

Test Report

Number: SHAH01565294

Applicant: HANGZHOU TIANYA INDUSTRY CO., LTD
RM 1004, B1, IBC OF EASTERN HANGZHOU, NO.600 JINSHA RD,
QIANTANG DISTRICT, HANGZHOU, 310018, ZHEJIANG CHINA
Attn: ZENG PINGJIA

Date: May 05, 2023

Sample Description:

One (1) submitted sample said to be:

Item Name : **(1) Brown Powder (ACID BLUE 40).**

Tests Conducted:

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

To be continued.

Authorized By:
For Intertek Testing Services Ltd., Shanghai



Rainbow Zhang
Deputy General Manager



Test Report

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Tests Conducted

1 Quinoline and Isoquinoline Content

Solvent extraction and followed by Gas Chromatography– Mass Spectrometry (GC-MS) analysis.

<u>Compounds</u>	<u>Tested Result In mg/kg</u> <u>Tested Component (1)</u>
Quinoline	ND
Isoquinoline	ND

Remark: Detection Limit = 10 mg/kg
ND = Not Detected

2 Orthophehyl phenol (OPP) content

By solvent extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Tested Component</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
(1)	<0.5

Remark: Detection Limit = 0.5 mg/kg

3 Free Phenol Content

By solvent extraction and then followed by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

<u>Tested Component</u>	<u>Tested Result (mg/kg)</u>
(1)	ND

Remark: Detection Limit = 5 mg/kg
ND = Not Detected

4 Alkylphenol (AP) and Alkylphenol Ethoxylates (APEO) content

With Reference to ISO 18254-1: 2016, By Liquid Chromatographic – Mass Spectrometric (LC-MS) Analysis.

<u>Compounds</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Nonylphenol (NP)	ND
Octylphenol (OP)	ND
Nonylphenol Ethoxylate (NPEO)	ND
Octylphenol Ethoxylate (OPEO)	ND

Remark: Detection Limit = 10 mg/kg
ND = Not Detected

To be continued.



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Tests Conducted

5 Bisphenol Content

By Liquid Chromatographic - Mass Spectrometry (LC/MS) analysis.

<u>Test Items</u>	<u>CAS No.</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Bisphenol A (BPA)	80-05-7	ND
Bisphenol AF (BPAF)	1478-61-1	ND
Bisphenol S (BPS)	80-09-1	ND
Bisphenol F (BPF)	620-92-8	ND

Remark: Detection Limit = 20 mg/kg
ND = Not Detected

6 Free Aromatic Amines content

By solvent extraction and followed by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

<u>Compound</u>	<u>Cas No.</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Aniline	62-53-3	N
p-Phenylenediamine	106-50-3	N
o-Aminoazotoluene	97-56-3	N

Remark: N = Not Detected
Detection Limit = 10 mg/kg

7 Polycyclic Aromatic Hydrocarbons (PAHs) Content

As per AfPS GS 2014: 01 PAK, by solvent extraction and determined by Gas Chromatography – Mass Spectrometer (GC/MS).

I. Test Result:
Testing Item

Naphthalene

Tested Result (mg/kg)
Tested Component (1)
ND

Remark: ND= Not detected
Detection limit = 0.2 mg/kg

II. Limits for PAH in Products (for reference):

<u>Parameter</u>	<u>Category 1</u>	<u>Category 2</u>		<u>Category 3</u>	
/	To be taken material, which are intended in the mouth, or materials in toys intended and with long-term skin contact (longer than 30 s)	Materials that do not fall into category 1, with foreseeable contact to skin longer than 30 s (long-term skin contact) or short-term repeated skin contact ^{a)}		Materials that do not fall into category 1 or 2, with foreseeable contact to skin up to 30 s (short-term skin contact)	
/	/	Toys by RL 2009/48/EC	Other products by ProdSG	Toys by RL 2009/48/EC	Other products by ProdSG
Naphthalene	< 1	< 2		< 10	

^{a)} Formulation "of repeated short-term skin contact" REACH Annex XVII No. 50 supplement (REGULATION (EU) No 1272/2013)

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8 Detection of Allergenous Dyestuff

