TEST REPORT

Report No.	:	WTF24F10237860C
Applicant	:	Mid Ocean Brands B.V.
Address	:	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	:	114697
Sample Name	:	Rainbow umbrella
Sample Model	:	MO6540
Test Requested	:	Refer to next page (s)
Test Method	:	Refer to next page (s)
Test Conclusion	:	**Pass** (Please refer to next pages for details)
Date of Receipt sample	:	2024-10-15
Testing period	:	2024-10-15 to 2024-10-22
Date of Issue	:	2024-10-22
Test Result	:	Refer to next page (s)
Note	:	As specified by client, only test the designated sample.

Prepared By:
Waltek Testing Group (Foshan) Co., Ltd.
Address: No.13-19, 2/F., 2nd Building, Sunlink Machinery City, Xingye 4 Road, Guanglong Industrial Park, Chihua Neighborhood Committee, Chencun Town, Shunde District, Foshan, Guangdong, China
Tel:+86-757-23811398 Fax:+86-757-23811381 E-mail:info@waltek.com.cn

Signed for and on behalf of
Waltek Testing Group (Foshan) Co., Ltd.

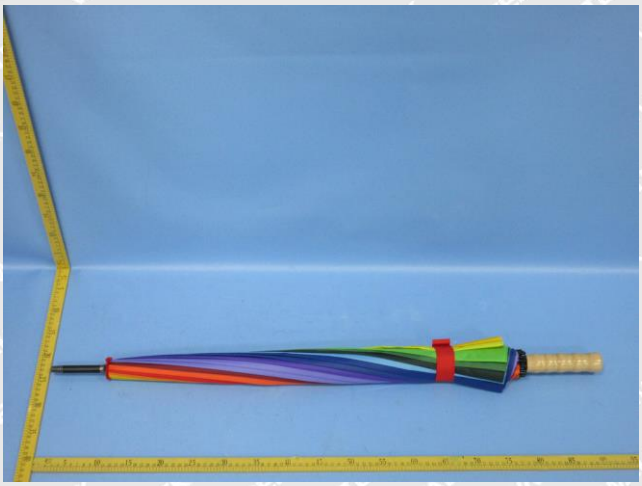
Swing.Liang

WTF24F10237860C

Summary

Item No.	Test Requested	Test Conclusion
1	Determination of Lead content in the submitted sample in accordance with REACH regulation Annex XVII Entries 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628	**Pass**
2	Determination of Cadmium content in the submitted sample in accordance with REACH regulation Annex XVII Entries 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011, No. 835/2012 and (EU) 2016/217	**Pass**
3	Determination of specified Phthalates content according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005	**Pass**
4	Determine the specified AZO Colorants contents in the submitted sample in according to the Entries 43 in Annex XVII of the REACH Regulation (EC) No.1907/2006 and the Amendment Regulation (EC) No.552/ 2009 & No.126/ 2013 (previously restricted under Directive 2002/61/EC).	**Pass**
5	Determination of specified Polycyclic Aromatic Hydrocarbons (PAHs) content in submitted sample in accordance with Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013.	**Pass**
6	As specified by client, determination of the released formaldehyde content in submitted sample	**Pass**
7	To determine the Pentachlorophenol and its salts and esters (PCP) content in the submitted sample with reference to Regulation (EU)2019/1021 and its amendment (EU)2020/784&(EU)2020/1203&(EU)2020/1204&(EU)2021/115& (EU)2021/277&(EU)2022/2291&(EU)2023/1608&(EU)2024/2555& (EU)2024/2570..	**Pass**
8	As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.	**Pass**

Sample photo:



MO6540

Test Results:

1) Lead (Pb)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	LOQ (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.1	No.2	No.3	
Lead(Pb)	2	ND	ND	ND	500
Conclusion	--	**Pass**	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.4+No.24+No.28	No.5+No.6	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.7+No.8+No.9	No.10+No.11+No.12	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.13+No.14+No.15	No.16+No.17+No.18	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.19+No.20	No.21	No.22	
Lead(Pb)	2	ND*	ND	ND	500
Conclusion	--	**Pass**	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.23	No.25	No.26	
Lead(Pb)	2	ND	ND	ND	500
Conclusion	--	**Pass**	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.27	No.29+No.30+No.31	
Lead(Pb)	2	ND	ND*	500
Conclusion	**--**	**Pass**	**Pass**	**--**

Test Item	LOQ (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.32	No.33	No.34+No.35	
Lead(Pb)	2	ND	ND	ND*	500
Conclusion	**--**	**Pass**	**Pass**	**Pass**	**--**

Note:
(1) mg/kg = milligram per kilogram
(2) ND = Not Detected (lower than LOQ)
(3) LOQ = Limit of quantitation
(4) Limit of Lead was quoted from REACH regulation Annex XVII Item 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628.
(5) "*" = Results are calculated by the minimum weight of mixed components.

