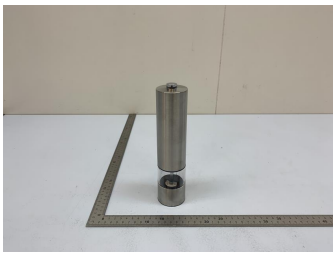
QIMA

TEST REPORT

Test Report #	23D-000632(A1)	Date of Report Issue:	October 11, 2023
Date of Sample Received:	July 12, 2023	Pages:	Page 1 of 37

CLIENT INFORMATION:

Company:	Mid Ocean Brands B.V.
Company Address:	7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong



SAMPLE INFORMATION:

Description:	Electric pepper mill		
Assortment:	-	Purchase Order Number:	-
SKU/Style/UPC No.:	MO8816	Toy Co./Agency:	-
Factory/Supplier/Vendor:	-	Buyer:	-
Country of Origin:	-	Labeled Age Grade:	-
Country of Distribution:	Europe	Recommended Age Grade:	-
Quantity Submitted:	8 pcs + 2 lot parts	Tested Age Grade:	-
Testing Period:	07/14/2023 – 08/02/2023 08/07/2023 – 08/10/2023 09/25/2023 – 10/08/2023	Materials:	ABS/stainless steel/PS

OVERALL RESULT: **PASS**

Refer to page 2 for test result summary and appropriate notes.

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QIMA Hansecontrol Testing Service (Dongguan) Co. Ltd.

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TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	Client's Requirement, Bisphenol A
PASS	Council of Europe Resolution CM/Res(2013)9, Metals and Alloys Used in Food Contact Materials –Extractable 21 elements
PASS	Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Phthalates Content (DBP, BBP, DEHP, DIBP)
PASS	Directive 2011/65/EU and amendments, Restriction of the Use of Certain Hazardous Substances in Electrical and electronic equipment (RoHS)
PASS	EC Directive 84/500/EEC as amended by Directive 2005/31/EC Leachable Lead and Cadmium from Ceramic Articles
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)
PASS	Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Overall Migration
PASS	Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Acrylonitrile
PASS	Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Bisphenol A
PASS	Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Heavy Metals
PASS	Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Primary Aromatic Amines
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII as Amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)
PASS	EN 55014-1 & 2-Household Appliances (D.C.)-Electromagnetic Compatibility (EMC)$^{\phi}$

Appendix I attached.

Test(s) marked with 'ϕ' was subcontracted to external laboratory.

DETAILED RESULTS:

Client's Requirement, Bisphenol A

Test Method: In-House Method
Analytical Method: Liquid Chromatography with Fluorescence Detection,
Liquid Chromatography-Mass Spectrometer (LC-MS)

Specimen No.		1	2	6	---	
Test Item	CAS No.	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	**Limit (ppm)**
Bisphenol A (BPA)	80-05-7	ND	ND	ND	---	**1**
Conclusion		PASS	PASS	PASS	---	

Note:
ppm (Parts per million) = mg/kg (Milligrams per kilogram)
LT = Less than
ND = Not Detected (Reporting Limit = 1 ppm)

DETAILED RESULTS:

Council of Europe Resolution CM/Res(2013)9, Metals and Alloys Used in Food Contact Materials – Extractable 21 elements

Test Method: In-House Method
Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Test Condition:
Simulant: 5g/L citric acid Temperature: 40°C Duration: 2 hours

Specimen No.	3				
Test Item	1st+2nd Migration (mg/kg)	3rd Migration (mg/kg)	**RL (mg/kg)**	**1st+2nd Migration Limit (mg/kg)**	**3rd Migration Limit (mg/kg)**
Aluminum (Al)	ND	ND	**0.5**	**35**	**5**
Antimony (Sb)	ND	ND	**0.02**	**0.28**	**0.04**
Arsenic (As)	ND	ND	**0.002**	**0.014**	**0.002**
Barium (Ba)	ND	ND	**0.25**	**8.4**	**1.2**
Beryllium (Be)	ND	ND	**0.01**	**0.07**	**0.01**
Cadmium (Cd)	ND	ND	**0.005**	**0.035**	**0.005**
Chromium (Cr)	ND	ND	**0.1**	**1.75**	**0.25**
Cobalt (Co)	ND	ND	**0.01**	**0.14**	**0.02**
Copper (Cu)	ND	ND	**0.5**	**28**	**4**
Iron (Fe)	ND	ND	**5**	**280**	**40**
Lead (Pb)	ND	ND	**0.01**	**0.07**	**0.01**
Lithium (Li)	ND	ND	**0.02**	**0.336**	**0.048**
Manganese (Mn)	ND	ND	**0.5**	**12.6**	**1.8**
Mercury (Hg)	ND	ND	**0.003**	**0.021**	**0.003**
Molybdenum (Mo)	ND	ND	**0.05**	**0.84**	**0.12**
Nickel (Ni)	ND	ND	**0.05**	**0.98**	**0.14**
Silver (Ag)	ND	ND	**0.05**	**0.56**	**0.08**
Thallium (Tl)	ND	ND	**0.0001**	**0.0007**	**0.0001**
Tin (Sn)	ND	ND	**5**	**700**	**100**
Vanadium (V)	ND	ND	**0.01**	**0.07**	**0.01**
Zinc (Zn)	ND	ND	**1**	**35**	**5**
Conclusion	PASS				

Note:
mg/kg = Milligrams per kilogram foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).

DETAILED RESULTS:

Council of Europe Resolution CM/Res(2013)9, Metals and Alloys Used in Food Contact Materials – Extractable 21 elements

Test Method: In-House Method
Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Test Condition:
Simulant: 5g/L citric acid Temperature: 40°C Duration: 2 hours

Specimen No.	4				
Test Item	1st+2nd Migration (mg/kg)	3rd Migration (mg/kg)	**RL (mg/kg)**	**1st+2nd Migration Limit (mg/kg)**	**3rd Migration Limit (mg/kg)**
Aluminum (Al)	ND	ND	**0.5**	**35**	**5**
Antimony (Sb)	ND	ND	**0.02**	**0.28**	**0.04**
Arsenic (As)	ND	ND	**0.002**	**0.014**	**0.002**
Barium (Ba)	ND	ND	**0.25**	**8.4**	**1.2**
Beryllium (Be)	ND	ND	**0.01**	**0.07**	**0.01**
Cadmium (Cd)	ND	ND	**0.005**	**0.035**	**0.005**
Chromium (Cr)	ND	ND	**0.1**	**1.75**	**0.25**
Cobalt (Co)	ND	ND	**0.01**	**0.14**	**0.02**
Copper (Cu)	ND	ND	**0.5**	**28**	**4**
Iron (Fe)	ND	ND	**5**	**280**	**40**
Lead (Pb)	ND	ND	**0.01**	**0.07**	**0.01**
Lithium (Li)	ND	ND	**0.02**	**0.336**	**0.048**
Manganese (Mn)	ND	ND	**0.5**	**12.6**	**1.8**
Mercury (Hg)	ND	ND	**0.003**	**0.021**	**0.003**
Molybdenum (Mo)	ND	ND	**0.05**	**0.84**	**0.12**
Nickel (Ni)	ND	ND	**0.05**	**0.98**	**0.14**
Silver (Ag)	ND	ND	**0.05**	**0.56**	**0.08**
Thallium (Tl)	ND	ND	**0.0001**	**0.0007**	**0.0001**
Tin (Sn)	ND	ND	**5**	**700**	**100**
Vanadium (V)	ND	ND	**0.01**	**0.07**	**0.01**
Zinc (Zn)	ND	ND	**1**	**35**	**5**
Conclusion	PASS				

Note:
mg/kg = Milligrams per kilogram foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).

DETAILED RESULTS:

Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Phthalates Content (DBP, BBP, DEHP, DIBP)

Test Method: IEC 62321-8:2017
Test Instrument: Gas Chromatography with Mass Spectrometry

Specimen No.		1+2+6	8	16+17+26	25+30+31	**Limit (% w/w)**
Test Item	CAS No.	Result (% w/w)	Result (% w/w)	Result (% w/w)	Result (% w/w)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	ND	ND	**0.1**
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	ND	ND	**0.1**
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	ND	ND	**0.1**
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	ND	ND	**0.1**
	Conclusion	PASS	PASS	PASS	PASS	

Specimen No.		32+33+34	46+47+50	---	---	**Limit (% w/w)**
Test Item	CAS No.	Result (% w/w)	Result (% w/w)	Result (% w/w)	Result (% w/w)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	---	**0.1**
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	---	**0.1**
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	---	**0.1**
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	---	---	**0.1**
	Conclusion	PASS	PASS	---	---	

Note:
% w/w = Percent by weight
LT = Less than
ND = Not detected (Reporting Limit = 0.015 % w/w)
Composite results are based on specimen of least mass resulting in highest potential concentration.

DETAILED RESULTS:

Directive 2011/65/EU and amendments, Restriction of the Use of Certain Hazardous Substances in Electrical and electronic equipment (RoHS)

Test Method: IEC 62321-3-1:2013 for Cadmium, Lead, Mercury, Chromium and Bromine by XRF
IEC 62321-5:2013 for Lead, Cadmium and Chromium by ICP-OES
IEC 62321-6:2015 for PBBs and PBDEs by GC-MS

Analytical Method: X-ray Fluorescence Spectrometry
Inductively Coupled Plasma-Optical Emission Spectrometry
Gas Chromatography Mass Spectrometry

No.	Specimen Description	Test Item (mg/kg)						Conclusion
		Pb	Cd	Hg	CrVI	PBBs	PBDEs	
	Limit	1000	100	1000	1000	1000	1000	
	XRF RL	700	70	700	700	300	300	
1	Translucent plastic (Bottle)	BL	BL	BL	BL	BL	BL	PASS
2	Black plastic (Bottom holder)	BL	BL	BL	BL	BL	BL	PASS
3	Silvery metal (Axis)	BL	ND*	BL	BL	NA	NA	PASS
4	Silvery metal (Spring)	BL	BL	BL	NE*	NA	NA	PASS
5	Silvery metal (Adjuster screw)	BL	BL	BL	NE*	NA	NA	PASS
6	White plastic (Fixed gear)	BL	BL	BL	BL	BL	BL	PASS
7	White ceramic (Gear)	BL	BL	BL	BL	BL	BL	PASS
8	Translucent plastic (Light)	BL	BL	BL	BL	BL	BL	PASS
9	Silvery metal (Wire on bottle)	BL	BL	BL	NE*	NA	NA	PASS
10	Silvery metal (Screw on bottom)	BL	ND*	BL	BL	NA	NA	PASS
11	Silvery metal (Screw on translucent bottle)	BL	BL	BL	BL	NA	NA	PASS
12	Silvery metal (Feet of light)	BL	BL	BL	BL	NA	NA	PASS
13	Golden metal (Tube connecter of wire and feet)	BL	BL	BL	BL	NA	NA	PASS
14	Silvery metal (Body shell)	BL	BL	BL	NE*	NA	NA	PASS

