

Test Report No. 5543144

Date : 11-Apr-2023

Page 1 of 7

**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 : OPP/LLDPE  
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. : 5796187  
Sample Condition : Sample is contained in a plastic bag.  
Quantity Submitted : 1 pack  
Sample Receiving Date : 21-Mar-2023  
Testing Period : 21-Mar-2023 to 11-Apr-2023

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

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liable for the veracity or lack thereof of such Information."

*"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>*

*Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."*

Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.

5244857

**Test Report No.** 5543144

**Date :** 11-Apr-2023

**Page 2 of 7**

**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 Mungsom  
Laboratory manager - Toy and Hard goods**

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liable for the veracity or lack thereof of such Information."

*"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>*

*Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."*

*Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.*

5244857

**Test Report No.** 5543144

**Date :** 11-Apr-2023

**Page 3 of 7**

**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/dm <sup>2</sup> )	Reporting Limit (mg/dm <sup>2</sup> )	Permissible Limit (mg/dm <sup>2</sup> )
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
Comment	--	PASS	--	--

Sample Description :

1. Clear plastic bag (inside)

Note :

1. mg/dm<sup>2</sup> = 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/dm<sup>2</sup>.
2. Analytical tolerance of olive oil simulant is 3mg/dm<sup>2</sup>.
3. Test condition & simulant were specified by client.
4. The ratio of surface area to volume is 20 dm<sup>2</sup> 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.

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liable for the veracity or lack thereof of such Information."

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.

5244857

**Test Report No.** 5543144

**Date :** 11-Apr-2023

**Page 4 of 7**

**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

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liability for the veracity or lack thereof of such information."

*"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>*

*Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."*

Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.

5244857

**Test Report No.** 5543144

**Date :** 11-Apr-2023

**Page 5 of 7**

**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	--	--

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liable for the veracity or lack thereof of such Information."

*"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>*

*Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."*

Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.

5244857

**Test Report No.** 5543144

**Date :** 11-Apr-2023

**Page 6 of 7**

**TEST RESULTS**

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 (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

**Remark:**

1. Test condition & simulant were specified by client.
2. The ratio of surface area to volume is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
3. The product is single-use as specified by client.
4. 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.

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liability for the veracity or lack thereof of such information."

*"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>*

*Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."*

Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.

5244857

Test Report No. 5543144

Date : 11-Apr-2023

Page 7 of 7

SAMPLE/ATTACHMENT PICTURE



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

"Any holder of this document is advised that should client or third party information be supplied with respect to the goods or sample, SGS may, at its discretion, attached or indicate such information to the report but SGS makes no warranties or accepts no liable for the veracity or lack thereof of such Information."

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) received and such sample(s) are retained for 30 days only.

5244857