2) Cadmium (Cd)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	LOQ (mg/kg)	Results (mg/kg)		
		No.2	No.3	No.4+No.24+No.28
Cadmium(Cd)	2	ND	ND	ND*
Conclusion	--	**Pass**	**Pass**	**Pass**

Test Item	LOQ (mg/kg)	Results (mg/kg)		
		No.21	No.25	No.27
Cadmium(Cd)	2	ND	ND	ND
Conclusion	--	**Pass**	**Pass**	**Pass**

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.29+No.30+No.31	No.32
Cadmium(Cd)	2	ND*	ND
Conclusion	--	**Pass**	**Pass**

Note:

(1) mg/kg = milligram per kilogram

(2) ND = Not Detected (lower than LOQ)

(3) LOQ = Limit of quantitation

(4) Limit of Cadmium according to REACH regulation Annex XVII Item 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011 and No. 835/2012 and (EU) 2016/217.

Category	Limit (mg/kg)
Wet paint	100
Surface coating	1000
Plastic	100
Metal parts of jewellery and hair accessories	100

(5) "*" = Results are calculated by the minimum weight of mixed components.

3) Phthalates

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test Items	LOQ (%)	Results (%)		Limit (%)
		No.3	No.4+No.24+No.28	
Benzyl butyl phthalate (BBP)	0.005	ND	ND*	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	ND	ND*	
Dibutyl phthalate (DBP)	0.005	ND	ND*	
Diisobutyl phthalate (DIBP)	0.005	ND	ND*	
Diisodecyl phthalate (DIDP)	0.01	ND	ND*	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND	ND*	
Di-n-octyl phthalate (DNOP)	0.005	ND	ND*	
Conclusion	--	**Pass**	**Pass**	--

Test Items	LOQ (%)	Results (%)	Limit (%)
		No.29+No.30+No.31	
Benzyl butyl phthalate (BBP)	0.005	ND*	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	ND*	
Dibutyl phthalate (DBP)	0.005	ND*	
Diisobutyl phthalate (DIBP)	0.005	ND*	
Diisodecyl phthalate (DIDP)	0.01	ND*	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND*	
Di-n-octyl phthalate (DNOP)	0.005	ND*	
Conclusion	--	**Pass**	--

Note:

DBP= Dibutyl phthalate BBP= Benzyl butyl phthalate DEHP= Bis-(2-ethylhexyl)- phthalate
DINP= Di-isononyl phthalate DNOP= Di-n-octyl phthalate DIDP= Di-isodecyl phthalate
DIBP= Diisobutyl phthalate

(1) % = percentage by weight
(2) ND = Not Detected or lower than limit of quantitation
(3) LOQ = Limit of quantitation
(4) “<” = less than
(5) The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005 (formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.
(6) “*” = Results are calculated by the minimum weight of mixed components.

4) AZO

Test Method: With reference to BS EN ISO 14362-1：2017 and BS EN ISO 14362-3：2017, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS)

No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)	
				No.7+No.8 +No.9	No.10+No.11 +No.12
1	4-Aminobiphenyl	92-67-1	30	ND*	ND*
2	Benzidine	92-87-5	30	ND*	ND*
3	4-chloro-o-Toluidine	95-69-2	30	ND*	ND*
4	2-Naphthylamine	91-59-8	30	ND*	ND*
5	o-Aminoazotoluene	97-56-3	30	ND*	ND*
6	2-Amino-4-nitrotoluene	99-55-8	30	ND*	ND*
7	p-Chloroaniline	106-47-8	30	ND*	ND*
8	2,4-diaminoanisol	615-05-4	30	ND*	ND*
9	4,4’-Diaminodiphenylmethane	101-77-9	30	ND*	ND*
10	3,3’-Dichlorobenzidine	91-94-1	30	ND*	ND*
11	3,3’-Dimethoxybenzidine	119-90-4	30	ND*	ND*
12	3,3’-Dimethylbenzidine	119-93-7	30	ND*	ND*
13	3,3’-Dimethyl-4,4’-diaminodiphenylmethane	838-88-0	30	ND*	ND*
14	p-cresinin	120-71-8	30	ND*	ND*
15	4,4’-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND*	ND*
16	4,4’-Oxydianiline	101-80-4	30	ND*	ND*
17	4,4’-Thiodianiline	139-65-1	30	ND*	ND*
18	o-Toluidine	95-53-4	30	ND*	ND*
19	2,4-Toluylendiamine	95-80-7	30	ND*	ND*
20	2,4,5 – Trimethylaniline	137-17-7	30	ND*	ND*
21	o-anisidine	90-04-0	30	ND*	ND*
22	4-aminoazobenzene	60-09-3	30	ND*	ND*
23	2,4-Xylidin	95-68-1	30	ND*	ND*
24	2,6-Xylidin	87-62-7	30	ND*	ND*
Conclusion		**--**	**--**	**Pass**	**Pass**

