



Date : 31-Jan-2023

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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         | : ONY/RCPP                   |
|---------------------|------------------------------|
| 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.        | : 5731054                               |
|-----------------------|---|
| Sample Condition      | : Sample is contained in a plastic bag. |
| Quantity Submitted    | : 1 pack                                |
| Sample Receiving Date | ∶ 23-Jan-2023                           |
| Testing Period        | ∶ 23-Jan-2023 to 31-Jan-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<br>European Commission Regulation (EU) No 10/2011 and its amendment<br>a) Plastic - Overall migration##  | Conclusion                                   |
|---|--|
| <ul> <li>3% Acetic Acid (W/V) Aqueous Solution</li> <li>10% Ethanol (V/V) Aqueous Solution</li> <li>20% Ethanol (V/V) Aqueous Solution</li> <li>50% Ethanol (V/V) Aqueous Solution</li> <li>Rectified Olive Oil</li> <li>b) Plastic - Specific Migration of Heavy Metal#</li> </ul> | PASS<br>PASS<br>PASS<br>PASS<br>PASS<br>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)<br>(mg/dm2) | Reporting Limit<br>(mg/dm2) | Permissible Limit<br>(mg/dm2) |
|---|---------------------------|------------------------|-----------------------------|-------------------------------|
| 3% Acetic Acid (W/V) Aqueous<br>Solution* | 1 hour at<br>100 Degree C | ND                     | 3.0                         | 10                            |
| 10% Ethanol (V/V) Aqueous<br>Solution*    | 1 hour at<br>100 Degree C | ND                     | 3.0                         | 10                            |
| 20% Ethanol (V/V) Aqueous<br>Solution*    | 1 hour at<br>100 Degree C | ND                     | 3.0                         | 10                            |
| Rectified Olive Oil**                     | 1 hour at<br>100 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.

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 1 hour (1st Migration) Single-use article:

| Test Item                          | Result (1)<br>(mg/kg)<br>(1 st migration) | Reporting Limit<br>(mg/kg) | Permissible Limit<br>(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)<br>(mg/kg)<br>(1 st migration) | Reporting Limit<br>(mg/kg) | Permissible Limit<br>(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<br>+ Lanthanum + Terbium | ND  |                            | 0.05                         |
| Comment  | PASS                                      |                            |                              |

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# Test Report No. 5477239 TEST RESULTS

**Test Item** Result (1) Reporting Limit (mg/kg) (mg/kg) (1st migration) 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

Date : 31-Jan-2023

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 is 6 dm2 per 1 kg of foodstuff in contact with.

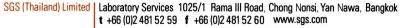
3. The product is single-use as specified by client.

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.

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SAMPLE/ATTACHMENT PICTURE



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