

# TEST REPORT

**Applicant** : Publik d.o.o.  
**Address** : Vladike Nikolaja 469, 14000 Valjevo, Serbia

## Report on the submitted sample said to be

**Sample name** : Bottle  
**Model** : PRIMAVERA (41.120.XX), TEA (43.013.XX), GOLD (43.011.XX), Gold Maxi (43.012.XX), CAFE (43.014.XX), JUICE (item code: 41.119.XX), H2O TRITAN (item code: 41.118.XX), CAMPUS MAXI (41.107.XX), CAMPUS SUBLI (41.108.XX), FLUID LUX (41.113.XX), ELEMENT (41.116.XX), ELEMENT SMART (41.117.XX), CALDO (41.114.XX) where XX means color range, coded from 00-99

**Manufacture** : Asia Gateway Overseas Limited  
**Address** : 21F.,New World Tower 1, 18 Queen's Road, Central, Hong Kong  
**Sample received date** : Jul. 08, 2021  
**Testing period** : Jul. 08, 2021- Jul. 13, 2021  
**Test Result(s)** Please refer to the next pages

Signed for and on behalf of

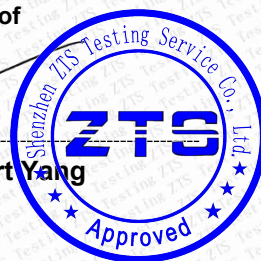
*Bert Yang*

Lab Manager : Bert Yang

Jul. 13, 2021

Date of issue

# AP



Test Sample	Test Requested:	Conclusion
001	COMMISSION REGULATION (EU) No.10/2011 and (EC) No 1935/2004 on metals and alloys used in food contact materials and articles. - Specific Release of Heavy Metals	Pass
002, 007	COMMISSION REGULATION (EU)No.10/2011 on plastic materials and articles intended to come into contact with food. - Overall migration - Soluble heavy metal - Primary aromatic amines - Specific migration of Bisphenol A (BPA) - Bisphenol A (BPA) Content - Specific migration of Formaldehyde - Specific migration of Melamine - Specific migration of Caprolactam	Pass
003	The European Council Directive 84/500/EEC and its amendment 2005/31/EC– Ceramic Articles intended to Come into Contact with Foodstuffs - migration Lead and Cadmium	Pass
004	CM/Res(2013)9 on metals and alloys used in food contact materials and articles. - Specific Release of Heavy Metals	Pass
005	In accordance with Council of Europe Resolution AP(2002)1 relating to wood intended to come into contact with foodstuffs. - Sensorial examination odour and taste test - Extractable Heavy Metals - Pentachlorophenol (PCP) Content. - Preserving Effect. - Fluorescent whitening agents - Specific migration of benzophenone. - Specific migration of 4-methylbenzophenone. - Extractable formaldehyde. - Bisphenol A (BPA) Content	Pass
006	Framework Resolution ResAP(2004)4 on rubber products intended to come into contact with foodstuffs. - Overall migration	Pass



### Test Part Description

Specimen No.	Description.
001	Silver Stainless steel
002	plastic
003	glass
004	Aluminum alloy
005	Bamboo cover
006	The silicone ring
007	TRITAN

**Test Result:**

Specific Release of Heavy Metals

Method: Preparation in Artificial tap water / 0.5% Citric acid at xx°C for xx hours, analyzed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES)/ Inductively Coupled Plasma Mass Spectrometer (ICP-MS).

Test Condition: 100°C 4Hour

Elements	SRL (mg/kg)		Result (mg/kg)		Conclusion
	1 <sup>st</sup> + 2 <sup>nd</sup>	3 <sup>rd</sup>	001		
			1 <sup>st</sup> + 2 <sup>nd</sup>	3 <sup>rd</sup>	
Tin(Sn)	700	100	N.D.	N.D.	Pass
Copper(Cu)	28	4	N.D.	N.D.	
Iron(Fe)	280	40	N.D.	N.D.	
Manganese(Mn)	12.6	1.8	N.D.	N.D.	
Zinc(Zn)	35	5	N.D.	N.D.	
Aluminum(Al)	35	5	N.D.	N.D.	
Barium(Ba)	8.4	1.2	N.D.	N.D.	
Titanium(Ti)	--	--	N.D.	N.D.	
Magnesium(Mg)	--	--	N.D.	N.D.	
Chromium(Cr)	1.750	0.250	N.D.	N.D.	
Nickel(Ni)	0.98	0.14	N.D.	N.D.	
Lithium(Li)	0.336	0.048	N.D.	N.D.	
Beryllium(Be)	0.07	0.01	N.D.	N.D.	
Vanadium(V)	0.07	0.01	N.D.	N.D.	
Cobalt(Co)	0.14	0.02	N.D.	N.D.	
Molybdenum(Mo)	0.84	0.12	N.D.	N.D.	
Silver(Ag)	0.56	0.08	N.D.	N.D.	
Antimony(Sb)	0.28	0.04	N.D.	N.D.	
Lead(Pb)	0.07	0.01	N.D.	N.D.	
Arsenic(As)	0.014	0.002	N.D.	N.D.	
Cadmium(Cd)	0.035	0.005	N.D.	N.D.	
Mercury(Hg)	0.021	0.003	N.D.	N.D.	
Thallium(Tl)	0.0007	0.0001	N.D.	N.D.	