No.	Specimen Description	Test Item (mg/kg)						Conclusion
		Pb	Cd	Hg	CrVI	PBBs	PBDEs	
	Limit	1000	100	1000	1000	1000	1000	
	XRF RL	700	70	700	700	300	300	
15	Silvery plating (On top button)	BL	BL	BL	BL	NA	NA	PASS
16	Beige plastic (Top button)	BL	BL	BL	BL	BL	BL	PASS
17	Translucent plastic (Fixed battery)	BL	BL	BL	BL	BL	BL	PASS
18	Silvery metal (Spring on battery box)	BL	BL	BL	BL	NA	NA	PASS
19	Golden metal (Rivet on battery box)	BL	BL	BL	BL	NA	NA	PASS
20	Coppery metal (Piece in battery box)	BL	BL	BL	BL	NA	NA	PASS
21	Light golden metal (Piece in battery box)	BL	BL	BL	BL	NA	NA	PASS
22	Golden metal (Wire)	BL	BL	BL	BL	NA	NA	PASS
23	Silvery solder(On rivet of battery box)	BL	BL	BL	BL	NA	NA	PASS
24	Golden metal (Rivet on button)	BL	BL	BL	BL	NA	NA	PASS
25	Blue plastic (Wire jacket)	BL	BL	BL	ND*	BL	BL	PASS
26	Black plastic (Battery box)	BL	BL	BL	BL	BL	BL	PASS
27	Silvery metal (Fixed gear)	BL	BL	BL	NE*	NA	NA	PASS
28	Silvery metal (Axis of gear)	BL	BL	BL	BL	NA	NA	PASS
29	Silvery metal (Wire connect of motor)	BL	BL	BL	NE*	NA	NA	PASS
30	White plastic (Gear)	BL	BL	BL	BL	BL	BL	PASS
31	Brown plastic (Gear)	BL	BL	BL	BL	BL	BL	PASS
32	Blue plastic (Gear)	BL	BL	BL	BL	BL	BL	PASS
33	Beige plastic (Gear)	BL	BL	BL	BL	BL	BL	PASS
34	Beige plastic (Motor top lid)	BL	BL	BL	BL	BL	BL	PASS
35	Silvery metal (Motor shell)	BL	BL	BL	BL	NA	NA	PASS

No.	Specimen Description	Test Item (mg/kg)						Conclusion
		Pb	Cd	Hg	CrVI	PBBs	PBDEs	
	Limit	1000	100	1000	1000	1000	1000	
	XRF RL	700	70	700	700	300	300	
36	Grey magnet(Round in motor)	BL	BL	BL	BL	NA	NA	PASS
37	Grey metal (U shake in motor)	BL	BL	BL	BL	NA	NA	PASS
38	Silvery metal (On motor lid)	BL	BL	BL	BL	NA	NA	PASS
39	Golden metal (Om motor lid)	BL	BL	BL	BL	NA	NA	PASS
40	Golden metal (Ring on motor lid)	BL	BL	BL	BL	NA	NA	PASS
41	Silvery metal (Motor axis)	BL	BL	BL	BL	NA	NA	PASS
42	Dull golden metal (Big ring on axis)	BL	BL	BL	BL	NA	NA	PASS
43	Golden metal (Small ring on axis)	BL	BL	BL	BL	NA	NA	PASS
44	Golden metal (Coil)	BL	BL	BL	BL	NA	NA	PASS
45	Silvery metal (Steel rotor)	BL	BL	BL	NE*	NA	NA	PASS
46	Green PCB(On axis)	BL	BL	BL	BL	ND*	ND*	PASS
47	White plastic (Rotor)	BL	BL	BL	BL	BL	BL	PASS
48	Brown material(On PCB)	BL	BL	BL	BL	BL	BL	PASS
49	Silvery solder (On PCB)	46.5*	ND*	BL	BL	NA	NA	PASS
50	Beige plastic (On PCB)	BL	BL	BL	BL	BL	BL	PASS

Note:

mg/kg (Milligrams per kilogram) = ppm (Parts per million)

LT = Less than

NA = Not Regulated or Not Applicable

BL = Below Limit by XRF screening;

NE = Negative, Absence of Cr (VI), the concentration of Cr (VI) in sample solution is less than 0.10 μg/cm^2.

PO = Positive, Presence of Cr (VI), the concentration of Cr (VI) in sample solution is more than 0.13 μg/cm^2.

Total Chromium by XRF screening method is reported for Chromium (VI) unless specified.

Total Bromine by XRF screening method is reported for PBBs and PBDEs unless specified.

Remark:

*Result reported with wet chemical confirmation test with ICP-OES / GC-MS / UV-Vis.

ND = Not detected. Result value is less than below reporting limit (RL).

Test item	RL	
Lead	20	mg/kg
Cadmium	20	mg/kg
Chromium VI	20	mg/kg
PBBs	100	mg/kg
PBDEs	100	mg/kg

DETAILED RESULTS:

EC Directive 84/500/EEC as amended by Directive 2005/31/EC
Leachable Lead and Cadmium from Ceramic Articles

Test Method: BS EN 1388-1:1996
Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	7-A	7-B	7-C	7-D	Average (mg/dm^2)	**Limit (mg/dm^2)**
Test Item	Result	Result	Result	Result		
Area, dm^2	0.33	0.33	0.33	0.33		
Volume of Acid Used, mL	55	55	55	55		
Leachable Cadmium (Cd), mg/dm^2	ND	ND	ND	ND	ND	**0.07**
Leachable Lead (Pb), mg/dm^2	ND	ND	ND	ND	ND	**0.8**
Conclusion	PASS	PASS	PASS	PASS	PASS	

Note:
mL = Millilitres; dm^2 = Square decimeters
mg/dm^2 = Milligrams per square decimeter
NA = Not applicable
LT = Less than
ND = Not detected (Reporting Limit: Cd = 0.02 mg/dm^2; Pb = 0.04 mg/dm^2)

	Category	Leachable Cd	Leachable Pb
X	1: Articles which cannot be filled and articles which can be filled, the internal depth of which, measured from the lowest point to the horizontal plane passing through the upper rim, does not exceed 25mm	**0.07 mg/dm^2**	**0.8 mg/dm^2**
	2: All other articles which can be filled	**0.3 mg/L**	**4.0 mg/L**
	3: Cooking ware; packaging and storage vessels having a capacity of more than three litres	**0.1 mg/L**	**1.5 mg/L**
	4. Drinking rim*	**0.2 mg/item**	**2 mg/item**

*Requirement is according to DGCCRF DM-4B-COM-002 (Inorganic materials (except metals and alloys), 4.1.1.

DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)

Test Method: AfPS GS 2019:01
Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		1	2	6	8+16	
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	**Limit (mg/kg)**
Benzo [a] pyrene (BaP)	50-32-8	ND	ND	ND	ND	**1**
Benzo [e] pyrene (BeP)	192-97-2	ND	ND	ND	ND	**1**
Benzo [a] anthracene (BaA)	56-55-3	ND	ND	ND	ND	**1**
Chrysene (CHR)	218-01-9	ND	ND	ND	ND	**1**
Benzo [b] fluroranthene (BbFA)	205-99-2	ND	ND	ND	ND	**1**
Benzo [j] fluroranthene (BjFA)	205-82-3	ND	ND	ND	ND	**1**
Benzo [k] fluroranthene (BkFA)	207-08-9	ND	ND	ND	ND	**1**
Dibenzo [a,h] anthracene (DBAhA)	53-70-3	ND	ND	ND	ND	**1**
Conclusion		PASS	PASS	PASS	PASS	

Note:
mg/kg = Milligrams per kilogram
LT = Less than
ND = Not detected (Reporting Limit = 0.2 mg/kg)

DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)

Test Method: AfPS GS 2019:01
Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		17+26	---	---	---	
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	**Limit (mg/kg)**
Benzo [a] pyrene (BaP)	50-32-8	ND	---	---	---	**1**
Benzo [e] pyrene (BeP)	192-97-2	ND	---	---	---	**1**
Benzo [a] anthracene (BaA)	56-55-3	ND	---	---	---	**1**
Chrysene (CHR)	218-01-9	ND	---	---	---	**1**
Benzo [b] fluroranthene (BbFA)	205-99-2	ND	---	---	---	**1**
Benzo [j] fluroranthene (BjFA)	205-82-3	ND	---	---	---	**1**
Benzo [k] fluroranthene (BkFA)	207-08-9	ND	---	---	---	**1**
Dibenzo [a,h] anthracene (DBAhA)	53-70-3	ND	---	---	---	**1**
Conclusion		PASS	---	---	---	

Note:
mg/kg = Milligrams per kilogram
LT = Less than
ND = Not detected (Reporting Limit = 0.2 mg/kg)

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Overall Migration

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V , Regulation (EU) 2020/1245, EN 1186-3:2002 (Total Immersion Method)

Repeated use materials and articles

Specimen No.			1				
Migration			1st	2nd	3rd	^Stability	**Limit (mg/dm²)**
Test Simulant	Test Condition		Result (mg/dm²)	Result (mg/dm²)	Result (mg/dm²)		
	Temp.	Duration					
Poly(2,6-diphenyl-p-phenylene oxide) (MPPO)	70°C	2H	ND	ND	ND	Sufficient	**10**
Conclusion			PASS				

Specimen No.			2				
Migration			1st	2nd	3rd	^Stability	**Limit (mg/dm²)**
Test Simulant	Test Condition		Result (mg/dm²)	Result (mg/dm²)	Result (mg/dm²)		
	Temp.	Duration					
Poly(2,6-diphenyl-p-phenylene oxide) (MPPO)	70°C	2H	ND	ND	ND	Sufficient	**10**
Conclusion			PASS				

Note:
Temp. = Temperature
°C = Degree Celsius
mg/dm² = Milligrams per square decimeter
LT = Less than
ND = Not detected (Reporting Limit = 3 mg/dm²)
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Overall Migration

