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Members of:

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Hong Kong Association for Testing, Inspection and Certification Limited
Hong Kong Toys Council

Test Report

Number: HKGH01940279

Applicant:

Date: May 16, 2016

Submitted samples said to be :

Item Name :

Style :

Tinboxes

(1) Coffee Tin with Plastic Lid and Plastic innerring

(2) Biscuit Tin

(3) Tea Tin

(4) Aluminium Can for Herbs/Spices/Lipbalm/Hand-Cream with PE innerliner inside the Lid

(5) Egg Shaped Tin for Chocolates with inside printing

(6) Unprinted Tin with PET Window for Spices

(7) Unprinted Tin for Mints/Sweets

Quantity :

Country of Origin :

Twelve sets & parts

China

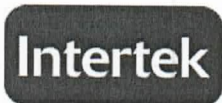
For and on behalf of :

Intertek Testing Services HK Ltd.



Angel Y.F. Cheung
Vice President





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Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) REACH Regulation (EC) No.1907/2006 , Annex XVII Item 23 & amendment No. 2016/217 - Cadmium content requirement	Pass
(2) REACH Regulation (EC) No. 1907/2006, Annex XVII item 20 & amendment (EU) No. 276/2010 (formerly known as Decision 2009/425/EC) - Organotin content requirement	Pass
(3) Council of Europe Resolution CM/Res (2013) 9 on Metals and Alloys used in Food Contact Materials and Articles - Migration of Metal Content	Pass
(4) European Commission Regulation No. 10/2011 and Regulation No. 1935/2004 - Overall migration	Pass
(5) European Commission Regulation No. 10/2011 Annex II and Regulation No.1935/2004 - Specific Migration of Heavy Metal	Pass
(6) European Economic Community 1895/2005/EC - Specific Migration of BADGE	Pass
(7) European Commission Regulation No. 10/2011 Annex I and Regulation No. 1935/2004 - Specific Migration of Phthalate	Pass
(8) European Commission Regulation No. 10/2011 Annex I and Regulation No.1935/2004 - Phthalate Content	Pass
(9) European Commission Regulation No. 10/2011 Annex I and Regulation No.1935/2004 - Specific Migration of Vinyl Acetate	Pass
(10) European Commission Regulation No. 10/2011 Annex I and Regulation No.1935/2004 - Specific Migration of Ethylene Glycol	Pass
(11) European Commission Regulation No. 10/2011 Annex I and Regulation No.1935/2004 - Specific Migration of Terephthalic Acid	Pass



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Intertek Testing Services Hong Kong Ltd.

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Tel: (852) 2173 8888 Fax: (852) 2786 1903 Website: www.intertek.com

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(1) Cadmium (Cd) Content

Test Method : Acid digestion method was used and total Cadmium content was determined by Inductively Coupled Argon Plasma Spectrometry.

Tested Component	Result in %, w/w	Limit in %, w/w
(1)	ND	0.1
(2)	ND	0.1
(3)	ND	0.1
(4)	ND	0.1
(5)	ND	0.1
(6)	ND	0.1
(7)	ND	0.1
(8/9)	ND	0.1
(10/11)	ND	0.01
(12/13)	ND	0.01

ND : Not detected (< 0.0005%)

Tested Components:

- (1) Coatings on metal (body of coffee tin).
- (2) Coatings on metal (body of biscuit tin).
- (3) Coatings on metal (body of tea tin).
- (4) Coatings on metal (body of blue style egg shape tins).
- (5) Coatings on metal (body of red style egg shape tins).
- (6) Coatings on metal (body of green style egg shape tin).
- (7) Coatings on metal (body of yellow style egg shape tin).
- (8) Lacquer on metal (lining of coffee tin, biscuit tin, tea tin, body of aluminium can for herbs/spices/ lip balm/ hand- cream, unprinted tin).
- (9) Coatings (black, white) on paper label (bar code label).
- (10) Black plastic (lip of coffee tin).
- (11) Transparent plastic (ring in lip of coffee tin).
- (12) Transparent plastic (window of Spices).
- (13) White foam (innerliner inside the lid of aluminium can for herbs).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to Apr 09, 2016



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(2) Organotin Content

Test Standard : By solvent extraction, followed by Gas Chromatography Mass Spectrometric (GC/MS) analysis.