**Note:**

1. "--" = No requirement.
2. mg/kg = milligrams of the constituents released per kilogram of foodstuff.
3. SRL = Specific Release Limit.

**1. Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments–Overall migration**

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; or EN 1186-3:2002 aqueous food simulants by total immersion method;.

Test Condition: 180°C 2Hour

Test Item(s).	Limit. (mg/dm <sup>2</sup> ) (mg/kg)	Result			Conclusion
		002	006	007	
Distilled water	10/60	N.D.	N.D.	N.D.	Pass
10% Ethanol(v/v)	10/60	N.D.	N.D.	N.D.	Pass
3% Acetic acid(w/v)	10/60	N.D.	N.D.	N.D.	Pass
50% Ethanol(v/v)	10/60	N.D.	N.D.	N.D.	Pass
Vegetable oil	10/60	N.D.	N.D.	N.D.	Pass

**Note:** 1. mg/dm<sup>2</sup> = milligram per square decimetre of surface area of material or article.

2. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

3. The requirement in accordance with the Commission Regulation (EU) No 10/2011.

4. The requirement in accordance with the Resolution AP (2004)1.

5. The requirement in accordance with the Resolution AP (2004)4.

6. The requirement in accordance with the Resolution AP (2004)5.

**2. Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments- SpecificSoluble heavy metal**

Test Method: Inductively coupled plasma atomic emission spectrometry (ICP-AES) was used for analysis

Test Condition: 180°C 2Hour

Elements	Ba	Co	Cu	Fe	Li	Mn	Zn	Conclusion
Limit (mg/kg)	1	0.05	5	48	0.6	0.6	25	
Material No.	Result (mg/kg)							Conclusion
002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	
007	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Pass

**Note:** 1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

2. The requirement in accordance with the Commission Regulation (EU) No 10/2011.

### 3. Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments -Specific migration of Bisphenol A (BPA)

Test Method: With reference to CEN/TS 13130-13:2005, analyzed by High Performance Liquid Chromatograph (HPLC-DAD).

Test Condition: 180°C 2Hour

Test Condition	Limit(mg/kg)	Result(mg/kg)		Conclusion
		002	007	
3% Acetic acid(w/v) 180°C,2Hour	0.6	<0.1	<0.1	PASS

- Note:**
1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.
  2. N.D. = Not Detected (< RL).
  3. RL (Reporting Limit) = 0.1 mg/kg.

### 4. Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments -Bisphenol A (BPA) Content

Method: Solvent extraction, analyzed by High Performance Liquid Chromatograph (HPLC-DAD).

Limit(mg/kg)	Result(mg/kg)		Conclusion
	002	007	
N.D.	N.D.	N.D.	PASS

- Note:**
1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.
  2. N.D. = Not Detected (< RL).
  3. RL (Reporting Limit) = 0.1 mg/kg.

### 5. Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments - Specific migration of Formaldehyde

Method: With reference to CEN/TS 13130-23:2005, analyzed by Ultraviolet visible Spectroscopy (UV-Vis).

Item	Unit	Result		Limit	Conclusion
		002	007		
3% Acetic acid(w/v)	mg/kg	N.D.	N.D.	15	Pass

- Note:**
1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.
  2. The requirement in accordance with the Commission Regulation (EU) No 10/2011.

**6. Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments- Primary aromatic amines**

Method: With reference to EN 13130-1:2004, was analyzed by Ultraviolet-visible spectrometer (UV-Vis).

