: Moderate odour
- 3: Moderately strong odour
- 4: Strong odour

6)

Test Item(s)	Limit	Test result(s)
Colour release in 3% acetic acid(W/V) aqueous solution	No colour release	Negative

Notes: Negative = No color release observed , Positive = Color release observed.

SAMPLE DESCRIPTION: Paper cup inside plastic film



*** End of Report***

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