Element	Result (% w/w)			Limit (% w/w)
	(1)	(2/3)	(4/5)	
Tri-substituted Organotin [^]	<0.005	<0.005	<0.005	0.1
Dibutyltin (DBT)	<0.005	<0.005	<0.005	0.1
Diocetyl tin (DOT)	<0.005	<0.005	<0.005	0.1

Element	Result (%, w/w)	Limit (%, w/w)
	(6)	
Tri-substituted Organotin^	<0.005	0.1
Dibutyltin (DBT)	<0.005	0.1
Diocetyl tin (DOT)	<0.005	0.1

The above limit was quoted according to Annex XVII Items 20 of the REACH Regulation (EC) no. 1907/2006 & amendment (EU) No. 276/2010 (formerly known as Decision 2009/425/EC) for organotin content.

[^] = The reported value was calculated by summation of the values of Tri-butyltin, Tri-phenyltin, Tri-methyltin, Tri-octyltin, Tri-cyclohexyltin

Tested Components:

- (1) Coatings on metal (body of all styles).
- (2) Black plastic (lip of coffee tin).
- (3) Transparent plastic (ring in lip of coffee tin).
- (4) Transparent plastic (window of Spices).
- (5) White foam (innerliner inside the lid of aluminium can for herbs).
- (6) Paper label with (black, white) coatings (bar code label).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to Apr 15, 2016



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(3) Migration of Metal Content

Test method: Council of Europe Resolution CM/Res (2013) 9 on Metals and Alloys used in Food Contact Materials and Articles

Food simulant	Temperature	Time
Artificial tap water	40°C	10 days

Element	Results obtained from sum of 1 st & 2 nd migration in mg/kg			Limit in mg/kg
	(1)	(2)	(3)	
Aluminium (Al)	< 0.1	< 0.1	< 0.1	35
Antimony (Sb)	< 0.01	< 0.01	< 0.01	0.28
Arsenic (As)	< 0.001	< 0.001	< 0.001	0.014
Barium (Ba)	< 0.1	< 0.1	< 0.1	8.4
Beryllium (Be)	< 0.001	< 0.001	< 0.001	0.07
Cadmium (Cd)	< 0.001	< 0.001	< 0.001	0.035
Chromium (Cr)	< 0.1	< 0.1	< 0.1	1.75
Cobalt (Co)	< 0.01	< 0.01	< 0.01	0.14
Copper (Cu)	< 0.1	< 0.1	< 0.1	28
Iron (Fe)	< 5	< 5	< 5	280
Lead (Pb)	< 0.01	< 0.01	< 0.01	0.07
Lithium (Li)	< 0.02	< 0.02	< 0.02	0.336
Manganese (Mn)	< 0.1	< 0.1	< 0.1	12.6
Mercury (Hg)	< 0.001	< 0.001	< 0.001	0.021
Molybdenum (Mo)	< 0.01	< 0.01	< 0.01	0.84
Nickel (Ni)	< 0.01	< 0.01	< 0.01	0.98
Silver (Ag)	< 0.02	< 0.02	< 0.02	0.56
Thallium (Tl)	< 0.0001	< 0.0001	< 0.0001	0.0007
Tin (Sn)	< 5	< 5	< 5	700
Vanadium (V)	< 0.005	< 0.005	< 0.005	0.07
Zinc (Zn)	< 1	< 1	< 1	35