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V , Regulation (EU) 2020/1245, EN 1186-3:2002 (Total Immersion Method)

Repeated use materials and articles

Specimen No.			6				
Migration			1st	2nd	3rd	^Stability	**Limit (mg/dm²)**
Test Simulant	Test Condition		Result (mg/dm²)	Result (mg/dm²)	Result (mg/dm²)		
	Temp.	Duration					
Poly(2,6-diphenyl-p-phenylene oxide) (MPPO)	70°C	2H	ND	ND	ND	Sufficient	**10**
Conclusion			PASS				

Note:
Temp. = Temperature
°C = Degree Celsius
mg/dm² = Milligrams per square decimeter
LT = Less than
ND = Not detected (Reporting Limit = 3 mg/dm²)
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Acrylonitrile

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Headspace Gas Chromatography-Mass Spectrometry

Test Condition:
Simulant: 3% Acetic acid Temperature: 40°C Duration: 2H

Repeated use materials and articles

Specimen No.	1			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Acrylonitrile	ND	ND	ND	Sufficient	**0.01**	**ND**
Conclusion	PASS					

Specimen No.	2			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Acrylonitrile	ND	ND	ND	Sufficient	**0.01**	**ND**
Conclusion	PASS					

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Bisphenol A

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Liquid Chromatography with Tandem Mass Spectrometry (LC-MSMS)

Test Condition:
Simulant: 3% Acetic acid Temperature: 40°C Duration: 2H

Repeated use materials and articles

Specimen No.		1			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration		1st	2nd	3rd			
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Bisphenol A (BPA)	80-05-7	ND	ND	ND	Sufficient	**0.02**	**0.05**
Conclusion		PASS					

Specimen No.		2			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration		1st	2nd	3rd			
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Bisphenol A (BPA)	80-05-7	ND	ND	ND	Sufficient	**0.02**	**0.05**
Conclusion		PASS					

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Bisphenol A

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Liquid Chromatography with Tandem Mass Spectrometry (LC-MSMS)

Test Condition:
Simulant: 3% Acetic acid Temperature: 40°C Duration: 2H

Repeated use materials and articles

Specimen No.		6			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration		1st	2nd	3rd			
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Bisphenol A (BPA)	80-05-7	ND	ND	ND	Sufficient	**0.02**	**0.05**
Conclusion		PASS					

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Heavy Metals

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Test Condition:
Simulant: 3% Acetic acid Temperature: 40 °C Duration: 2H

Repeated use materials and articles

Specimen No.	1			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Aluminum (Al)	ND	ND	ND	Sufficient	**0.2**	**1**
Antimony (Sb)	ND	ND	ND	Sufficient	**0.02**	**0.04**
Arsenic (As)	ND	ND	ND	Sufficient	**0.01**	**ND**
Barium (Ba)	ND	ND	ND	Sufficient	**0.2**	**1**
Cadmium (Cd)	ND	ND	ND	Sufficient	**0.002**	**ND**
Chromium (Cr)	ND	ND	ND	Sufficient	**0.01**	**ND**
Cobalt (Co)	ND	ND	ND	Sufficient	**0.02**	**0.05**
Copper (Cu)	ND	ND	ND	Sufficient	**0.2**	**5**
Iron (Fe)	ND	ND	ND	Sufficient	**0.2**	**48**
Lead (Pb)	ND	ND	ND	Sufficient	**0.01**	**ND**
Lithium (Li)	ND	ND	ND	Sufficient	**0.2**	**0.6**
Manganese (Mn)	ND	ND	ND	Sufficient	**0.2**	**0.6**
Mercury (Hg)	ND	ND	ND	Sufficient	**0.01**	**ND**
Nickel (Ni)	ND	ND	ND	Sufficient	**0.02**	**0.02**
Zinc (Zn)	ND	ND	ND	Sufficient	**0.2**	**5**
Europium (Eu)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Gadolinium (Gd)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Lanthanum (La)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Terbium (Tb)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Sum of (Eu, Gd, La, Tb)	ND	ND	ND	Sufficient	--	**0.05**

Conclusion	PASS		

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Heavy Metals

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Test Condition:
Simulant: 3% Acetic acid Temperature: 40 °C Duration: 2H

Repeated use materials and articles

Specimen No.	2			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Aluminum (Al)	ND	ND	ND	Sufficient	**0.2**	**1**
Antimony (Sb)	ND	ND	ND	Sufficient	**0.02**	**0.04**
Arsenic (As)	ND	ND	ND	Sufficient	**0.01**	**ND**
Barium (Ba)	ND	ND	ND	Sufficient	**0.2**	**1**
Cadmium (Cd)	ND	ND	ND	Sufficient	**0.002**	**ND**
Chromium (Cr)	ND	ND	ND	Sufficient	**0.01**	**ND**
Cobalt (Co)	ND	ND	ND	Sufficient	**0.02**	**0.05**
Copper (Cu)	ND	ND	ND	Sufficient	**0.2**	**5**
Iron (Fe)	ND	ND	ND	Sufficient	**0.2**	**48**
Lead (Pb)	ND	ND	ND	Sufficient	**0.01**	**ND**
Lithium (Li)	ND	ND	ND	Sufficient	**0.2**	**0.6**
Manganese (Mn)	ND	ND	ND	Sufficient	**0.2**	**0.6**
Mercury (Hg)	ND	ND	ND	Sufficient	**0.01**	**ND**
Nickel (Ni)	ND	ND	ND	Sufficient	**0.02**	**0.02**
Zinc (Zn)	ND	ND	ND	Sufficient	**0.2**	**5**
Europium (Eu)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Gadolinium (Gd)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Lanthanum (La)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Terbium (Tb)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Sum of (Eu, Gd, La, Tb)	ND	ND	ND	Sufficient	--	**0.05**

Conclusion	PASS		

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Heavy Metals

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Test Condition:
Simulant: 3% Acetic acid Temperature: 40 °C Duration: 2H

Repeated use materials and articles

Specimen No.	6			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
Aluminum (Al)	ND	ND	ND	Sufficient	**0.2**	**1**
Antimony (Sb)	ND	ND	ND	Sufficient	**0.02**	**0.04**
Arsenic (As)	ND	ND	ND	Sufficient	**0.01**	**ND**
Barium (Ba)	ND	ND	ND	Sufficient	**0.2**	**1**
Cadmium (Cd)	ND	ND	ND	Sufficient	**0.002**	**ND**
Chromium (Cr)	ND	ND	ND	Sufficient	**0.01**	**ND**
Cobalt (Co)	ND	ND	ND	Sufficient	**0.02**	**0.05**
Copper (Cu)	ND	ND	ND	Sufficient	**0.2**	**5**
Iron (Fe)	ND	ND	ND	Sufficient	**0.2**	**48**
Lead (Pb)	ND	ND	ND	Sufficient	**0.01**	**ND**
Lithium (Li)	ND	ND	ND	Sufficient	**0.2**	**0.6**
Manganese (Mn)	ND	ND	ND	Sufficient	**0.2**	**0.6**
Mercury (Hg)	ND	ND	ND	Sufficient	**0.01**	**ND**
Nickel (Ni)	ND	ND	ND	Sufficient	**0.02**	**0.02**
Zinc (Zn)	ND	ND	ND	Sufficient	**0.2**	**5**
Europium (Eu)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Gadolinium (Gd)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Lanthanum (La)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Terbium (Tb)	ND	ND	ND	Sufficient	**0.01**	**0.05**
Sum of (Eu, Gd, La, Tb)	ND	ND	ND	Sufficient	--	**0.05**

Conclusion	PASS		

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Primary Aromatic Amines

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Liquid Chromatography with Tandem Mass Spectrometry (LC-MSMS)

Test Condition:
Simulant: 3% Acetic acid Temperature: 40°C Duration: 2H

Repeated use materials and articles

Specimen No.	1			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
4-Aminobiphenyl (4-ABP)	ND	ND	ND	Sufficient	0.002	0.002
Benzidine (BNZ)	ND	ND	ND	Sufficient	0.002	0.002
4-Chloro-o-Toluidine (4-CoT)	ND	ND	ND	Sufficient	0.002	0.002
2-Naphthylamine(2-Nap)	ND	ND	ND	Sufficient	0.002	0.002
4-Amino-2',3-dimethylazobenzene (o-AAT)	ND	ND	ND	Sufficient	0.002	0.002
5-Nitro-o-toluidine(2-M-5-NA)	ND	ND	ND	Sufficient	0.002	0.002
4-Chloro-Aniline (4-CA)	ND	ND	ND	Sufficient	0.002	0.002
4-Methoxy-mphenylenediamine (4-M-mPDA)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Methylenedianiline (4,4'-MDA)	ND	ND	ND	Sufficient	0.002	0.002
3,3'-Dichlorobenzidine(3,3'-DCB)	ND	ND	ND	Sufficient	0.002	0.002
3,3'-Dimethoxybenzidine (3,3'-DMB)	ND	ND	ND	Sufficient	0.002	0.002
3,3-Dimethylbenzidine (3,3-DMB)	ND	ND	ND	Sufficient	0.002	0.002
4,4-Methylenedi-o-toluidine (4,4'-MDoT)	ND	ND	ND	Sufficient	0.002	0.002
2-Methoxy-5-Methylaniline (2-M-5-MA)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Methylene-bis-(2-chloro-aniline) (4,4'MB-2-CA)	ND	ND	ND	Sufficient	0.002	0.002
4,4-Diaminodiphenylether (4,4'-DPE)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Thiodianiline(4,4'-THOA)	ND	ND	ND	Sufficient	0.002	0.002

o-Toluidine (O-T)	ND	ND	ND	Sufficient	0.002	0.002
2,4-Toluenediamine (2,4-TDA)	ND	ND	ND	Sufficient	0.002	0.002
2,4,5-Trimethylaniline (2,4,5-TMA)	ND	ND	ND	Sufficient	0.002	0.002
o-Anisidine (o-ASD)	ND	ND	ND	Sufficient	0.002	0.002
4-Aminoazobenzene(4-AAB)	ND	ND	ND	Sufficient	0.002	0.002
m-Phenylenediamine (m-PDA)	ND	ND	ND	Sufficient	0.002	0.002
2,6-Dimethylaniline (2,6-DMA)	ND	ND	ND	Sufficient	0.002	--
Aniline (ANL)	ND	ND	ND	Sufficient	0.002	
p-Phenylenediamine (p-PDA)	ND	ND	ND	Sufficient	0.002	
2,4-Dimethylaniline (2,4-DMA)	ND	ND	ND	Sufficient	0.002	
2,6-Toluenediamine (2,6-TDA)	ND	ND	ND	Sufficient	0.002	
1,5-Diaminenaphthalene（1,5-DAN）	ND	ND	ND	Sufficient	0.002	
Specific migration of PAA (total 24-29)	ND	ND	ND	Sufficient	--	**0.010**
Conclusion	PASS					