Test Method: Inductively coupled plasma atomic emission spectrometry (ICP-AES) was used for analysis

Test Condition:	Unit	Result		Limit	Conclusion
		002	007		
3% Acetic acid(w/v) 180°C,2Hour	mg/kg	N.D.	N.D.	0.01	Pass

**Note:** 1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

2. The requirement in accordance with the Commission Regulation (EU) No 10/2011.

**Migration of Lead and Cadmium**

Method: With reference to 84/500/EEC ANNEX II, analyzed by Atomic Absorption Spectrometer (AAS) / Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES).

	Leachable Lead	Leachable Cadmium
	Result (mg/L)	Result (mg/L)
	003 (mg/L)	003 (mg/L)
1	<0.1	<0.02
2	<0.1	<0.02
3	<0.1	<0.02
4	<0.1	<0.02
Limit	4.0	0.3

**Note:** 1. Volume of 4% Acetic acid used xxx mL.

2. mg/dm<sup>2</sup> = milligram per square decimetre of surface area of material or article.

3. mg/L = milligram per liter.

4. Permissible limits for articles



## Specific Release of Heavy Metals

Method: Preparation in Artificial tap water / 0.5% Citric acid at xx°C for xx hours, analyzed by Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES)/ Inductively Coupled Plasma Mass Spectrometer (ICP-MS).

Test Condition: 100°C 4Hour

Elements	SRL (mg/kg)		Result (mg/kg)		Conclusion
	1 <sup>st</sup> + 2 <sup>nd</sup>	3 <sup>rd</sup>	004		
			1 <sup>st</sup> + 2 <sup>nd</sup>	3 <sup>rd</sup>	
Tin(Sn)	700	100	N.D.	N.D.	Pass
Copper(Cu)	28	4	N.D.	N.D.	
Iron(Fe)	280	40	N.D.	N.D.	
Manganese(Mn)	12.6	1.8	N.D.	N.D.	
Zinc(Zn)	35	5	N.D.	N.D.	
Aluminum(Al)	35	5	N.D.	N.D.	
Barium(Ba)	8.4	1.2	N.D.	N.D.	
Titanium(Ti)	--	--	N.D.	N.D.	
Magnesium(Mg)	--	--	N.D.	N.D.	
Chromium(Cr)	1.750	0.250	N.D.	N.D.	
Nickel(Ni)	0.98	0.14	N.D.	N.D.	
Lithium(Li)	0.336	0.048	N.D.	N.D.	
Beryllium(Be)	0.07	0.01	N.D.	N.D.	
Vanadium(V)	0.07	0.01	N.D.	N.D.	
Cobalt(Co)	0.14	0.02	N.D.	N.D.	
Molybdenum(Mo)	0.84	0.12	N.D.	N.D.	
Silver(Ag)	0.56	0.08	N.D.	N.D.	
Antimony(Sb)	0.28	0.04	N.D.	N.D.	
Lead(Pb)	0.07	0.01	N.D.	N.D.	
Arsenic(As)	0.014	0.002	N.D.	N.D.	
Cadmium(Cd)	0.035	0.005	N.D.	N.D.	
Mercury(Hg)	0.021	0.003	N.D.	N.D.	
Thallium(Tl)	0.0007	0.0001	N.D.	N.D.	

## Note:

1. "--" = No requirement.
2. mg/kg = milligrams of the constituents released per kilogram of foodstuff.
3. SRL = Specific Release Limit.

Sensorial examination odour and taste test.

Test Method: With reference to DIN 10955:2004

Test media: Deionized Water

Test Item(s).	Limit.	Result	Conclusion
		005	
Sensorial examination odour (Point scale)	2.5.	N.D.	Pass
Sensorial examination taste (Point scale)	2.5.	N.D.	Pass

Extractable heavy metals.

Test Method: With reference to EN 645:1993 (cold water extraction), analysis was performed by UV-Vis and ICP-OES / ICP-MS.

Test Item	Result (mg/ dm <sup>2</sup> )	MDL (mg/ dm <sup>2</sup> )	Maximum Permissible Limit (mg/dm <sup>2</sup> )	Conclusion
	005			
Extractable Lead	N.D.	0.002	0.003	Pass
Extractable Cadmium	N.D.	0.002	0.002	Pass
Extractable Mercury	N.D.	0.002	0.002	Pass

Note : 1. mg/dm<sup>2</sup> = milligram per square decimeter

2. N.D. = Not Detected (< MDL)

3. MDL = Method Detection Limit

Pentachlorophenol (PCP).