No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)	
				No.13+No.14 +No.15	No.16+No.17 +No.18
1	4-Aminobiphenyl	92-67-1	30	ND*	ND*
2	Benzidine	92-87-5	30	ND*	ND*
3	4-chloro-o-Toluidine	95-69-2	30	ND*	ND*
4	2-Naphthylamine	91-59-8	30	ND*	ND*
5	o-Aminoazotoluene	97-56-3	30	ND*	ND*
6	2-Amino-4-nitrotoluene	99-55-8	30	ND*	ND*
7	p-Chloroaniline	106-47-8	30	ND*	ND*
8	2,4-diaminoanisol	615-05-4	30	ND*	ND*
9	4,4'-Diaminodiphenylmethane	101-77-9	30	ND*	ND*
10	3,3'-Dichlorobenzidine	91-94-1	30	ND*	ND*
11	3,3'-Dimethoxybenzidine	119-90-4	30	ND*	ND*
12	3,3'-Dimethylbenzidine	119-93-7	30	ND*	ND*
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	30	ND*	ND*
14	p-cresinin	120-71-8	30	ND*	ND*
15	4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND*	ND*
16	4,4'-Oxydianiline	101-80-4	30	ND*	ND*
17	4,4'-Thiodianiline	139-65-1	30	ND*	ND*
18	o-Toluidine	95-53-4	30	ND*	ND*
19	2,4-Toluylendiamine	95-80-7	30	ND*	ND*
20	2,4,5 – Trimethylaniline	137-17-7	30	ND*	ND*
21	o-anisidine	90-04-0	30	ND*	ND*
22	4-aminoazobenzene	60-09-3	30	ND*	ND*
23	2,4-Xylidin	95-68-1	30	ND*	ND*
24	2,6-Xylidin	87-62-7	30	ND*	ND*
Conclusion		**--**	**--**	**Pass**	**Pass**

No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)	
				No.19+No.20	No.34+No.35
1	4-Aminobiphenyl	92-67-1	30	ND*	ND*
2	Benzidine	92-87-5	30	ND*	ND*
3	4-chloro-o-Toluidine	95-69-2	30	ND*	ND*
4	2-Naphthylamine	91-59-8	30	ND*	ND*
5	o-Aminoazotoluene	97-56-3	30	ND*	ND*
6	2-Amino-4-nitrotoluene	99-55-8	30	ND*	ND*
7	p-Chloroaniline	106-47-8	30	ND*	ND*
8	2,4-diaminoanisol	615-05-4	30	ND*	ND*
9	4,4'-Diaminodiphenylmethane	101-77-9	30	ND*	ND*
10	3,3'-Dichlorobenzidine	91-94-1	30	ND*	ND*
11	3,3'-Dimethoxybenzidine	119-90-4	30	ND*	ND*
12	3,3'-Dimethylbenzidine	119-93-7	30	ND*	ND*
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	30	ND*	ND*
14	p-cresinin	120-71-8	30	ND*	ND*
15	4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND*	ND*
16	4,4'-Oxydianiline	101-80-4	30	ND*	ND*
17	4,4'-Thiodianiline	139-65-1	30	ND*	ND*
18	o-Toluidine	95-53-4	30	ND*	ND*
19	2,4-Toluylendiamine	95-80-7	30	ND*	ND*
20	2,4,5 – Trimethylaniline	137-17-7	30	ND*	ND*
21	o-anisidine	90-04-0	30	ND*	ND*
22	4-aminoazobenzene	60-09-3	30	ND*	ND*
23	2,4-Xylidin	95-68-1	30	ND*	ND*
24	2,6-Xylidin	87-62-7	30	ND*	ND*
Conclusion		**--**	**--**	**Pass**	**Pass**

Note:

- ND = Not Detected or lower than limit of quantitation
- mg/kg=Milligram per kilogram
- Limit of quantitation (mg/kg): Each 5mg/kg
- The CAS-numbers 97-56-3 and 99-55-8 are further reduced to CAS-numbers 95-53-4 and 95-80-7.
- AZO colorants that are able to form 4-aminoazobenzene, generate under the condition of this method aniline and 1,4-phenylenediamine. The presence of these colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorant used.
- "*" = Results are calculated by the minimum weight of mixed components.

5) Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method: With reference to AFPS GS 2019:01 PAK method, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS).

Test Items	Unit	Results	LOQ	Limit
		No.3		
Benzo(a)anthracene (BaA)	mg/kg	ND	0.2	1.0
Chrysene (CHR)	mg/kg	ND	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND	0.2	1.0
Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND	0.2	1.0
Conclusion	--	**Pass**	--	--

Test Items	Unit	Results	LOQ	Limit
		No.4+No.24+No.28		
Benzo(a)anthracene (BaA)	mg/kg	ND*	0.2	1.0
Chrysene (CHR)	mg/kg	ND*	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND*	0.2	1.0
Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND*	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND*	0.2	1.0
Conclusion	--	**Pass**	--	--

Note:
(1) ND = Not Detected or lower than limit of quantitation
(2) mg/kg=milligram per kilogram=ppm
(3) LOQ = Limit of quantitation
(4) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg (0,0001 % by weight of this component) of any of the listed PAHs.
(5) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Toys, including activity toys, and childcare articles, shall not be placed on the market, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0,5 mg/kg (0,00005 % by weight of this component) of any of the listed PAHs.
(6) "*" = Results are calculated by the minimum weight of mixed components.

6) Formaldehyde
Test Method: With reference to EN717-3:1996, analysis was performed by UV-VIS

Test Item	Unit	Result	LOQ	Client's Limit
		No.3		
Formaldehyde (CH_2O)	mg/kg	ND	10	80
Conclusion	--	**Pass**	**Pass**	--

Note:
- ND = Not Detected or lower than limit of quantitation
- mg/kg =milligram per kilogram=ppm
- LOQ = Limit of quantitation

7) Pentachlorophenol and its salts and esters (PCP)

Test method: With reference to In-house Method, analysis was performed by GC-MS.

Test Items	Result (mg/kg)	Limit (mg/kg)	LOQ (mg/kg)
	No.3		
Pentachlorophenol and its salts and esters (PCP)	ND	≤ 5mg/kg in substances, mixtures or articles	5
Conclusion	**Pass**	--	--

Note:

(1) ND = Not Detected or lower than limit of quantitation

(2) mg/kg= milligram per kilogram= ppm

(3) LOQ = Limit of quantitation

8) Colour Fastness to Rubbing

Colour Fastness to Rubbing						
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)						
		No.7	**No.8**	**No.9**	**No.10**	**Client's Limit**
Length	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Width	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Conclusion		**Pass**	**Pass**	**Pass**	**Pass**	--

Colour Fastness to Rubbing						
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)						
		No.11	**No.12**	**No.13**	**No.14**	**Client's Limit**
Length	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Width	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Conclusion		**Pass**	**Pass**	**Pass**	**Pass**	--

Colour Fastness to Rubbing						
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)						
		No.15	**No.16**	**No.17**	**No.18**	**Client's Limit**
Length	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Width	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4-5	4	4	2-3
Conclusion		**Pass**	**Pass**	**Pass**	**Pass**	--

Colour Fastness to Rubbing						
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)						
		No.19	**No.20**	**No.34**	**No.35**	**Client's Limit**
Length	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Width	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	4	4	4	4	2-3
Conclusion		**Pass**	**Pass**	**Pass**	**Pass**	--

Note:

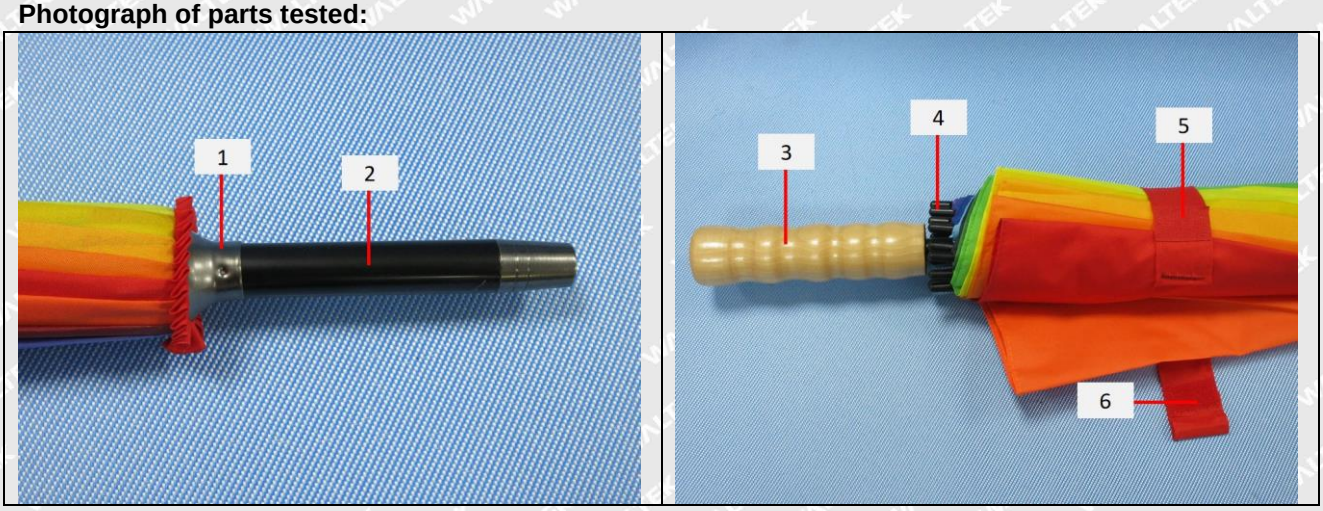
(1) Grey Scale Rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.

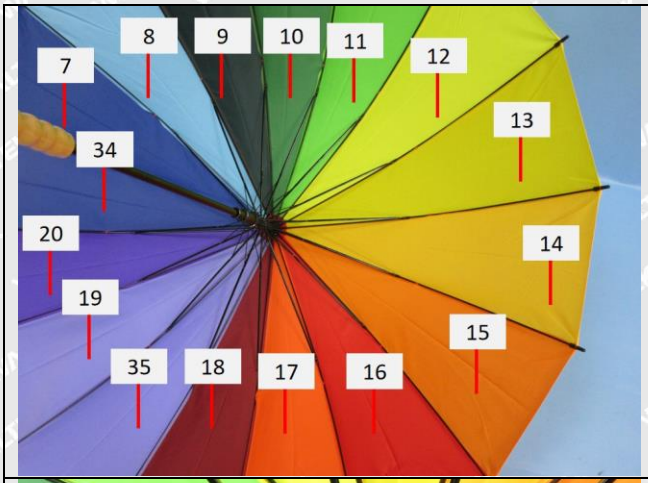
Description for Specimen:

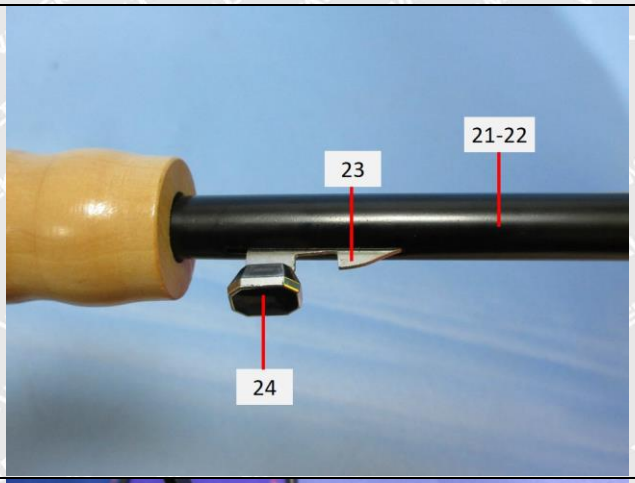
Specimen No.	Specimen Description
1	Silvery metal shell
2	Silvery metal tube with black surface
3	Brown wooden handle
4	Black plastic cap
5	Red plastic hook(VELCRO)
6	Red plastic loop(VELCRO)
7	Blue main fabric
8	Light blue main fabric
9	Dark green main fabric
10	Green main fabric
11	Light green main fabric
12	Light yellow main fabric
13	Yellow main fabric
14	Dark yellow main fabric
15	Orange main fabric
16	Red main fabric
17	Dark orange main fabric
18	Dark red main fabric
19	Purple main fabric

