

**Test Report No.** 5194518

**Date :** 2-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 : PET/MPET/LLDPE (S)  
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. : 5407015  
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 2-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
(1) Notification of the Ministry of Public Health (No.295) B.E. 2548 (2005) : Qualities or standard for container made from plastic a) Polyethylene (PE)	--
1. Lead content	PASS
2. Cadmium content	PASS
3. Heavy metal (as lead) in 4% concentrated acetic acid extraction	PASS
4. Quantity of potassium Permanganate Consumed	PASS
5. Residue after Evaporation Test	PASS
6. Migration of color Extraction	PASS
(2) Additional request by client's	
1. Germanium (Elution)	See result
2. Antimony (Elution)	See result

**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.

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

**Rutchuporn Mungsom  
Laboratory manager - Hardgood**

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**TEST RESULTS**

**(1) Notification of the Ministry of Public Health (No.295) B.E. 2548 (2005) : Qualities or standard for container made from plastic.**

**a) Polyethylene (PE)**

**Qualities and standard of plastic**

Method : With reference to TIS 656: 2556. Analysis was performed by ICP-OES.

Details	Result (1) (mg/kg)	Limit of Quantitative (mg/kg)	Permissible Limit (mg/kg)
Lead content***	<2	2.0	100
Cadmium content***	<2	2.0	100

Sample Description :

1. Metallized/clear plastic bag with multicolor printed

Note :

1. mg/kg = milligram per kilogram
2. < = Less than

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**TEST RESULTS**

**Qualities and standard of dissemination**

Method : With reference to TIS 656: 2556.

Details	Test Condition <sup>^</sup>	Result (1) (mg/dm3)	Limit of Quantitative (mg/dm3)	Permissible Limit (mg/dm3)
Heavy metal (calculated as lead) in 4% concentrated acetic acid extraction***	30 minute at 60 degree C	<1	--	1
Potassium permanganate used for reaction in water extraction***	30 minute at 60 degree C	<1	1.0	10
Residue substances which is evaporate in water***	30 minute at 60 degree C	<3	3.0	30
Residue substances which is evaporate in 4% concentrated acetic acid***	30 minute at 60 degree C	<3	3.0	30
Residue substances which is evaporate in 20% concentrated alcohol***	30 minute at 60 degree C	<3	3.0	30
Residue substances from volatile matters in normal heptane***	Room temperature (1 hr. at 25 degree C)	<3	3.0	150

**Sample Description :**

1. Metallized / clear plastic bag with multicolor printed (inside)

**Note :**

1. mg/dm3 = milligram per cubic decimeter
2. Degree C = degree Celsius
3. < = Less than

**Remark :**

1. ^ = In case of the use at temperature not higher than 100 degree Celsius

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**TEST RESULTS**

**Qualities and standard of dissemination**

Test Method : With reference to TIS 655 -1 : 2553

Details	Test Condition <sup>^</sup>	Result (1)	Permissible Limit
Migration of color extract by water***	30 minute at 60 degree C	Negative (See Note 2)	Negative
Migration of color extract by 4% concentrated acetic acid***	30 minute at 60 degree C	Negative (See Note 2)	Negative
Migration of color extract by 20% concentrated alcohol***	30 minute at 60 degree C	Negative (See Note 2)	Negative
Migration of color extract by normal heptanes***	Room temperature (1 hr. at 25 degree C)	Negative (See Note 2)	Negative

**Sample Description :**

1. Metallized / clear plastic bag with multicolor printed (inside)

**Note :**

1. Degree C = degree Celsius
2. "Negative" mean it's not presence of color migration/ "Positive" mean it's presence of color migration

**Remark :**

1. ^ = In case of the use at temperature not higher than 100 degree Celsius

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**TEST RESULTS**

(2) Additional request by client's

**Qualities and standard of dissemination**

Method : With reference to TIS 656: 2556

Details	Test Condition <sup>^</sup>	Result (1) (mg/dm <sup>3</sup> )	Limit of Quantitative (mg/dm <sup>3</sup> )	Permissible Limit# (mg/dm <sup>3</sup> )
Antimony**	30 minute at 60 degree C	<0.02	0.02	0.05
Germanium**	30 minute at 60 degree C	<0.02	0.02	0.10

Sample Description :

1. Metallized / clear plastic bag with multicolor printed (inside)

Note :

1. mg/dm<sup>3</sup> = milligram per cubic decimeter
2. Degree C = degree Celsius
3. < = Less than

Remark :

1. <sup>^</sup> = In case of the use at temperature not higher than 100 degree Celsius.
2. # = Permissible limit is quoted from Notification of the Ministry of Public Health (No.295) B.E. 2548 (2005) :Qualities or standard for container made from plastic,Polyethylene terephthalate (PET).
3. Test condition & simulant were specified by client.

Remark:

1. The test item(s) marked \*\* on test report is/are analyzed at SGS (Thailand) Limited, address: 41/16-20 and 41/23 Soi Rama III 59, Rama III road, Chongnonsee, Yannawa, Bangkok but not included in the NSC-ONSC accreditation scope.
2. The test item(s) marked \*\*\* on test report is/are analyzed at SGS (Thailand) Limited, address: 41/16-20 and 41/23 Soi Rama III 59, Rama III road, Chongnonsee, Yannawa, Bangkok.

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SAMPLE/ATTACHMENT PICTURE



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

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