

Test Report No. 5193394

Date : 1-Mar-2022

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Client : Prepack Thailand Co., Ltd.
30/145,Moo1,
Khok Kham, Muang Samutsakhon, Samutsakorn 74000 Thailand

The following sample(s) was/were submitted and identified by client as:

Sample Name : ONYLON/LLDPE (A)
Sample Description : Plastic Bag
Manufacturer/Vendor : Prepack Thailand Co., Ltd.
Country of Origin : Thailand

The following sample(s) was/were identified by SGS as:

SGS Sample No. : 5407029
Sample Condition : Sample is contained in a plastic bag.
Quantity Submitted : 1 pack
Sample Receiving Date : 18-Feb-2022
Testing Period : 18-Feb-2022 to 1-Mar-2022

Test Method & Results : Please refer to next page(s).

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Test Requested & Result Summary

Test Requested : Please refer to the result summary (Test parameter(s) was/were selected by client).

Result Summary:

Test Requested	Conclusion
Commission Regulation (EU) No 10/2011 of 14 January 2011, hence Article 3 of European Regulation No. 1935/2004 and its amendment (EU) 2020/1245 Regulation	--
a) Plastic - Overall migration##	
3% Acetic Acid (W/V) Aqueous Solution	PASS
10% Ethanol (V/V) Aqueous Solution	PASS
20% Ethanol (V/V) Aqueous Solution	PASS
Rectified Olive Oil	PASS
b) Plastic - Specific Migration of Heavy Metal#	PASS

Remark:

1. Test results in this report are applicable for the item tested and reflects the tested sample as received.
2. # ; The decision rules based on simple acceptance which the probability of false accept may be as high as 50% in case the results is exactly on the tolerance limit.
3. ## ; The decision rules based on the requested specification or standard.

**Signed for and on behalf of
SGS (Thailand) Limited**



**Rutchuporn Mungsom
Laboratory manager - Hardgood**

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TEST RESULTS

European Commission Regulation (EU) No 10/2011 and its amendment (EU) 2020/1245 Regulation

a) Plastic - Overall migration***

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 method (1st migration);
EN 1186-5:2002 aqueous food simulants by cell method;
EN 1186-4:2002 olive oil by cell method.

Simulant Used	Test Condition	Result (1) (mg/dm ²)	Reporting Limit (mg/dm ²)	Permissible Limit (mg/dm ²)
3% Acetic Acid (W/V) Aqueous Solution	2 hours at 100 Degree C	ND	3.0	10
10% Ethanol (V/V) Aqueous Solution	2 hours at 100 Degree C	ND	3.0	10
20% Ethanol (V/V) Aqueous Solution	2 hours at 100 Degree C	ND	3.0	10
Rectified Olive Oil	1 hour at 121 Degree C	ND	3.0	10
Comment	--	PASS	--	--

Sample Description :

1. Clear plastic bag with multicolor printed (inside)

Note :

1. mg/dm² = milligram per square decimeter
2. Degree C = degree Celsius
3. ND = Not Detected
4. Permissible Limit is according to Commission Regulation (EU) No 10/2011 of 14 January 2011 and its amendment (EU) 2020/1245 Regulation.

Remark :

1. Analytical tolerance of aqueous simulants is 2mg/dm² or 12mg/kg
2. Analytical tolerance of fatty food simulants is 3mg/dm² or 20mg/kg
3. Test condition & simulant were specified by client.
4. The ratio of surface area to volume ratio is 20 dm² per 1 kg of foodstuff in contact with.
5. The product is single-use as specified by client.