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Primary Aromatic Amines

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Liquid Chromatography with Tandem Mass Spectrometry (LC-MSMS)

Test Condition:
Simulant: 3% Acetic acid Temperature: 40°C Duration: 2H

Repeated use materials and articles

Specimen No.	2			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
4-Aminobiphenyl (4-ABP)	ND	ND	ND	Sufficient	0.002	0.002
Benzidine (BNZ)	ND	ND	ND	Sufficient	0.002	0.002
4-Chloro-o-Toluidine (4-CoT)	ND	ND	ND	Sufficient	0.002	0.002
2-Naphthylamine(2-Nap)	ND	ND	ND	Sufficient	0.002	0.002
4-Amino-2',3-dimethylazobenzene (o-AAT)	ND	ND	ND	Sufficient	0.002	0.002
5-Nitro-o-toluidine(2-M-5-NA)	ND	ND	ND	Sufficient	0.002	0.002
4-Chloro-Aniline (4-CA)	ND	ND	ND	Sufficient	0.002	0.002
4-Methoxy-mphenylenediamine (4-M-mPDA)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Methylenedianiline (4,4'-MDA)	ND	ND	ND	Sufficient	0.002	0.002
3,3'-Dichlorobenzidine(3,3'-DCB)	ND	ND	ND	Sufficient	0.002	0.002
3,3'-Dimethoxybenzidine (3,3'-DMB)	ND	ND	ND	Sufficient	0.002	0.002
3,3-Dimethylbenzidine (3,3-DMB)	ND	ND	ND	Sufficient	0.002	0.002
4,4-Methylenedi-o-toluidine (4,4'-MDoT)	ND	ND	ND	Sufficient	0.002	0.002
2-Methoxy-5-Methylaniline (2-M-5-MA)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Methylene-bis-(2-chloro-aniline) (4,4'MB-2-CA)	ND	ND	ND	Sufficient	0.002	0.002
4,4-Diaminodiphenylether (4,4'-DPE)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Thiodianiline(4,4'-THOA)	ND	ND	ND	Sufficient	0.002	0.002

o-Toluidine (O-T)	ND	ND	ND	Sufficient	0.002	0.002
2,4-Toluenediamine (2,4-TDA)	ND	ND	ND	Sufficient	0.002	0.002
2,4,5-Trimethylaniline (2,4,5-TMA)	ND	ND	ND	Sufficient	0.002	0.002
o-Anisidine (o-ASD)	ND	ND	ND	Sufficient	0.002	0.002
4-Aminoazobenzene(4-AAB)	ND	ND	ND	Sufficient	0.002	0.002
m-Phenylenediamine (m-PDA)	ND	ND	ND	Sufficient	0.002	0.002
2,6-Dimethylaniline (2,6-DMA)	ND	ND	ND	Sufficient	0.002	--
Aniline (ANL)	ND	ND	ND	Sufficient	0.002	
p-Phenylenediamine (p-PDA)	ND	ND	ND	Sufficient	0.002	
2,4-Dimethylaniline (2,4-DMA)	ND	ND	ND	Sufficient	0.002	
2,6-Toluenediamine (2,6-TDA)	ND	ND	ND	Sufficient	0.002	
1,5-Diaminenaphthalene（1,5-DAN）	ND	ND	ND	Sufficient	0.002	
Specific migration of PAA (total 24-29)	ND	ND	ND	Sufficient	--	**0.010**
Conclusion	PASS					

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Commission Regulation (EU) No. 10/2011 as Amended by Regulation (EU) 2020/1245, Specific Migration - Primary Aromatic Amines

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, Regulation (EU) 2020/1245, EN 13130-1:2004, (Total Immersion Method)
Analytical Method: Liquid Chromatography with Tandem Mass Spectrometry (LC-MSMS)

Test Condition:
Simulant: 3% Acetic acid Temperature: 40°C Duration: 2H

Repeated use materials and articles

Specimen No.	6			^Stability	RL (mg/kg)	Migratable Limit (mg/kg)
Migration	1st	2nd	3rd			
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)			
4-Aminobiphenyl (4-ABP)	ND	ND	ND	Sufficient	0.002	0.002
Benzidine (BNZ)	ND	ND	ND	Sufficient	0.002	0.002
4-Chloro-o-Toluidine (4-CoT)	ND	ND	ND	Sufficient	0.002	0.002
2-Naphthylamine(2-Nap)	ND	ND	ND	Sufficient	0.002	0.002
4-Amino-2',3-dimethylazobenzene (o-AAT)	ND	ND	ND	Sufficient	0.002	0.002
5-Nitro-o-toluidine(2-M-5-NA)	ND	ND	ND	Sufficient	0.002	0.002
4-Chloro-Aniline (4-CA)	ND	ND	ND	Sufficient	0.002	0.002
4-Methoxy-mphenylenediamine (4-M-mPDA)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Methylenedianiline (4,4'-MDA)	ND	ND	ND	Sufficient	0.002	0.002
3,3'-Dichlorobenzidine(3,3'-DCB)	ND	ND	ND	Sufficient	0.002	0.002
3,3'-Dimethoxybenzidine (3,3'-DMB)	ND	ND	ND	Sufficient	0.002	0.002
3,3-Dimethylbenzidine (3,3-DMB)	ND	ND	ND	Sufficient	0.002	0.002
4,4-Methylenedi-o-toluidine (4,4'-MDoT)	ND	ND	ND	Sufficient	0.002	0.002
2-Methoxy-5-Methylaniline (2-M-5-MA)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Methylene-bis-(2-chloro-aniline) (4,4'MB-2-CA)	ND	ND	ND	Sufficient	0.002	0.002
4,4-Diaminodiphenylether (4,4'-DPE)	ND	ND	ND	Sufficient	0.002	0.002
4,4'-Thiodianiline(4,4'-THOA)	ND	ND	ND	Sufficient	0.002	0.002

o-Toluidine (O-T)	ND	ND	ND	Sufficient	0.002	0.002
2,4-Toluenediamine (2,4-TDA)	ND	ND	ND	Sufficient	0.002	0.002
2,4,5-Trimethylaniline (2,4,5-TMA)	ND	ND	ND	Sufficient	0.002	0.002
o-Anisidine (o-ASD)	ND	ND	ND	Sufficient	0.002	0.002
4-Aminoazobenzene(4-AAB)	ND	ND	ND	Sufficient	0.002	0.002
m-Phenylenediamine (m-PDA)	ND	ND	ND	Sufficient	0.002	0.002
2,6-Dimethylaniline (2,6-DMA)	ND	ND	ND	Sufficient	0.002	--
Aniline (ANL)	ND	ND	ND	Sufficient	0.002	
p-Phenylenediamine (p-PDA)	ND	ND	ND	Sufficient	0.002	
2,4-Dimethylaniline (2,4-DMA)	ND	ND	ND	Sufficient	0.002	
2,6-Toluenediamine (2,6-TDA)	ND	ND	ND	Sufficient	0.002	
1,5-Diaminenaphthalene（1,5-DAN）	ND	ND	ND	Sufficient	0.002	
Specific migration of PAA (total 24-29)	ND	ND	ND	Sufficient	--	**0.010**
Conclusion	PASS					

Note:
°C = Degree Celsius
mg/kg = Milligrams per kg foodstuff
LT = Less than
ND = Not detected. Result value is less than reporting limit (RL).
^According to Regulation (EU) 2020/1245, it does not comply when the 2nd migration exceeds the level observed in the 1st migration, and the 3rd migration exceeds the level observed in the 2nd migration, even in case the migration limit is not exceeded in any of the three migration tests.

DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII as Amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)

Test Method: CPSC-CH-C1001-09.4
Test Instrument: Gas Chromatography with Mass Spectrometry

Specimen No.		1+2+6	---	---	Limit (% w/w)
Test Item	CAS No.	Result (% w/w)	Result (% w/w)	Result (% w/w)	
Dibutyl Phthalate (DBP)	84-74-2	ND	---	---	**0.1**
Benzyl Butyl Phthalate (BBP)	85-68-7	ND	---	---	**0.1**
Di-(2-Ethylhexyl) Phthalate (DEHP)	117-81-7	ND	---	---	**0.1**
Diisobutyl Phthalate (DIBP)	84-69-5	ND	---	---	**0.1**
Sum of DBP, BBP, DEHP, DIBP		ND	---	---	**0.1**
Di-n-Octyl Phthalate (DnOP)	117-84-0	ND	---	---	
Diisononyl Phthalate (DINP)	28553-12-0 68515-48-0	ND	---	---	
Diisodecyl Phthalate (DIDP)	26761-40-0 68515-49-1	ND	---	---	
Sum of DnOP, DINP, DIDP		ND	---	---	**0.1**
Conclusion		PASS	---	---	

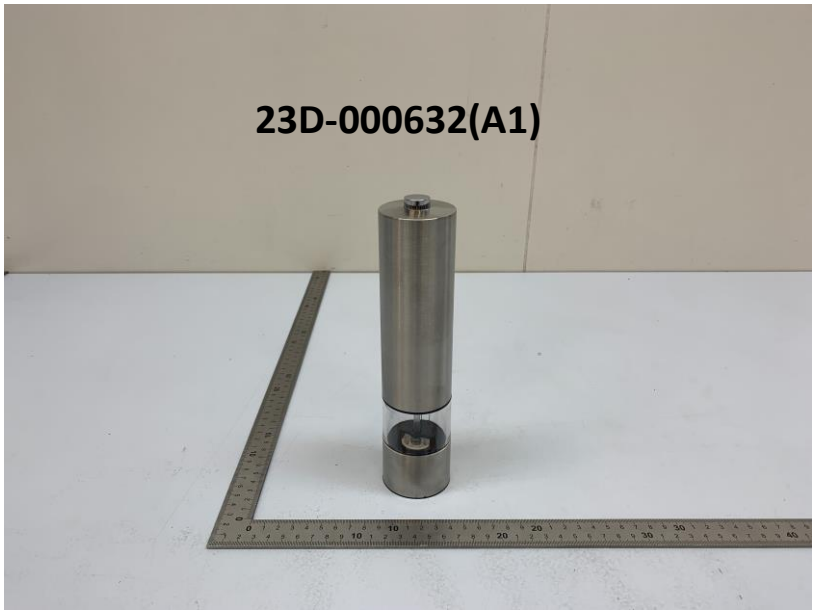
Note:
% w/w = Percent by weight
LT = Less than
ND = Not detected (Reporting Limit = 0.015 % w/w)
Composite results are based on specimen of least mass resulting in highest potential concentration.

