





SGS (Thailand) Limited

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Test Report No. 5516768 Date: 14-Mar-2023

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 : PET/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. : 5763694

Sample Condition : Sample is contained in a plastic bag.

Quantity Submitted : 1 pack

Sample Receiving Date : 21-Feb-2023

Testing Period : 21-Feb-2023 to 14-Mar-2023

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
European Commission Regulation (EU) No 10/2011 and its amendment	
a) Plastic - Overall migration##	
3% Acetic Acid (W/V)	PASS
10% Ethanol (V/V)	PASS
20% Ethanol (V/V)	PASS
Rectified Olive Oil	PASS
b) Plastic - Specific Migration of Heavy Meta#	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) Ltd.



Rutchuporn Moungsom Laboratory manager - Toy and Hard goods

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TEST RESULTS

Test Report No.

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

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 1186-2:2022 Test methods for overall migration in vegetable oils

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EN 1186-3:2022 Test methods for overall migration in evaporable simulants

EN1186-13:2002 Method B - adsorption by modified polyphenylene oxide.

Simulant Used	Test Condition	Result (1) (mg/dm2)	Reporting Limit (mg/dm2)	Permissible Limit (mg/dm2)
3% Acetic Acid (W/V)*	10 days at 40 Degree C	ND	3.0	10
10% Ethanol (V/V)*	10 days at 40 Degree C	ND	3.0	10
20% Ethanol (V/V)*	10 days at 40 Degree C	ND	3.0	10
Rectified Olive Oil**	10 days at 40 Degree C	ND	3.0	10
Poly (2,6-diphenyl-p-phenylene oxide) (MPPO)	10 days at 40 Degree C	ND	3.0	10
Comment		PASS		

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TEST RESULTS

Sample Description:

(1) Clear plastic bag with multicolor printed (inside)

- 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

Remark:

- 1. Analytical tolerance of evaporable simulants is 2mg/dm2.
- 2. Analytical tolerance of olive oil simulant is 3mg/dm2.
- 3. Test condition & simulant were specified by client.
- 4. The ratio of surface area to volume is 20 dm2 per 1 kg of foodstuff in contact with.
- 5. The product is single-use as specified by client.
- 6. Test(s) marked * on this report are not included in the NSC-ONSC accreditation scope.
- 7. The test item(s) marked ** on test report is/are analyzed at SGS (Thailand) Limited, address: 10, 10/1 4 and 12 Soi Rama III S. 59, Chong Nonsi, Yan Nawa, Bangkok but not included in the NSC-ONSC accreditation scope.

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Test Report No. 5516768 **TEST RESULTS**

b) Specific migration of heavy metal

Method: With reference to EN 13130-1:2004. Analysis was performed by ICP-MS / ICP-OES.

Ammonium was analyzed by UV-Vis Spectrophotometer.

Simulant Used: 3% acetic acid (w/v)

Test Condition: 40 Degree C for 10 days (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	ND
Specific Migration of Barium***	ND	0.25	1
Specific Migration of Cadmium***	ND	0.002	ND
Specific Migration of Chromium***	ND	0.01	ND
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	ND
Specific Migration of Lithium***	ND	0.1	0.6

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TEST RESULTS





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Comment

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

1. mg/kg = milligram per kilogram of foodstuff in contact with

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- 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.

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SAMPLE/ATTACHMENT PICTURE

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