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Element	Result obtained from 3 rd migration in mg/kg			Limit in mg/kg
	(1)	(2)	(3)	
Aluminium (Al)	< 0.1	< 0.1	< 0.1	5
Antimony (Sb)	< 0.01	< 0.01	< 0.01	0.04
Arsenic (As)	< 0.001	< 0.001	< 0.001	0.002
Barium (Ba)	< 0.1	< 0.1	< 0.1	1.2
Beryllium (Be)	< 0.001	< 0.001	< 0.001	0.01
Cadmium (Cd)	< 0.001	< 0.001	< 0.001	0.005
Chromium (Cr)	< 0.1	< 0.1	< 0.1	0.250
Cobalt (Co)	< 0.01	< 0.01	< 0.01	0.02
Copper (Cu)	< 0.1	< 0.1	< 0.1	4
Iron (Fe)	< 5	< 5	< 5	40
Lead (Pb)	< 0.01	< 0.01	< 0.01	0.010
Lithium (Li)	< 0.02	< 0.02	< 0.02	0.048
Manganese (Mn)	< 0.1	< 0.1	< 0.1	1.8
Mercury (Hg)	< 0.001	< 0.001	< 0.001	0.003
Molybdenum (Mo)	< 0.01	< 0.01	< 0.01	0.12
Nickel (Ni)	< 0.01	< 0.01	< 0.01	0.14
Silver (Ag)	< 0.02	< 0.02	< 0.02	0.08
Thallium (Tl)	< 0.0001	< 0.0001	< 0.0001	0.0001
Tin (Sn)	< 5	< 5	< 5	100
Vanadium (V)	< 0.005	< 0.005	< 0.005	0.01
Zinc (Zn)	< 1	< 1	< 1	5

Tested Components :

- (1) Silver metal box (internal of tin for coffee/ biscuit/ tea) (Tinplated with electroplated coating with epoxy resin lacquer).
- (2) Silver metal box (internal of cans for herbs/ spices/ lipbalm/ handcream) (Polyethylene).
- (3) White plastic (lid of cans for heabs/ spices/ lipbalm/ handcream) (Polyethylene).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016



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(4) Overall Migration

Test standard : Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition for tested components (1) and (6):

Fatty food simulant	
Time	Temperature
10 days	40 °C

Test condition for tested components (2), (3) and (7):

Aqueous food simulant	
Time	Temperature
10 days	40 °C

Test condition for tested components (4) and (5):

Aqueous food simulant	
Time	Temperature
10 days	40 °C

Fatty food simulant	
Time	Temperature
10 days	40 °C

II. Test result :

Tested component	Result in mg/dm ²	
	Fatty food simulant	
(1)	<1	
(6)	<1	
Limit in mg/dm ²	10	

Tested component	Result in mg/dm ²	
	10% (v/v) ethanol	
(2)	<1	
(3)	<1	
(7)	<1	
Limit in mg/dm ²	10	

Tested component	Result in mg/dm ²	
	10% (v/v) ethanol	Fatty food simulant
(4)	<1	1
(5)	<1	1
Limit in mg/dm ²	10	10



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Tested Components :

- (1) Silver metal box (internal of tin for coffee/ biscuit/ tea) (Tinplated with electroplated coating with epoxy resin lacquer).
- (2) Black plastic (lid) (Polypropylene)
- (3) Transparent plastic (ring) (EVA).
- (4) Silver metal box (internal of cans for herbs/ spices/ lipbalm/ handcream) (Polyethylene).
- (5) White plastic (lid of cans for heabs/ spices/ lipbalm/ handcream) (Polyethylene).
- (6) Colord metal egg (internal of egg) (tinplated with electroplated coating + Modified epoxy inside).
- (7) Transparent plastic (window of spices) (PET).

Comment :

The scope of the standard was not applicable to the submitted sample. Testing was conducted with reference to the standard and requirements as stated.

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016



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(5) Specific Migration of Heavy Metal

Test standard : Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition :

Aqueous food simulant	
Time	Temperature
10 days	60 °C

II. Test Results :

Food simulant: 10% (v/v) Ethanol							
Tested component	Results in mg/kg						
	Barium	Cobalt	Copper	Iron	Lithium	Manganese	Zinc
(1)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
(2)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
(3)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
(4)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
(5)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
(6)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
(7)	<0.1	<0.03	<1	<5	<0.1	<0.1	<5
Limit in mg/kg	1	0.05	5	48	0.6	0.6	25

Tested Components :

- (1) Silver metal box (internal of tin for coffee/ biscuit/ tea) (Tinplated with electroplated coating with epoxy resin lacquer).
- (2) Black plastic (lid) (Polypropylene)
- (3) Transparent plastic (ring) (EVA).
- (4) Silver metal box (internal of cans for herbs/ spices/ lipbalm/ handcream) (Polyethylene).
- (5) White plastic (lid of cans for heabs/ spices/ lipbalm/ handcream) (Polyethylene).
- (6) Colord metal egg (internal of egg) (tinplated with electroplated coating + Modified epoxy inside).
- (7) Transparent plastic (window of spices) (PET).