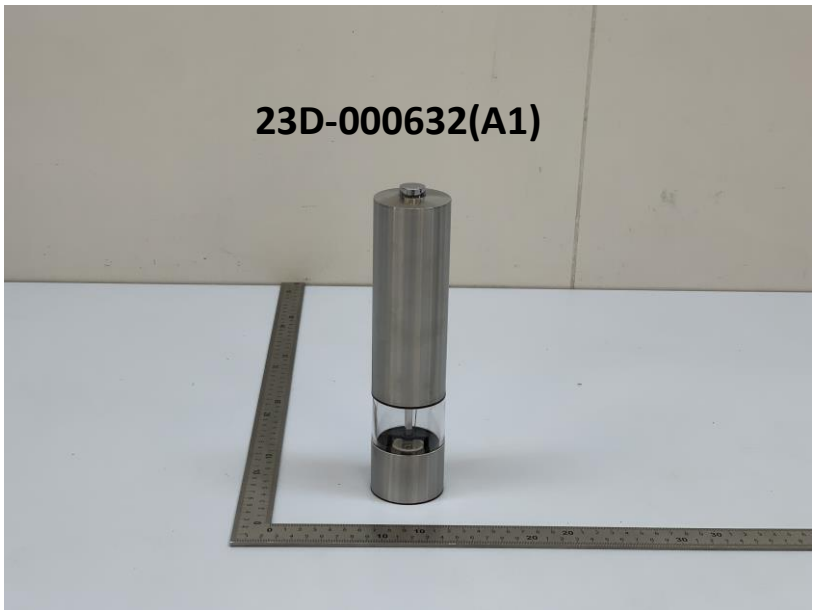
SPECIMEN DESCRIPTION:

Specimen No.	Specimen Description	Location
1	Translucent plastic(AS)	Bottle
2	Black plastic(ABS)	Bottom holder
3	Silvery metal(Aluminum)	Axis
4	Silvery metal(SS201)	Spring
5	Silvery metal (SS201)	Adjuster screw
6	White plastic(POM)	Fixed gear
7	White ceramic	Gear
8	Translucent plastic	Light
9	Silvery metal	Wire on bottle
10	Silvery metal	Screw on bottom
11	Silvery metal	Screw on translucent bottle
12	Silvery metal	Feet of light
13	Golden metal	Tube connecter of wire and feet
14	Silvery metal	Body shell
15	Silvery plating	On top button
16	Beige plastic	Top button
17	Translucent plastic	Fixed battery
18	Silvery metal	Spring on battery box
19	Golden metal	Rivet on battery box
20	Coppery metal	Piece in battery box
21	Light golden metal	Piece in battery box
22	Golden metal	Wire
23	Silvery solder	On rivet of battery box
24	Golden metal	Rivet on button
25	Blue plastic	Wire jacket
26	Black plastic	Battery box
27	Silvery metal	Fixed gear
28	Silvery metal	Axis of gear

29	Silvery metal	Wire connect of motor
30	White plastic	Gear
31	Brown plastic	Gear
32	Blue plastic	Gear
33	Beige plastic	Gear
34	Beige plastic	Motor top lid
35	Silvery metal	Motor shell
36	Grey magnet	Round in motor
37	Grey metal	U shake in motor
38	Silvery metal	On motor lid
39	Golden metal	Om motor lid
40	Golden metal	Ring on motor lid
41	Silvery metal	Motor axis
42	Dull golden metal	Big ring on axis
43	Golden metal	Small ring on axis
44	Golden metal	Coil
45	Silvery metal	Steel rotor
46	Green PCB	On axis
47	White plastic	Rotor
48	Brown material	On PCB
49	Silvery solder	On PCB
50	Beige plastic	On PCB

SAMPLE PHOTO:





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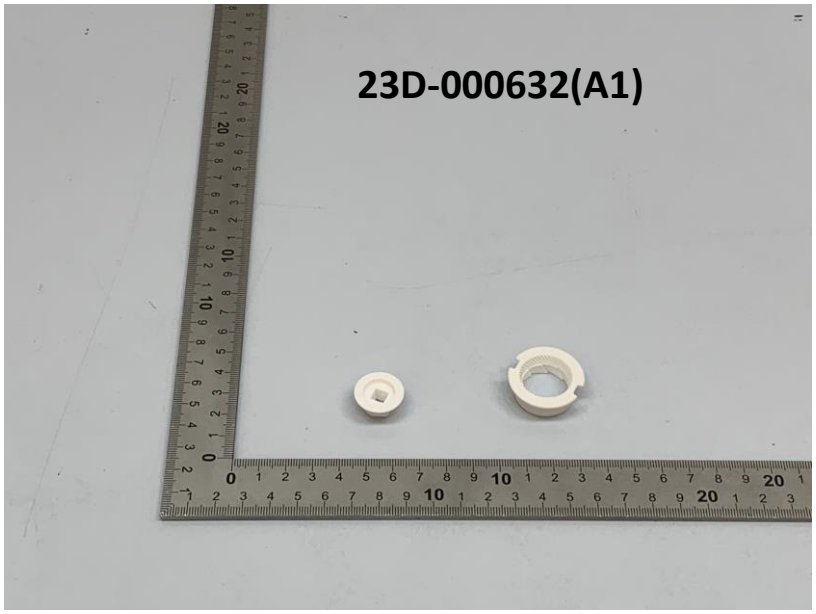
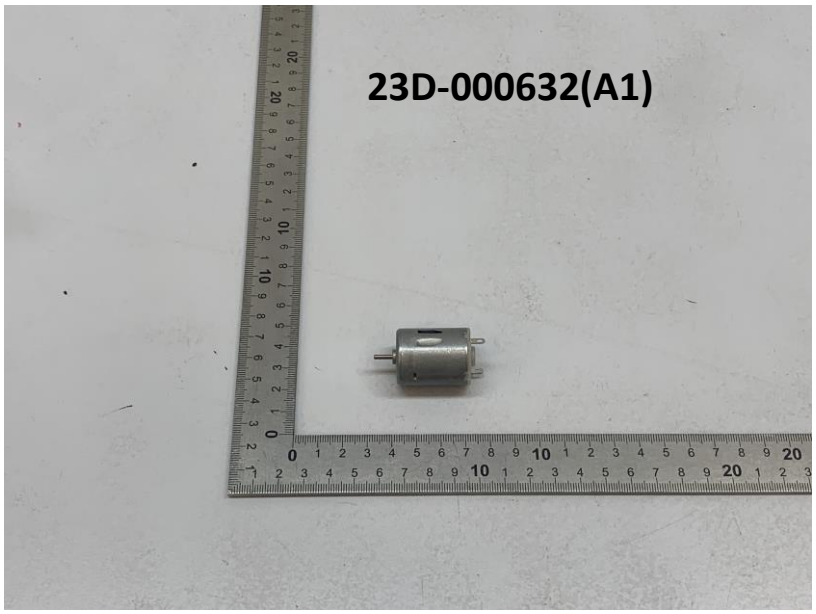
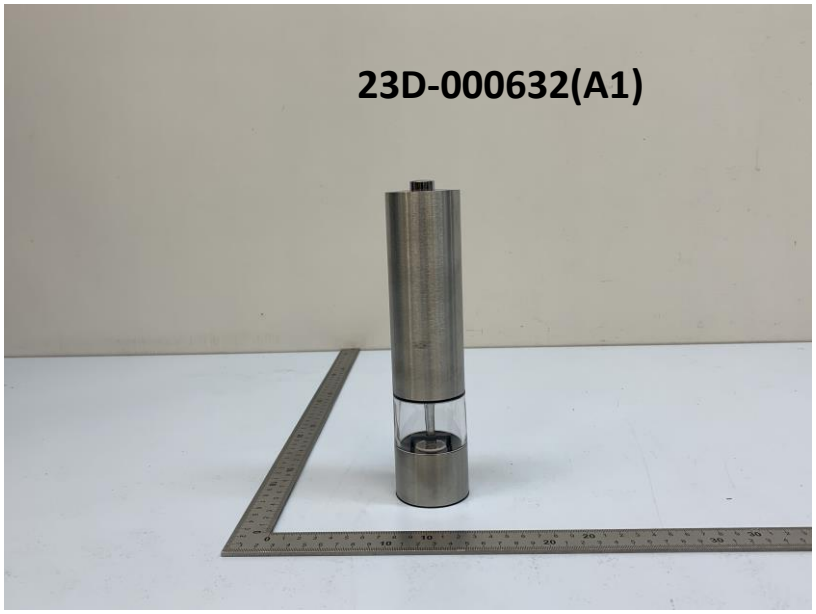




SAMPLE PHOTO:



-End Report-

Appendix Ⅰ

The test was performed by EMTEK (Dongguan) Co., Ltd.
Test Report No. EDG2307180184E00301C.
Test Report No. EDG2307180184E00301R.

Certificate of Conformity

NO.: EDG2307180184E00301C

The following products have been tested by us with the listed standards and found in conformity with the council EMC directive 2014/30/EU. This is to certify that the specimen is in conformity with the assessment requirement mentioned follow. This certificate does not imply assessment to the production of the product.

Applicant	:	QIMA Hansecontrol Testing service (Dongguan) Co. Ltd.
Address	:	Room 101, Building 1, Changsheng Rd No. 6, Changkeng, Liaobu Town, Dongguan City 523400 Guangdong P.R.China
Trade Mark	:	N/A
EUT	:	Electric pepper mill
M/N	:	/
Test Standards	:	EN IEC 55014-1: 2021 EN IEC 55014-2: 2021
Version	:	Ver.1.0

Sam Lv(Manager)

July 21, 2023

The certificate is based on a single evaluation of five samples of above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.