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TEST RESULTS

b) Specific migration of heavy metal***

Method: With reference to EN 13130-1:2004. Analysis was performed by Analysis was performed by ICP-MS / ICP-OES.
 Ammonium was analyzed by UV-Vis Spectrophotometer.
 Simulant Used: 3% acetic acid (w/v) in aqueous solution
 Test Condition: 100 Degree C for 2 hours (1st Migration)
 Single-use article:

Test Item	Result (1) (mg/kg) (1 st migration)	Reporting Limit (mg/kg)	Permissible Limit (mg/kg)
Specific Migration of Aluminium	ND	0.1	1
Specific Migration of Antimony	ND	0.01	0.04
Specific Migration of Arsenic	ND	0.01	0.01
Specific Migration of Barium	ND	0.25	1
Specific Migration of Cadmium	ND	0.002	0.002
Specific Migration of Chromium	ND	0.01	0.01
Specific Migration of Cobalt	ND	0.01	0.05
Specific Migration of Copper	ND	0.25	5
Specific Migration of Iron	ND	5	48
Specific Migration of Lead	ND	0.01	0.01
Specific Migration of Lithium	ND	0.1	0.6

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Test Item	Result (1) (mg/kg) (1 st migration)	Reporting Limit (mg/kg)	Permissible Limit (mg/kg)
Specific Migration of Manganese	ND	0.1	0.6
Specific Migration of Mercury	ND	0.01	0.01
Specific Migration of Nickel	ND	0.01	0.02
Specific Migration of Zinc	ND	0.5	5
Specific Migration of Europium	ND	0.025	--
Specific Migration of Gadolinium	ND	0.025	--
Specific Migration of Lanthanum	ND	0.025	--
Specific Migration of Terbium	ND	0.025	--
Specific Migration of Europium + Gadolinium + Lanthanum + Terbium	ND	--	0.05
Comment	PASS	--	--

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Test Item	Result (1) (mg/kg) (1st migration)	Reporting Limit (mg/kg)
Specific Migration of Ammonium	ND	1
Specific Migration of Calcium	ND	1
Specific Migration of Magnesium	ND	1
Specific Migration of Potassium	ND	1
Specific Migration of Sodium	ND	1

Sample Description:

1. Clear plastic bag with multicolor printed (inside)

Note :

1. mg/kg = milligram per kilogram of foodstuff in contact with
2. Degree C = degree Celsius
3. ND = Not Detected
4. Permissible Limit is according to Commission Regulation (EU) No 10/2011 of 14 January 2011 and its amendment (EU) 2020/1245 Regulation.

Remark:

1. Test condition & simulant were specified by client.
2. The ratio of surface area to volume ratio is 6 dm² per 1 kg of foodstuff in contact with.
3. The product is single-use as specified by client.

Remark: The test item(s) marked *** on test report is/are analyzed at SGS (Thailand) Limited, address: 4/16-20 and 4/23 Soi Rama III 59, Rama III road, Chongnonsee, Yannawa, Bangkok.

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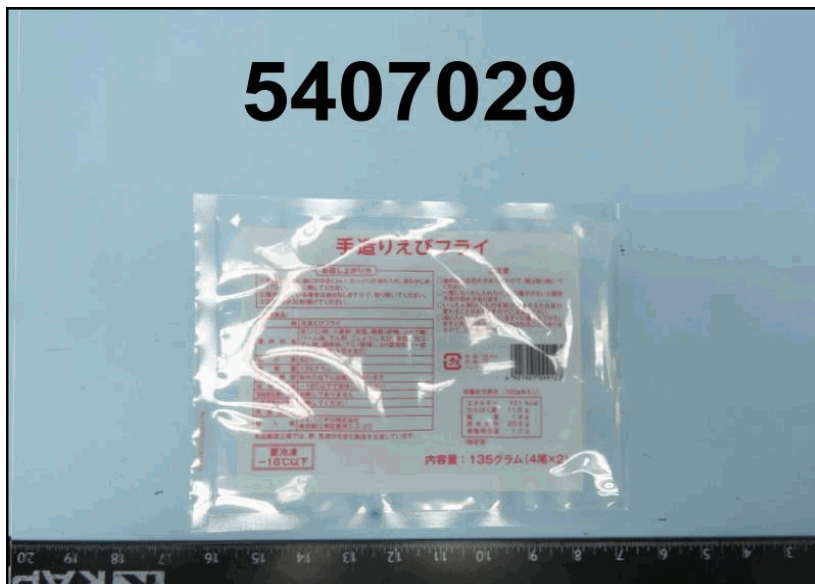
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SAMPLE/ATTACHMENT PICTURE



***** End of Report *****

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