With reference to DIN 54231: 2005, by Liquid Chromatography – Tandem Mass Spectrometry (LC-MS/MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Disperse Blue 1	ND
Disperse Blue 3	ND
Disperse Blue 7	ND
Disperse Blue 26	ND
Disperse Blue 35	ND
Disperse Blue 102	ND
Disperse Blue 106	ND
Disperse Blue 124	ND
Disperse Orange 1	ND
Disperse Orange 3	ND
Disperse Orange 37/76/59	ND
Disperse Red 1	ND
Disperse Red 11	ND
Disperse Red 17	ND
Disperse Yellow 1	ND
Disperse Yellow 3	ND
Disperse Yellow 9	ND
Disperse Yellow 39	ND
Disperse Yellow 49	ND
Disperse Brown 1	ND

Remark: Detection Limit = 50 mg/kg
ND = Not Detected

9 Blue colorants Content

With reference to DIN 54231: 2005, and followed by Liquid Chromatography - Mass Spectrometry (LC-MS) analysis.

<u>Tested Component</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
C39H23Cl-CrN7012S 2Na (118685-33-9)	ND
C46H-30CrN10020S2 3Na	ND

Remark: Detection Limit = 50mg/kg
ND = Not Detected

To be continued.



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10 Carcinogenic Dyes Content

With reference to DIN 54231: 2005, By Liquid Chromatography – Tandem Mass Spectrometry (LC-MS-MS) and High Performance Liquid Chromatography Photodiode Array Detector (HPLC-DAD) Analysis.

<u>Compounds</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>	<u>Requirement (mg/kg)</u>
Acid Violet 49	ND	Class I-IV
Basic Blue 26 (with Michler's Ketone>0.1%)	ND	50
Basic Green 4 (Malachite Green Chloride)	ND	50
Basic Green 4 (Malachite Green Oxalate)	ND	50
Basic Green 4 (Malachite Green)	ND	50
Basic Red 9	ND	50
Basic Violet 3 with>0.1% of Michler's Ketone	ND	50
Basic Violet 14	ND	50
Disperse Blue 1	ND	50
Disperse Blue 3	ND	50
Disperse Blue 7	ND	50
Disperse Blue 26	ND	50
Disperse Blue 35	ND	50
Disperse Blue 102	ND	50
Disperse Blue 106	ND	50
Disperse Blue 124	ND	50
Disperse Brown 1	ND	50
Disperse Orange 1	ND	50
Disperse Orange 3	ND	50
Disperse Orange 11	ND	50
Disperse Orange 37/59/76	ND	50
Disperse Orange 61	ND	50
Disperse Orange 149	ND	50
Disperse Red 1	ND	50
Disperse Red 11	ND	50
Disperse Red 17	ND	50
Disperse Yellow 1	ND	50
Disperse Yellow 3	ND	50
Disperse Yellow 9	ND	50
Disperse Yellow 39	ND	50
Disperse Yellow 49	ND	50

Remark: Report limit = 50 mg/kg
ND = Not Detected

With Acid Digestion And Followed By Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) analysis.

<u>Tested Compounds</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>	<u>Requirement (mg/kg)</u> <u>Class I-IV</u>
Pigment Red 104 Δ	ND	50
Pigment Yellow 34 Δ	ND	50

Remark: Report limit = 50 mg/kg
ND = Not Detected

Δ = Determination was based on elemental analysis and result was calculated based on worst scenario.

To be continued.



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Tests Conducted

11 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 ISO 14362-1: 2017/EN ISO 14362-3: 2017 for p-Aminoazobenzene