EMTEK (Dongguan) Co., Ltd.
Add: -1&2/F .,Building 2,Zone A,Zhongda Marine Biotechnology Research and Development Base ,No.9，Xincheng Avenue,Songshanhu High-technology Industrial Development Zone,Dongguan, Guangdong,China Http://www.emtek.com.cn E-mail: project@emtek.com.cn

EMTEK
Access to the World

TEST REPORT

Product Name : Electric pepper mill
Model Number : /

Prepared for	:	QIMA Hansecontrol Testing service (Dongguan) Co. Ltd.
Address	:	Room 101, Building 1, Changsheng Rd No. 6, Changkeng, Liaobu Town, Dongguan City 523400 Guangdong P.R.China
Prepared by	:	EMTEK(DONGGUAN) CO., LTD.
Address	:	-1&2/F.,Buiding 2,Zone A,Zhongda Marine Biotechnology Research and Development Base,N.9,Xincheng Avenue,Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China Tel : +86-0769-22807078 Fax: +86-0769-22807079
Report Number	:	EDG2307180184E00301R
Date(s) of Tests	:	July 18, 2023 to July 20, 2023
Date of issue	:	July 21, 2023

TABLE OF CONTENTS

TEST REPORT VERIFICATION

Applicant	:	QIMA Hansecontrol Testing service (Dongguan) Co. Ltd.
EUT	:	Electric pepper mill
Model No.	:	/
Rating	:	DC 6V from battery (AA*4)

Measurement Procedure Used:

EN IEC 55014-1: 2021
EN IEC 55014-2: 2021

The device described above is tested by EMTEK(DONGGUAN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK(DONGGUAN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the EN IEC 55014-1, EN IEC 55014-2 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK(DONGGUAN) CO., LTD.

Date of Test : July 18, 2023 to July 20, 2023

Prepared by : Galen Xiao

Galen Xiao / Editor

Reviewer : Tim Dong

Tim Dong / Supervisor

Approved & Authorized Signer :

Sam Lv / Manager

EMTEK (DONGGUAN) CO.,LTD. TESTING

Modified Information

Version	Summary	Revision Date	Report No.
	Original Report	/	EDG2307180184E00301R

1. DESCRIPTION OF STANDARDS AND RESULTS

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted Disturbances at the AC mains port	EN IEC 55014-1: 2021	Table 5	N/A
Discontinuous Disturbance (Click)	EN IEC 55014-1: 2021	Clause 4.4	N/A
Disturbance Power (30 MHz to 300 MHz)	EN IEC 55014-1: 2021	Table 7,Table 8	N/A
Radiated Emission (30 MHz to 1000 MHz)	EN IEC 55014-1: 2021	Table 9	Pass
Radiated Emission (1 GHz to 6 GHz)	EN IEC 55014-1: 2021	Table 11	N/A
IMMUNITY			
Description of Test Item	Basic Standard	Performance Criteria	Results
Electrostatic Discharge (ESD)	IEC 61000-4-2:2008	B	N/A
Radio frequency electromagnetic fields	IEC 61000-4-3:2020	A	N/A
Fast Transients (EFT)	IEC 61000-4-4:2012	B	N/A
Surges	IEC 61000-4-5: 2014+AMD1:2017	B	N/A
Injected Currents	IEC 61000-4-6:2013/COR1:2015	A	N/A
Voltage Dips, 100%	IEC 61000-4-11: 2020	C	N/A
Voltage Dips, 60%		C	N/A
Voltage Dips, 30%		C	N/A
Note: N/A is an abbreviation for Not Applicable. Category I equipment is deemed to comply with the immunity requirements of this document without testing.			

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	Electric pepper mill
Model Number	:	/
Trade Mark	:	N/A
Power Supply For Test	:	DC 6V
Operate Mode	:	ON
EUT Category	:	☑ Category I ☐ Category II ☐ Category III ☐ Category IV ☐ Category V
Highest clock frequency	:	☑ F≤15MHz, ☐ 15MHz＜F≤200MHz, ☐ F>200MHz
Applicant	:	QIMA Hansecontrol Testing service (Dongguan) Co. Ltd.
Address	:	Room 101, Building 1, Changsheng Rd No. 6, Changkeng, Liaobu Town, Dongguan City 523400 Guangdong P.R.China
Date of sample received	:	July 18, 2023
Date of Test	:	July 18, 2023 to July 20, 2023

2.2. Description of Test Facility

Site Description

EMC Lab : Accredited by CNAS, 2020.08.27
The certificate is valid until 2024.07.05
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2018
The Certificate Registration Number is L3150

Name of Firm : EMTEK(DONGGUAN) CO., LTD.

Site Location : -1&2/F.,Building 2, Zone A, Zhongda Marine Biotechnology Reserch and Development Base, No.9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

2.3. Description of Support Device

The EUT was tested together with the following accessories:

Kind of Equipment	Manufacturer	Type	SN
/	/	/	/

2.4. Measurement Uncertainty

Test Item		Uncertainty
Conducted Emission	:	2.08dB(9k~150kHz Conduction 1#) 2.42dB(150k-30MHz Conduction 1#)
Radiated Emission (3m Chamber)	:	3.32dB (30M~1GHz Polarize: H) 3.34dB (30M~1GHz Polarize: V)
Uncertainty for Flicker test	:	0.07%
Uncertainty for Harmonic test	:	1.8%
Uncertainty for test site temperature and humidity	:	0.6℃ 4%

3. MEASURING DEVICES AND TEST EQUIPMENT

3.1. For Radiated Emission

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde&Schwarz	ESCI	101415	2023/5/11	1 Year
2.	Bi-log Hybrid Antenna	Schwarzbeck	VULB9163	141	2023/5/15	1 Year
3.	Pre-Amplifie	HP	8447F	OPTH64	2023/5/11	1 Year
4.	Signal Analyzer	R&S	FSV30	103039	2023/5/11	1 Year
5.	Horn Antenna	Schwarzbeck	BBHA9120D	1272	2023/5/15	1 Year
6.	Pre-Amplifie	LUNAR EM	PM1-18-40	J10100000081	2023/5/11	1 Year

4. RADIATED EMISSION (UP TO 1GHZ)

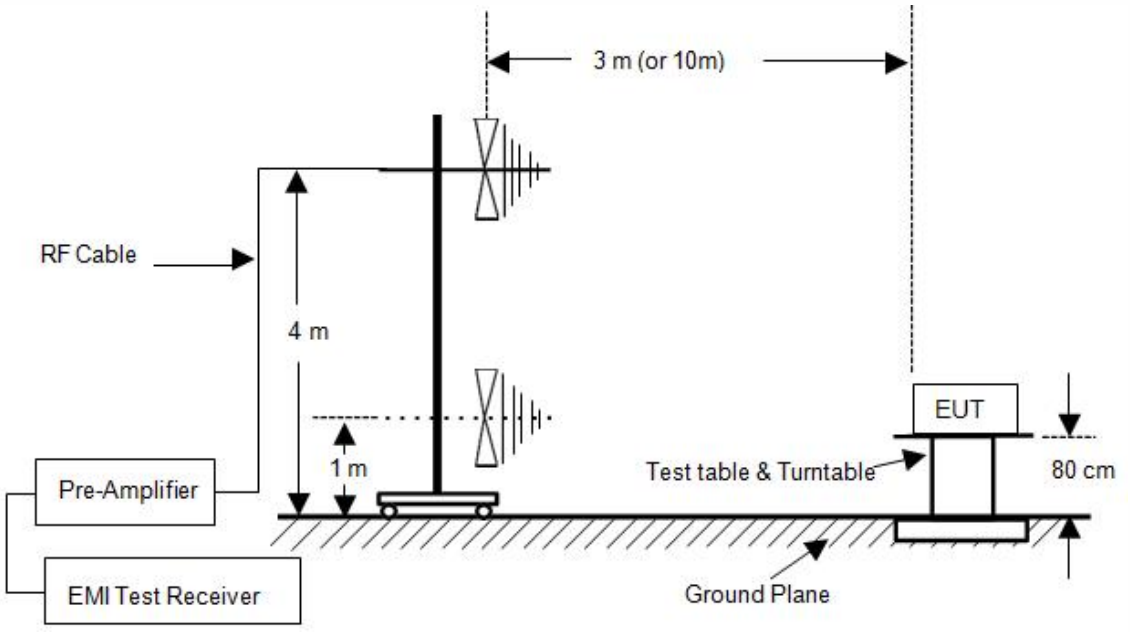
4.1. Block Diagram of Test

4.1.1. Block diagram of connection between the EUT and simulators

EUT

(EUT: Electric pepper mill)

4.1.2. Block diagram of test setup (In chamber)



(EUT: Electric pepper mill)

4.2. Measurement Standard and limit

4.2.1. Test Standard

EN IEC 55014-1: 2021

4.2.2. Test Limits

All emanations from a device or system shall not exceed the level of field strengths specified below:

Table 9

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dBmV/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.
(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

4.3. EUT Configuration on Test

The EN IEC 55014 regulations test method must be used to find the maximum emission during Radiated Emission measurement.

EUT	:	Electric pepper mill
Model Number	:	/

4.4. Operating Condition of EUT

Step 1: Turn on the power.

Step 2: Let the EUT work in test mode (ON) and measure it.

4.5. Test Procedure

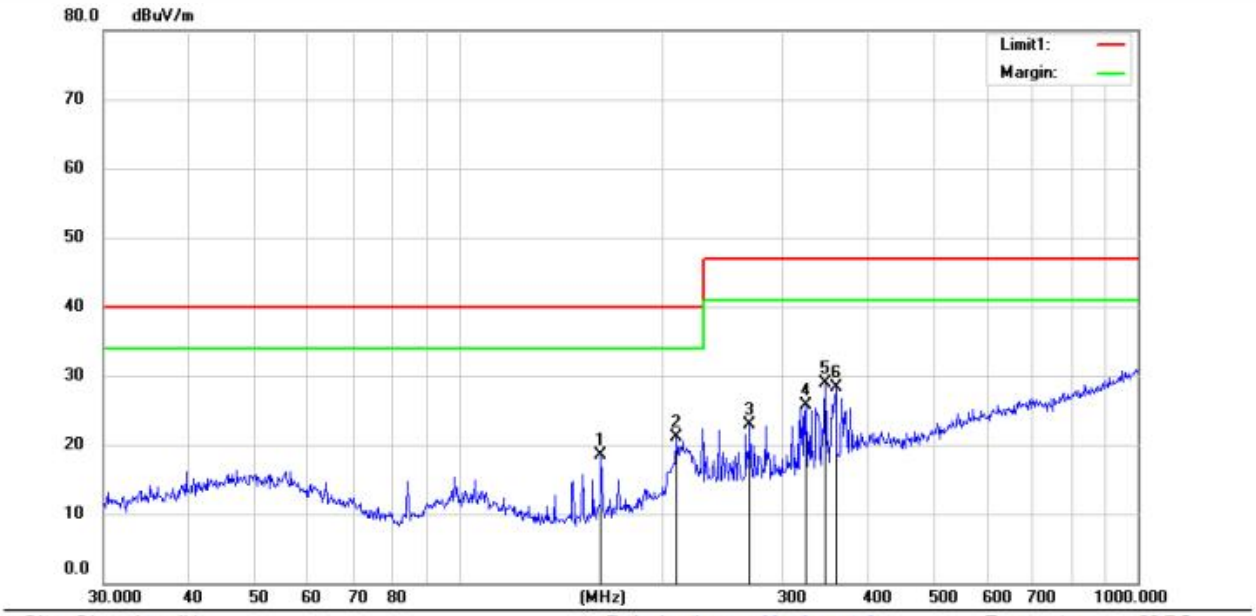
The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meter to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarizations of the antenna are set on test.