Test Method: With reference to LFGB § 64 BVL B 82.02.8 - 2001, analysis was performed by GC-MS.

Item	Unit	Result	MDL	Maximum Permissible Limit	Conclusion
		005			
PCP Content	mg/kg	N.D.	0.1	0.15	Pass

Note: mg/kg = ppm

Preserving effect.

Test Method: With reference to EN 1104:2005.

Tested Fungus	Test result.	Specification	Conclusion
	005		
Bacillus subtilis ATCC No. 6633 .	Absent	Absence of zone inhibition	Pass
Aspergillus niger ATCC No.6275	Absent	Absence of zone inhibition	Pass

Note: 1. Absent denotes absence of Antimicrobial constituents which inhibits the growth of tested bacteria and fungus

**Fastness of Fluorescent whitening agents**

Test Method: As per BS EN 648:2006 procedure B (short time contact).

Item	Test result.	Limit	Conclusion
	005		
Deionized Water	No staining	No staining (Grade 5)	Pass
Aqueous Acetic Acid 3.0% (m/v)	No staining	No staining (Grade 5)	Pass
Saliva Simulant 5g/L	No staining	No staining (Grade 5)	Pass
Rectified Olive Oil	No staining	No staining (Grade 5)	Pass

**Specific migration of benzophenone.**

Test Method: With reference to EN 13130-1:2004, analysis was performed by GC-MS. .

Item	Unit	Test result.	MDL	Limit	Conclusion
		0025			
Specific migration of benzophenone	mg/kg.	N.D.	0.2	0.6.	Pass

**Specific migration of 4-methylbenzophenone.**

Test Method: With reference to EN 13130-1:2004, analysis was performed by GC-MS.

Item	Unit	Test result.	MDL	Limit	Conclusion
		005			
Specific migration of 4-methylbenzophenone .	mg/kg	N.D.	0.2	0.2	Pass

**Extractable formaldehyde.**

Test Method:With reference to EN 645:1994 (cold water extraction) and EN 1541:2001, analysis was performed by UV-Vis.

Item	Unit	Test result.	MDL	Limit	Conclusion
		005			
Extractable formaldehyde	mg/dm <sup>2</sup> .	N.D.	0.1	1	Pass

Picture of sample



Photo 1



Photo 2

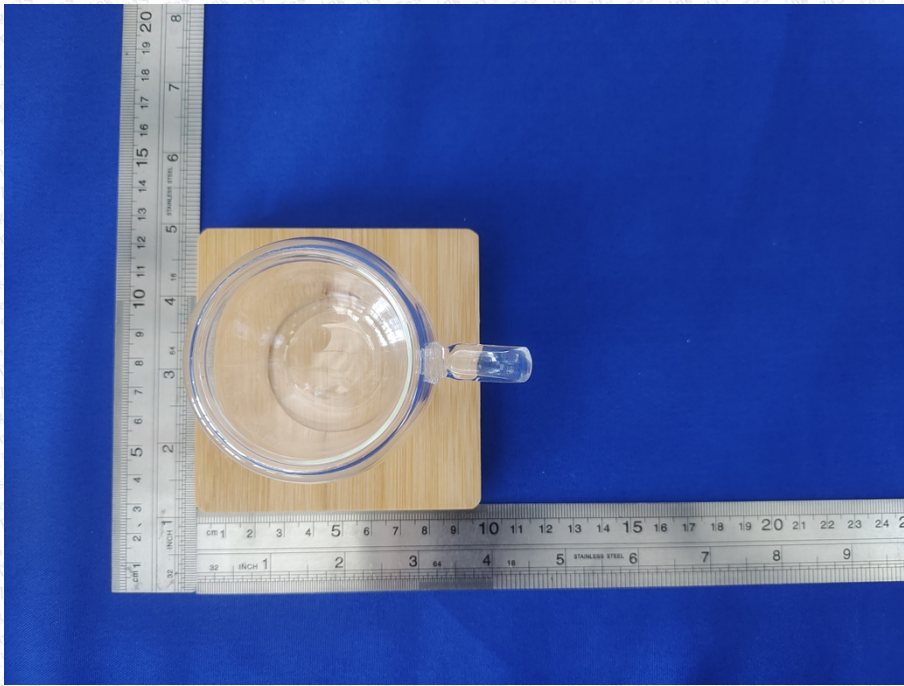


Photo 3

**\*\*\*\* THE END OF REPORT \*\*\*\***