	<u>Forbidden</u>	<u>CAS No.</u>	<u>Tested Result (ppm)</u> <u>Method T</u> <u>Tested Component (1)</u>
1.	4-Aminodiphenyl	92-67-1	N
2.	Benzidine	92-87-5	N
3.	4-Chloro-o-Toluidine	95-69-2	N
4.	2-Naphthylamine	91-59-8	N
5.	o-Aminoazotoluene	97-56-3	N
6.	2-Amino-4-Nitrotoluene	99-55-8	N
7.	p-Chloroaniline	106-47-8	N
8.	2,4-Diaminoanisole	615-05-4	N
9.	4,4'-Diaminodiphenylmethane	101-77-9	N
10.	3,3'-Dichlorobenzidine	91-94-1	N
11.	3,3'-Dimethoxybenzidine	119-90-4	N
12.	3,3'-Dimethylbenzidine	119-93-7	N
13.	3,3'-Dimethyl-4,4' diaminodiphenylmethane	838-88-0	N
14.	p-Cresidine	120-71-8	N
15.	4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	N
16.	4,4'-Oxydianiline	101-80-4	N
17.	4,4'-Thiodianiline	139-65-1	N
18.	o-Toluidine	95-53-4	N
19.	2,4-Toluylenediamine	95-80-7	N
20.	2,4,5-Trimethylaniline	137-17-7	N
21.	o-Anisidine	90-04-0	N
22.	p-Aminoazobenzene	60-09-3	N
23.	2,4-Xylidine	95-68-1	N
24.	2,6-Xylidine	87-62-7	N
25.	Aniline	62-53-3	N
26.	p-Toluidine	108-45-2	N
27.	m-Toluidine	108-44-1	N
28.	4-Chloro-o-toluidinium chloride^	3165-93-3	N
29.	2,4,5-Trimethylaniline hydrochloride^	21436-97-5	N
30.	2-Naphthylammoniumacetate^	553-00-4	N
31.	2,4-Diaminoanisole sulphate^	39156-41-7	N

Remark: N = Not Detected

Detection Limit = 10 ppm

ppm = parts per million = mg/kg

Method T: Direct buffer extraction as per EN ISO 14362-1: 2017 Section 10.2

To be continued.



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12 Total Heavy metal Content

As per client's request, acid digestion method was used and determined by Inductively Coupled Argon Plasma Spectrometry.

<u>Tested element(s)</u>	<u>CAS NO.</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>	<u>Detection Limit (mg/kg)</u>
Total Antimony (Sb)	7440-36-0	ND	10
Total Arsenic (As)	7440-38-2	ND	10
Total Barium (Ba)	7440-39-3	ND	10
Total Cadmium(Cd)	7440-43-9	ND	10
Total Cobalt (Co)	7440-48-4	ND	10
Total Copper (Cu)	7440-50-8	33	10
Chromium(Cr III)	7440-47-3	12	10
Chromium(Cr VI)	18540-29-9	ND	10
Total Iron (Fe)	7439-89-6	76	10
Total Lead(Pb)	7439-92-1	ND	10
Total Nickel (Ni)	7440-02-0	ND	10
Total Mercury(Hg)	7439-97-6	ND	2
Total Selenium (Se)	7482-49-2	ND	10
Total Silver (Ag)	7440-22-4	ND	10
Total Tin (Sn)	7440-31-5	ND	10

Remark: ND = Not Detected

13 Monochlorophenol (MonoCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2- MonoCP	ND
3- MonoCP	ND
4- MonoCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

14 Dichlorophenol (DiCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2,3- DiCP	ND
2,4- DiCP	ND
2,5- DiCP	ND
2,6- DiCP	ND
3,4- DiCP	ND
3,5- DiCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

To be continued.



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15 Trichlorophenol (TriCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2,3,4- TriCP	ND
2,3,5- TriCP	ND
2,3,6- TriCP	ND
2,4,5- TriCP	ND
2,4,6- TriCP	ND
3,4,5- TriCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

16 Tetrachlorophenol (TeCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2,3,5,6-TeCP	ND
2,3,4,6-TeCP	ND
2,3,4,5-TeCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

17 Pentachlorophenol (PCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Pentachlorophenol (PCP)	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

Tested Components:

(1) Brown Powder (ACID BLUE 40).

Date Sample Received: Apr 25, 2023

Testing Period: Apr 25, 2023 to May 05, 2023

To be continued.



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Tests Conducted



End of report.

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09: 2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

The sample(s) and sample information hereto are provided by the client who shall be solely responsible for the authenticity and integrity thereof. The results shown in this report relate only to the sample(s) received and tested. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct. This report shall not be reproduced unless with prior written approval from Intertek Testing Services Shanghai Ltd.