The bandwidth of the Receiver (ESCI) is set at 120kHz.

4.6. Test Results

Pass.

The test data are attach on follow page.



Site Chamber #1 Polarization: *Horizontal* Temperature: 23.7 C

Limit: EN IEC 55014-1_3m(RE) Power: DC 6V Humidity: 66 %

Mode: ON

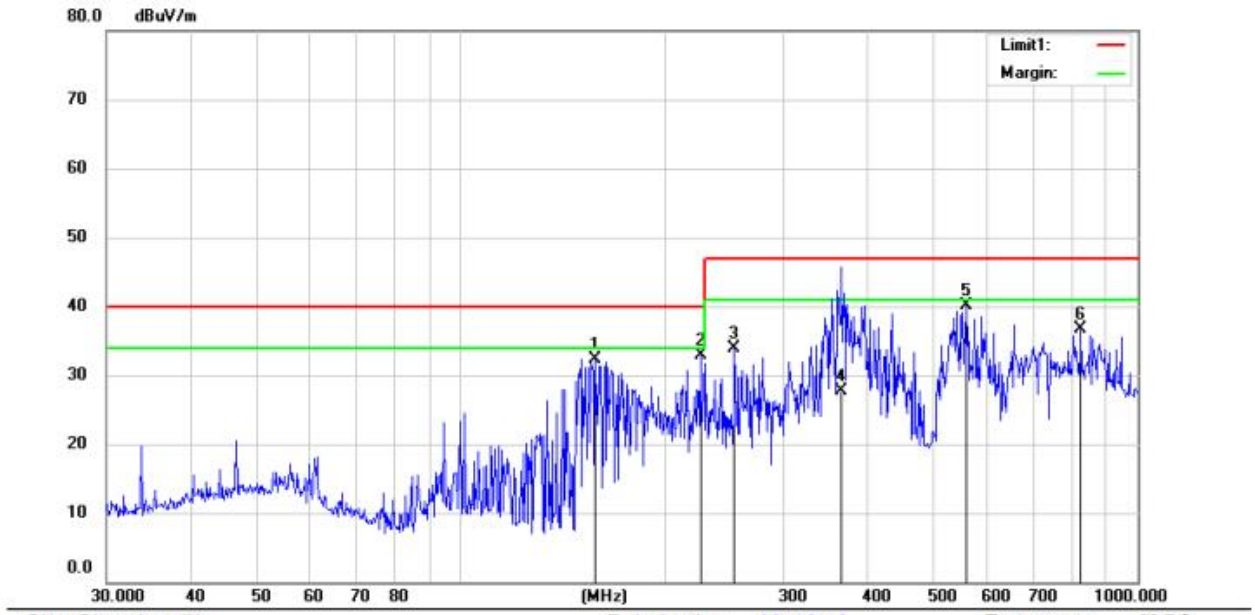
Note:

No.	Mk.	Freq.	Reading Level	Ant. Factor	Pre Amp Gain	Cable loss	Measure-ment	Limit	Over		HI	Degree	
		MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	Detector	cm	deg.	Comment
1		162.0414	38.59	8.96	30.56	1.5	18.49	40.00	-21.51	QP			
2		209.3130	37.74	11.86	30.31	1.78	21.07	40.00	-18.93	QP			
3		268.4853	37.42	13.33	30	2.14	22.89	47.00	-24.11	QP			
4		324.4561	38.78	14.44	29.83	2.26	25.65	47.00	-21.35	QP			
5	*	346.8092	41.50	14.93	29.83	2.36	28.96	47.00	-18.04	QP			
6		359.1860	40.30	15.24	29.82	2.61	28.33	47.00	-18.67	QP			

*:Maximum data x:Over limit !:over margin Operator: Ccyf

Remark:

1. Measurement (dB μ V/m) = Antenna Factor(dB) -Amp Factor(dB) +Cable Loss(dB) + Reading(dB μ V/m)
2. Over (dB) = Measurement (dB μ V/m) - Limit (dB μ V/m)



Site Chamber #1 Polarization: *Vertical* Temperature: 23.7 C

Limit: EN IEC 55014-1_3m(RE) Power: DC 6V Humidity: 66 %

Mode: ON

Note:

No.	Mk.	Freq.	Reading Level	Ant. Factor	Pre Amp Gain	Cable loss	Measure-ment	Limit	Over		HI	Degree	
		MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	Detector	cm	deg.	Comment
1		158.1123	52.74	8.76	30.58	1.48	32.40	40.00	-7.60	QP			
2		226.0994	48.97	12.33	30.22	1.92	33.00	40.00	-7.00	QP			
3		253.8366	48.73	13.07	30.07	2.13	33.86	47.00	-13.14	QP			
4		365.5391	39.34	15.4	29.82	2.78	27.70	47.00	-19.30	QP			
5	*	558.7301	47.81	19.09	29.9	3.11	40.11	47.00	-6.89	QP			
6		824.5968	40.96	22	30.14	3.85	36.67	47.00	-10.33	QP			

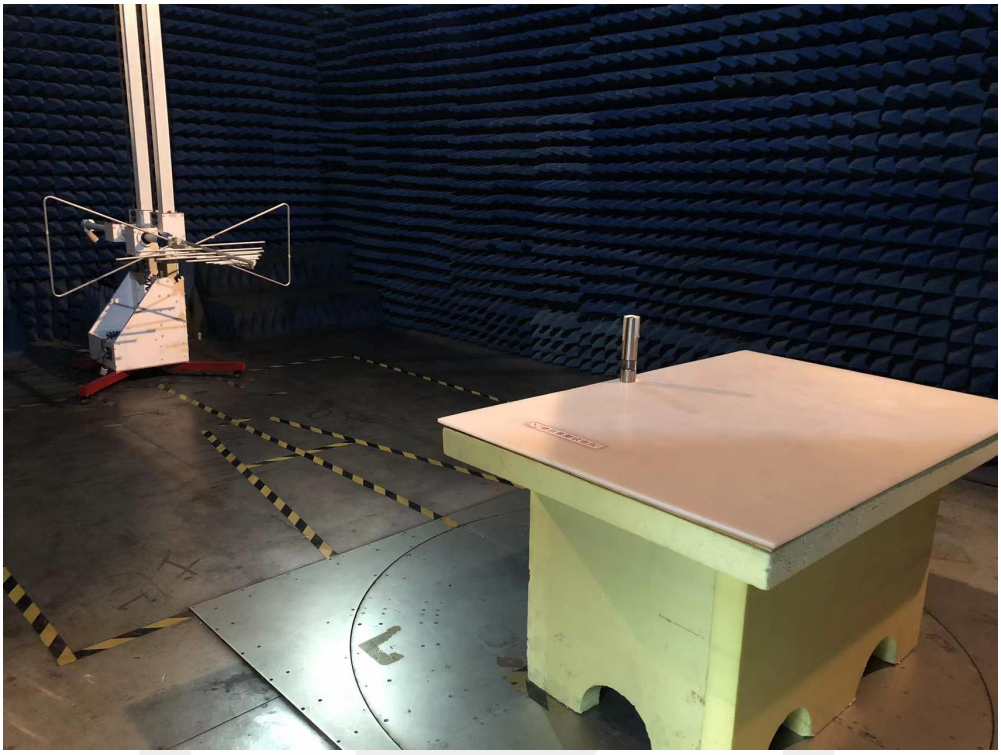
*:Maximum data x:Over limit !:over margin Operator: Ccyf

Remark:

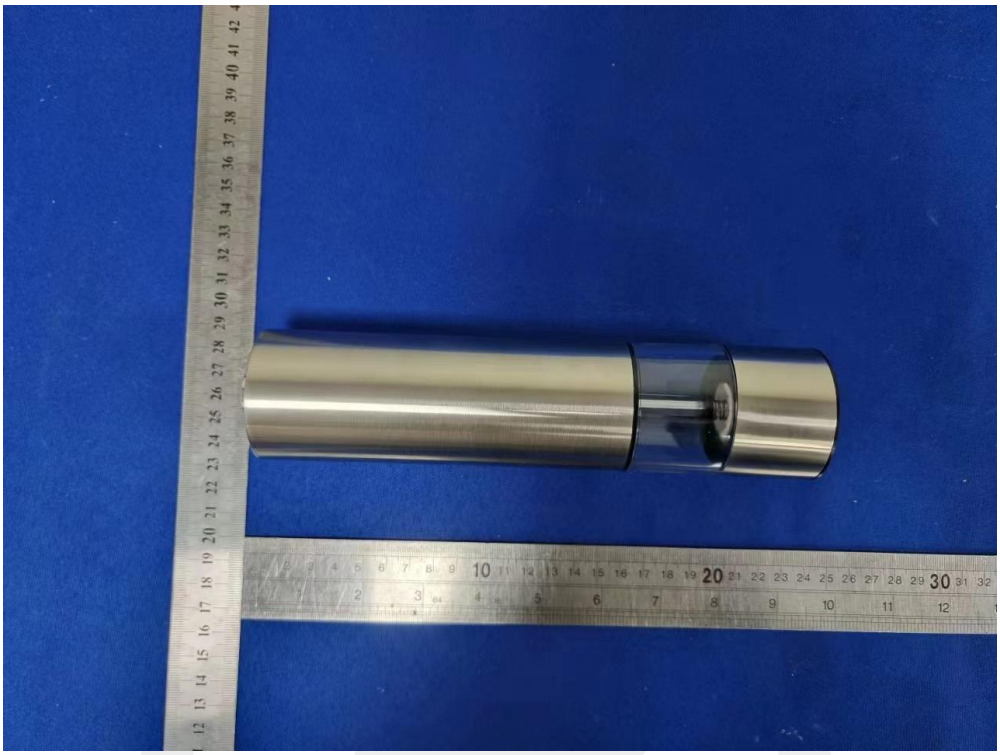
1. Measurement (dB μ V/m) = Antenna Factor(dB) -Amp Factor(dB) +Cable Loss(dB) + Reading(dB μ V/m)
2. Over (dB) = Measurement (dB μ V/m) - Limit (dB μ V/m)