Date sample received : Apr 05, 2016

Testing period :Apr 05, 2016 to May 13, 2016



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(6) Specific Migration of Bisphenol-A Diglycidyl Ether (BADGE) Test

Test Standard : EEC commission Directive 2002/72/EC and 1895/2005/EC, selection of test condition & food simulants by 82/711/EEC, 85/572/EEC and its amendment.

I. Test condition :

Aqueous food simulant	
Time	Temperature
10 days	60 °C

II. Test results

1. Result for sum of BADGE, BADGE.H₂O, BADGE.2H₂O

Tested component	Result in mg/kg		
	10% (v/v) ethanol	10% (v/v) ethanol	10% (v/v) ethanol
(1)	<1	<1	<1
(2)	<1	<1	<1
(3)	<1	<1	<1
Limit (mg/kg)	9	9	9

2. Result for sum of BADGE.HCl, BADGE.2HCl, BADGE.H₂O.HCl

Tested component	Result in mg/kg		
	10% (v/v) ethanol	10% (v/v) ethanol	10% (v/v) ethanol
(1)	<1	<1	<1
(2)	<1	<1	<1
(3)	<1	<1	<1
Limit (mg/kg)	1	1	1

Tested Components :

- (1) Silver metal box (internal of tin for coffee/ biscuit/ tea) (Tinplated with electroplated coating with epoxy resin lacquer).
- (2) Silver metal box (internal of cans for herbs/ spices/ lipbalm/ handcream) (Polyethylene).
- (3) White plastic (lid of cans for heabs/ spices/ lipbalm/ handcream) (Polyethylene).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016



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(7) Specific Migration of Phthalate

Test standard : Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition :

Aqueous food simulant	
Time	Temperature
10 days	60 °C

II. Test Results :

Butyl benzy phthalate (BBP) :

Tested component	Result in mg/kg
(1)	10% (v/v) ethanol
Limit in mg/kg	<1
	30

Bis (2-ethylhexyl) phthalate (DEHP) :

Tested component	Result in mg/kg
(1)	10% (v/v) ethanol
Limit in mg/kg	<1
	1.5

Dibutyl phthalate (DBP) :

Tested component	Result in mg/kg
(1)	10% (v/v) ethanol
Limit in mg/kg	<0.2
	0.3

Di-(iso-nonyl) Phthalate (DINP) + Di-(iso-decyl) phthalate (DIDP) :

Tested component	Result in mg/kg
(1)	10% (v/v) ethanol
Limit in mg/kg	<1
	9



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Diallyl phthalate (DAP) :

Tested component	Result in mg/kg
(1)	10% (v/v) ethanol
Limit in mg/kg	Not Detected
	Not Detected

Remark :

Detection limit of DAP = 0.01 mg/kg

Tested Component :

(1) Transparent plastic (ring) (EVA).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016

(8) **Phthalate Content Test**

Test Method : European Commission Regulation (EU) No. 10/2011, by solvent extraction, followed by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Compounds	Result (%, w/w)	Limit (%, w/w) (max.)
	(1)	
Dibutyl phthalate (DBP)	<0.01	0.05
Diethyl hexyl phthalate (DEHP)	<0.01	0.1
Benzyl butyl phthalate (BBP)	<0.01	0.1
Diisononyl phthalate (DINP)	<0.01	0.1
Diisodecyl phthalate (DIDP)	<0.01	0.1

Tested Component :

(1) Transparent plastic (Ring - EVA).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to Apr 09, 2016



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(9) Specific Migration of Vinyl Acetate

Test standard : Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition :

Aqueous food simulant	
Time	Temperature
10 days	60 °C

II. Test Results :

Tested component	Result in mg/kg
	10% (v/v) ethanol
(1)	<6
Limit in mg/kg	12

Tested Component :

(1) Transparent plastic (ring) (EVA).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016

(10) Specific Migration of Ethylene Glycol

Test standard : Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition :

Aqueous food simulant	
Time	Temperature
10 days	60 °C

II. Test Results :

Tested component	Result in mg/kg
	10% (v/v) ethanol
(1)	<10
Limit in mg/kg	30

Tested Component :

(1) Transparent plastic (window of spices) (PET).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016



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(11) Specific Migration of Terephthalic Acid

Test standard : Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition :

Aqueous food simulant	
Time	Temperature
10 days	60 °C

II. Test Results :

Tested component	Result in mg/kg
	10% (v/v) ethanol
(1)	<1.0
Limit in mg/kg	7.5

Tested Component :

(1) Transparent plastic (window of spices) (PET).