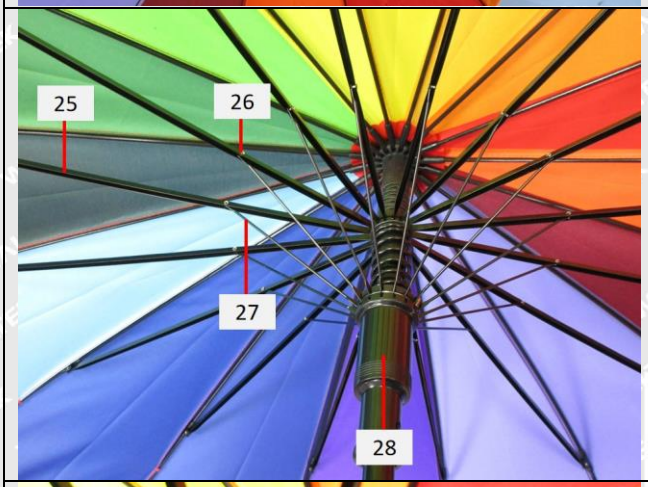
Specimen No.	Specimen Description
20	Dark purple main fabric
21	Black coating
22	Silvery metal tube without black coating
23	Silvery metal sheet
24	Black plastic button with silvery surface
25	Silvery metal strip with black surface
26	Silvery metal rivet
27	Silvery metal strip with black surface
28	Black plastic shell
29	Black plastic strip
30	Black plastic connector
31	Black plastic shell
32	Silvery metal spring with black surface
33	Silvery metal ring
34	Dark blue main fabric
35	Light purple main fabric

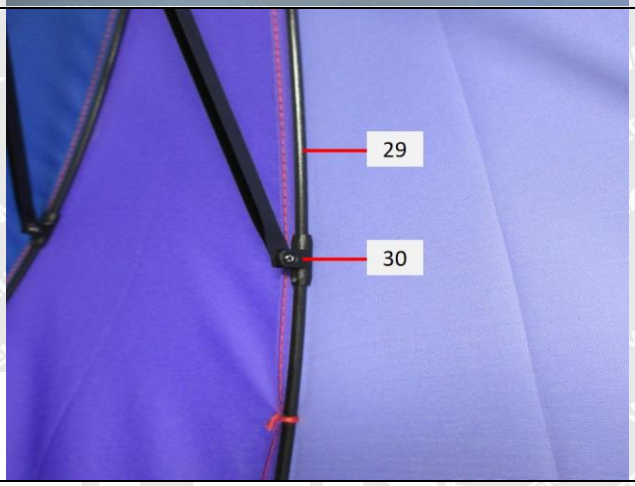
Photograph of parts tested:

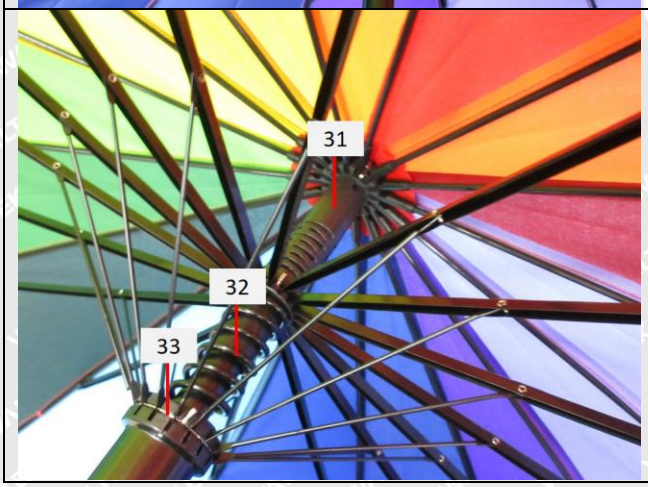



7
8
9
10
11
12
13
34
20
14
19
15
35
18
17
16


21-22
23
24


25
26
27
28


29
30


31
32
33

/

Remarks:

1. The results shown in this test report refer only to the sample(s) tested;
2. This test report cannot be reproduced, except in full, without prior written permission of the company;
3. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver;
4. The Applicant name and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which Waltek hasn't verified;
5. If the report is not stamped with the accreditation recognized seal, it will only be used for scientific research, education, and internal quality control activities, and is not used for the purpose of issuing supporting data to the society.
6. The sample material information (Model No. information) is provided by client, not verified by test laboratory. The samples of reference Model No. are not tested. Test laboratory not responsible for the accuracy, appropriateness, completeness and authenticity of the information provided by client.

====== End of Report ======