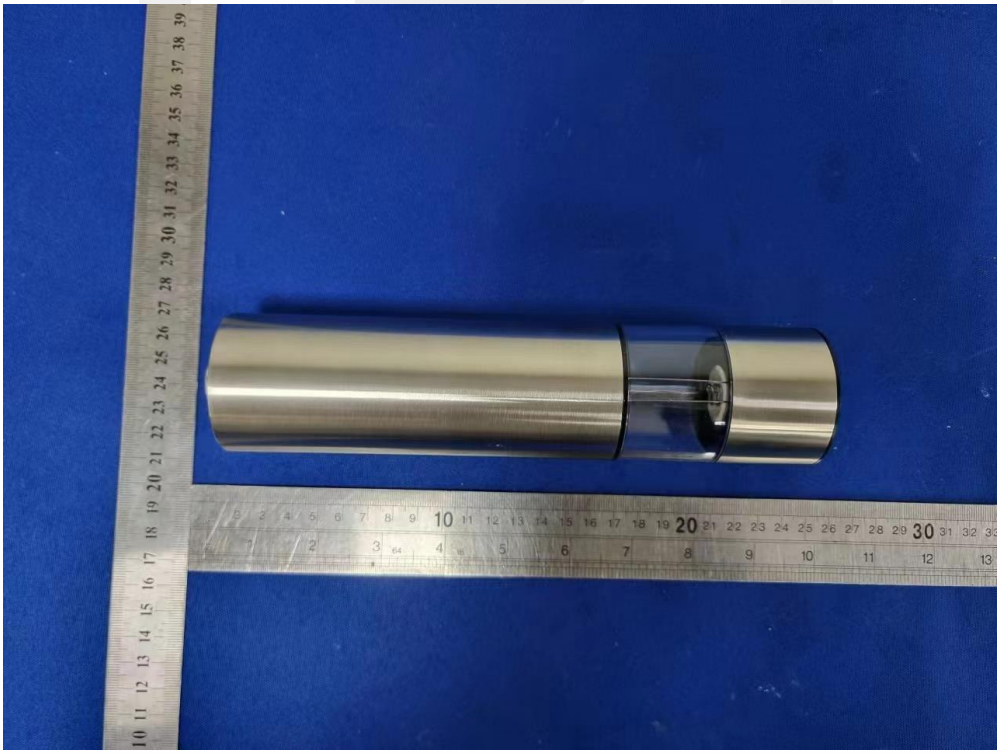
5. PHOTOGRAPH

5.1. Photo of Radiated Emission

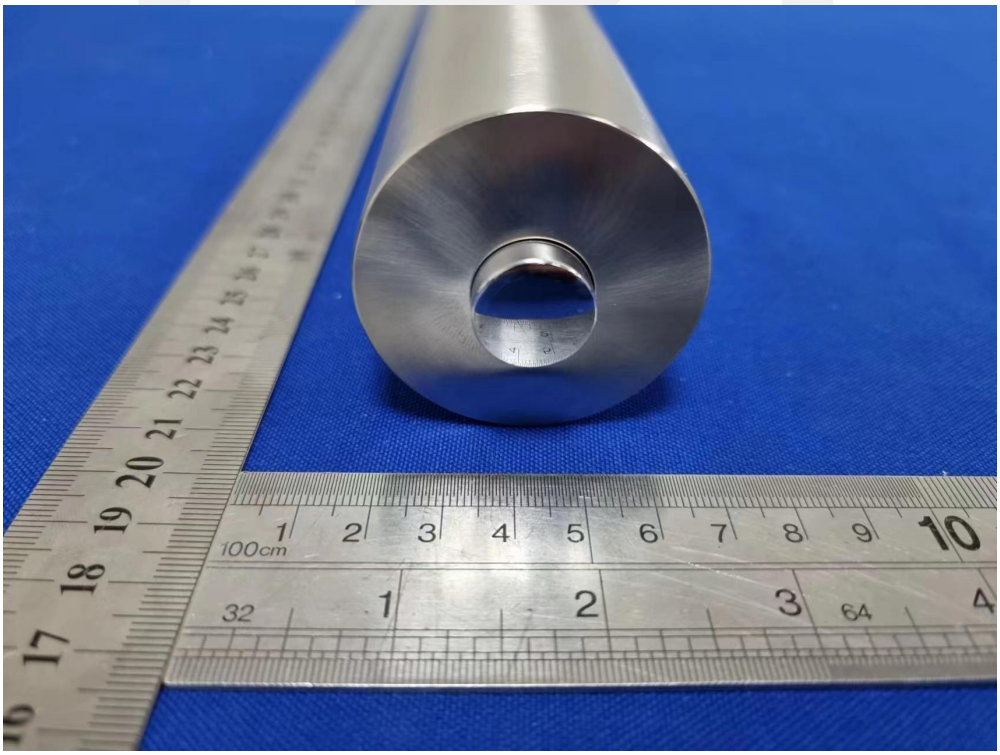


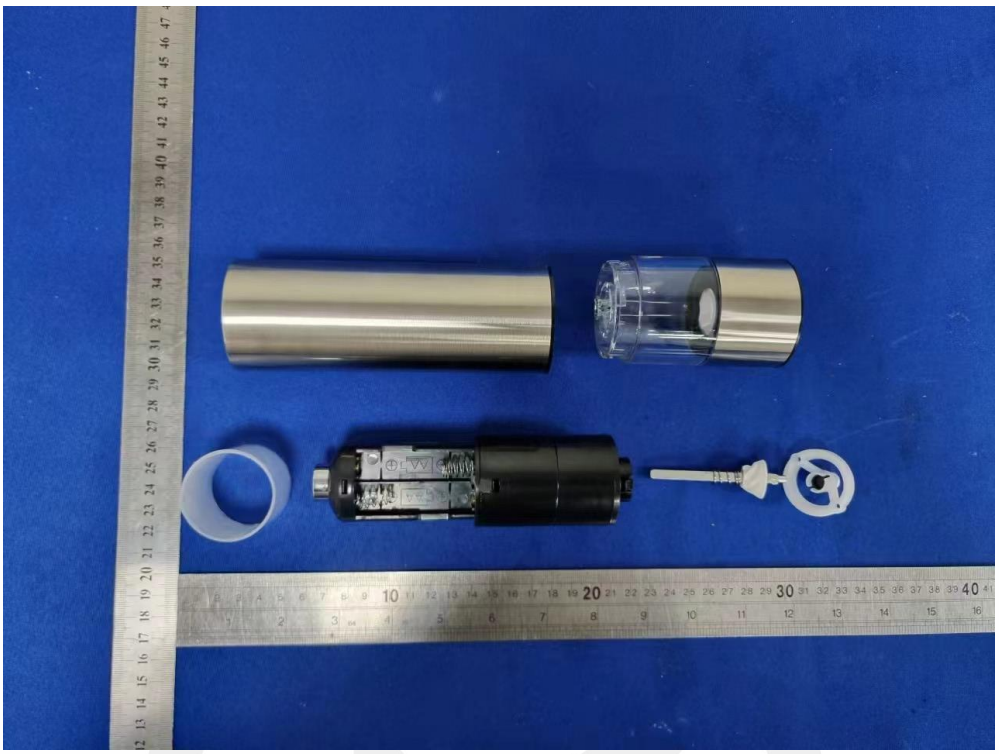
APPENDIX
(Photos of EUT)

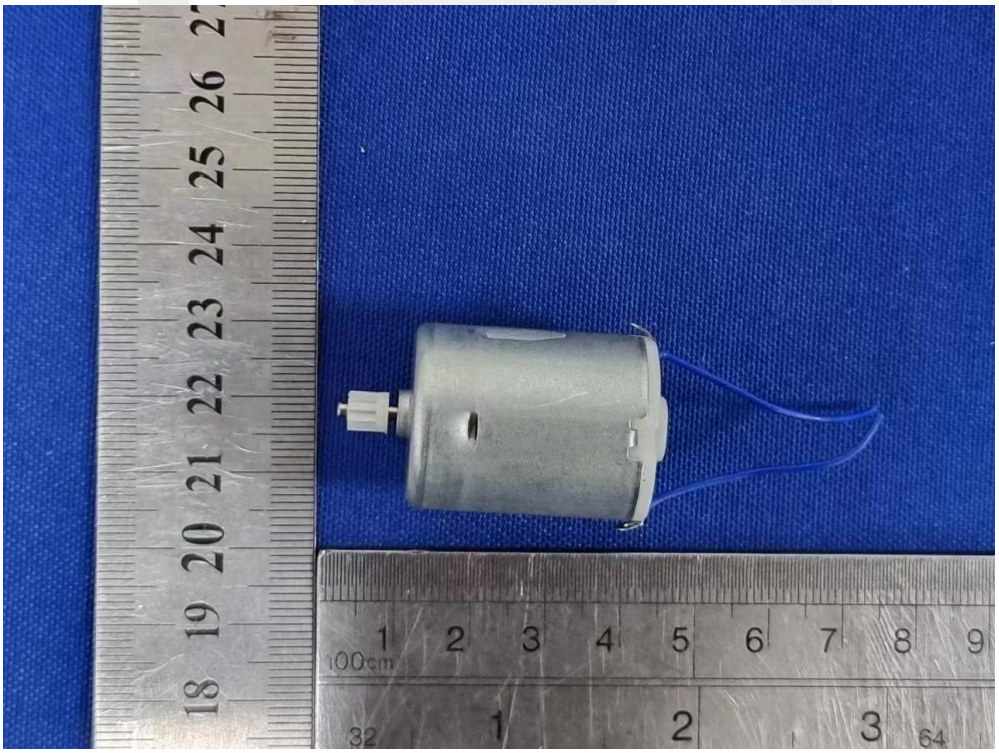





100cm
32
64


100cm
32
64





------The end---

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