Date sample received : Apr 05, 2016

Testing period : Apr 05, 2016 to May 13, 2016

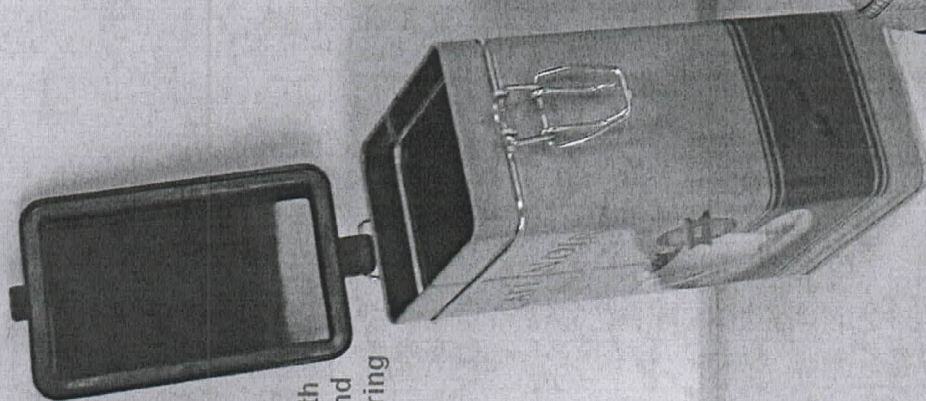
End of report

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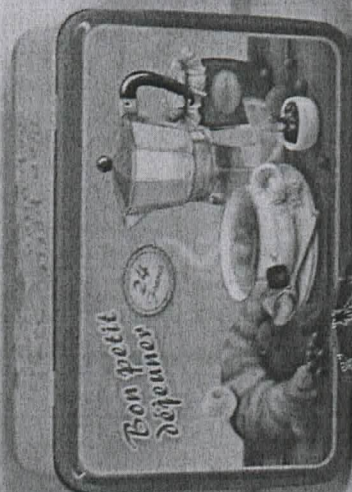
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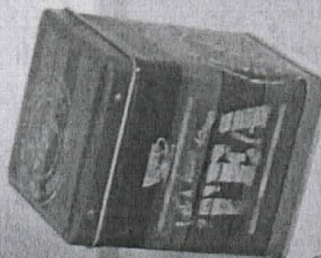




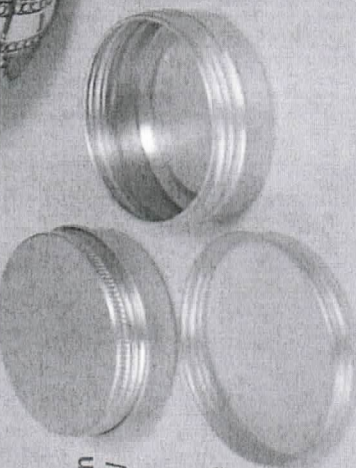
1. Coffee tin with Plastic Lid and Plastic innerring



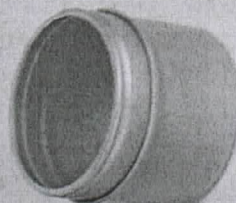
2. Biscuit tin



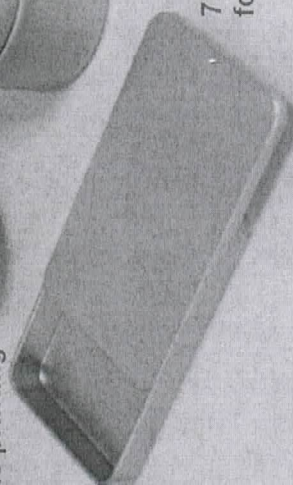
3. Tea tin



4. Aluminium can for herbs/spices/lipbalm / hand-cream with PE innerliner inside the lid



6. unprinted tin with PET window for spices



7. unprinted tin for mints/sweets