

COSMO GROUP ASIA

| Technical Report: Date Received: | (8816)228-0160 Aug 15, 2016 | | Aug 24, 2016 Page 1 of 6 |
|---|---------------------------------------|---------------------|-----------------------------|
| COSMO GROUP ASIA 2508 PACIFIC PLAZA 41 | 0 DES VOEUX RD WEST | | |
| Sample Description: | LUNCH BAG | | |
| Vendor: | N/A | Sample Size: | N/A |
| Manufacturer: | N/A | Style No(s): | N/A |
| Buyer: | N/A | SKN/SKU No.: | N/A |
| Labeled Age Grade: | N/A | PO No.: | N/A |
| Appropriate Age Grade: | N/A | Ref #: | N/A |
| Client Specified Age Grade: | 3+ | Country of Origin: | N/A |
| Tested Age Grade: UPC Code: | N/A N/A | Assortment No.: | N/A |
| Test Starting Date: | AUG 15, 2016 | Test Finished Date: | AUG 24, 2016 |

EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- Overall Migration Test for Plastic Materials in Contact with Foodstuffs Commission Regulation (EU) No. 10/2011 and Its Amendments.
- Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs Commission Regulation (EU) No. 10/2011 and Its Amendments.
- Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs Draft Amendment of Commission Regulation (EU) No 10/2011.

BUREAU VERITAS SHENZHEN CO.,LTD DONGGUAN BRANCH

Harvey Xue Assistant Manager, Analytical Lab

RT/ML

<u>REMARK</u>

If there are questions or concerns on this report, please contact the following persons: Report Enquiry: (86) 0769 85935656 Ext. 8819 CPSAnalytical.DG@cn.bureauveritas.com Business Contact: (86) 0769 85893595 This report shall not be reproduced except in full, without the written approval of our laboratory.

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Tested Component(s) Description List:

| Test Item(s) | Item / Component Description(s) | Location(s) | Style(s) | Client Claimed Material |
|--------------|---------------------------------|--------------|----------|----------------------------|
| 1001 | Grey plastic | Lining | - | PVEA |
| 1002 | Black plastic | Mesh pocket | - | Polyester |
| 1003 | Black plastic | Elastic band | - | Polyester |



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RESULTS:

<u>Overall Migration Test for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No.</u> <u>10/2011 and Its Amendments</u>

Test Condition: OM 3: 2 h at 70 °C (3% Acetic acid)

| | | Re | sult | Maximum | Analytical Tolerance |
|---------------------------|--------------------|------|------|-----------------|-------------------------|
| Simulant Used | Unit | 1001 | 1002 | Allowable Limit | |
| Food contact surface area | dm ² | 0.6 | 0.6 | - | - |
| Volume of stimulant used | mL | 100 | 100 | - | - |
| 3% Acetic acid | mg/dm ² | <5 | <5 | 10 | +2 |
| Conclusion | - | PASS | PASS | - | - |

| | | Result | Maximum | Analytical | |
|---------------------------|--------------------|--------|-----------------|------------|--|
| Simulant Used | Unit | 1003 | Allowable Limit | Tolerance | |
| Food contact surface area | dm ² | 0.6 | - | - | |
| Volume of stimulant used | mL | 100 | - | - | |
| 3% Acetic acid | mg/dm ² | <5 | 10 | +2 | |
| Conclusion | - | PASS | - | - | |

Note: "<" = less than mg/dm² = milligram per square decimeter

Method: EN 1186-1: 2002;

2) For article intended for repeated use, the migration tests are carried out three times on the same test sample and the third test result is shown in result table.

3) The test simulation was specified by client

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.



