





SGS (Thailand) Limited

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**Test Report No.** Date: 8-Feb-2023 5483935

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:

: ONYLON/LLDPE (S) Sample Name

Sample Description : Plastic bag

: PREPACK THAILAND CO., LTD. Manufacturer/Vendor

Country of Origin : Thailand

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

SGS Sample No. : 5731051

Sample Condition : Sample is contained in a plastic bag.

**Quantity Submitted** : 1 pack

Sample Receiving Date : 23-Jan-2023

: 23-Jan-2023 to 8-Feb-2023 **Testing Period** 

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) 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) Ltd.



Rutchuporn Moungsom
Laboratory manager - Toy and Hard goods

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**TEST RESULTS** 

# 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

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

Simulant Used	Test Condition	Result (1) (mg/dm2)	Reporting Limit (mg/dm2)	Permissible Limit (mg/dm2)
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	5	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

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**TEST RESULTS** 

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 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) 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	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**

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	ND
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

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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 with amendments.

## Remark:

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

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# **SAMPLE/ATTACHMENT PICTURE**



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