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RESULTS:

<u>Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Commission Regulation</u> (EU) No. 10/2011 and Its Amendments

Test Condition: 24 h at 40 °C (3% Acetic acid)

| | Simulant | Unit | Re | sult | Maximum |
|---------------------------|----------------|-----------------|---------|---------|-----------------|
| Parameter | Used | | 1001 | 1002 | Allowable Limit |
| Food contact surface area | - | dm ² | 0.6 | 0.6 | - |
| Volume of stimulant used | - | mL | 100 | 100 | - |
| Barium (Ba) | 3% Acetic acid | mg/kg | <0.1 | <0.1 | 1 |
| Cobalt (Co) | 3% Acetic acid | mg/kg | < 0.005 | < 0.005 | 0.05 |
| Copper (Cu) | 3% Acetic acid | mg/kg | <0.5 | <0.5 | 5 |
| Iron (Fe) | 3% Acetic acid | mg/kg | <5 | <5 | 48 |
| Lithium (Li) | 3% Acetic acid | mg/kg | <0.1 | <0.1 | 0.6 |
| Manganese (Mn) | 3% Acetic acid | mg/kg | <0.1 | <0.1 | 0.6 |
| Zinc (Zn) | 3% Acetic acid | mg/kg | <3 | <3 | 25 |
| Conclusion | - | - | PASS | PASS | - |

| _ | Simulant | | Result | Maximum |
|---------------------------|----------------|-----------------|--------|-----------------|
| Parameter | Used | Unit | 1003 | Allowable Limit |
| Food contact surface area | - | dm ² | 0.6 | - |
| Volume of stimulant used | - | mL | 100 | - |
| Barium (Ba) | 3% Acetic acid | mg/kg | <0.1 | 1 |
| Cobalt (Co) | 3% Acetic acid | mg/kg | <0.005 | 0.05 |
| Copper (Cu) | 3% Acetic acid | mg/kg | <0.5 | 5 |
| Iron (Fe) | 3% Acetic acid | mg/kg | <5 | 48 |
| Lithium (Li) | 3% Acetic acid | mg/kg | <0.1 | 0.6 |
| Manganese (Mn) | 3% Acetic acid | mg/kg | <0.1 | 0.6 |
| Zinc (Zn) | 3% Acetic acid | mg/kg | <3 | 25 |
| Conclusion | - | - | PASS | - |

Note: "<" = less than

mg/kg = milligram per kilogram

* Zn limit is 5 mg/kg in Draft amendment of Commission Regulation (EU) No 10/2011.

Method: EN 13130-1: 2004 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP).

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.

2) For article intended for repeated use, the migration tests are carried out three times on the same test sample and the third test result is shown in result table.



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RESULTS:

<u>Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Draft Amendment of</u> <u>Commission Regulation (EU) No 10/2011</u>

Test Condition: 24 h at 40 °C (3% Acetic acid)

| | Simulant | Unit | Res | sult | Maximum Allowable Limit |
|---------------------------|----------------|-----------------|--------|--------|----------------------------|
| Parameter | Used | | 1001 | 1002 | |
| Food contact surface area | - | dm ² | 0.6 | 0.6 | - |
| Volume of stimulant used | - | mL / g | 100 | 100 | - |
| Aluminum (Al) | 3% Acetic acid | mg/kg | <0.1 | <0.1 | 1 |
| Nickel (Ni) | 3% Acetic acid | mg/kg | <0.002 | <0.002 | 0.02 |
| Conclusion | - | - | PASS | PASS | - |

| | Simulant | | Result | Maximum |
|---------------------------|----------------|-----------------|--------|-----------------|
| Parameter | Used | Unit | 1003 | Allowable Limit |
| Food contact surface area | - | dm ² | 0.6 | - |
| Volume of stimulant used | - | mL/g | 100 | - |
| Aluminum (Al) | 3% Acetic acid | mg/kg | <0.1 | 1 |
| Nickel (Ni) | 3% Acetic acid | mg/kg | <0.002 | 0.02 |
| Conclusion | - | - | PASS | - |

Note: "<" = less than

mg/kg = milligram per kilogram

Method: EN 13130-1: 2004 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP).

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RESULTS:



END OF REPORT