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Applicant: Mid Ocean Brands B.V.

Address: 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

The following sample(s) and sample information was/were submitted and identified by client as:

Sample Name:

RPET bottle

Model/Style/Item #:

MO6467

Receiving Date:

16-Nov-2021

**Test Period:** 

From 16-Nov-2021 to 24-Nov-2021

**Add Information:** 

### **Test Summary:**

| # | Test Item(s)   | Reference Standard/Method                                 | Result |
|---|--|---|--------|
| 1 | Phthalate content (DIBP、DEHP、DBP、BBP、DINP、DIDP、DNOP) -Item 51&52 of Annex XVII of REACH Regulation (EC) 1907/2006. | EN 14372:2004 & IEC 62321-<br>8:2017, determined by GC-MS | PASS   |
| 2 | Cadmium content -Item 23 of Annex XVII of REACH Regulation (EC) 1907/2006  | IEC 62321-5:2013,<br>determined by AAS                    | PASS   |
| 3 | Total Lead content -Item 63 of Annex XVII of REACH Regulation (EC) 1907/2006                                       | IEC 62321-5:2013,<br>determined by AAS                    | PASS   |

Signed for and on behalf of STS

Tim Qi
(Technical Director)







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| #  | Test Item(s)  | Reference Standard/Method                    | Result |
|----|---|--|--------|
| 4  | Overall migration for Plastic Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, the Commission Regulation (EU) No 10/2011 and its amendment (EU)2020/1245                            | EN 1186-1:2002 & EN 1186-<br>3:2002          | PASS   |
| 5  | Specific migration of Heavy Metal for Plastic Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, the Commission Regulation (EU) No 10/2011 and its amendment (EU)2020/1245            | EN 13130-1: 2004,<br>determined by ICP-OES   | PASS   |
| 6  | Specific migration of Primary Aromatic Amine for Plastic Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, the Commission Regulation (EU) No 10/2011 and its amendment (EU)2020/1245 | EN 13130-1:2004,<br>determined by GC/MS      | PASS   |
| 7  | Specific migration of Bisphenol A for Plastic Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, the Commission Regulation (EU) No 10/2011 and its amendment (EU)2020/1245            | DD CEN/TS 13130-13:2005, determined by LC-MS | PASS   |
| 8  | Overall Migration for Silicone Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, French Decree 2007-766 and French Order 25/11/1992  | EN 1186-1:2002 & EN 1186-<br>3:2002          | PASS   |
| 9  | Volatile Compounds Content for Silicone Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004,French Decree 2007-766 and French Order 25/11/1992  | Order 25/11/1992                             | PASS   |
| 10 | Peroxide Value for Silicone Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, French Decree 2007-766 and French Order 25/11/1992   | French pharmacopoeia method                  | PASS   |
| 11 | Organotin Content for Silicone Materials in Contact with Foodstuffs - Regulation (EC) No 1935/2004, French Decree 2007-766 and French Order 25/11/1992  | EN 13130-1:2004,determined by ICP-OES        | PASS   |
| 12 | Bisphenol A Content - French Law No. 2012-1442  | In-house Method,determined by LC-MS          | PASS   |
| 13 | Dishwasher safe test (complied with the specification of dishwasher safe test according to PAS 54:2003)   | BS EN 12875-1:2005                           | PASS   |







### Result:

#### Phthalate content (DIBP、DEHP、DBP、BBP、DINP、DIDP、DNOP) EN 14372:2004 & IEC 62321-8:2017, determined by GC-MS

|   |                   |  |      | Material |      | Limit   | RL       |
|---|-------------------|--|------|----------|------|---------|----------|
|   |                   | Compound                                     | 1    | 2+3+5    | 4    | (%)     | (%)      |
| 1 | DBP               | Dibutyl Phthalate<br>CAS# 84-74-2            | N.D. | N.D.     | N.D. | -       | 0.005    |
| 2 | BBP               | Benzylbutyl Phthalate<br>CAS# 85-68-7        | N.D. | N.D.     | N.D. | -       | 0.005    |
| 3 | DEHP              | Bis-(2-ethylhexyl)Phthalate<br>CAS# 117-81-7 | N.D. | N.D.     | N.D. | -       | 0.005    |
| 4 | DIBP              | Diisobutyl phthalate<br>CAS# 84-69-5         | N.D. | N.D.     | N.D. | <u></u> | 0.005    |
| 5 | DNOP              | Di-n-octyl phthalate<br>CAS# 117-84-0        | N.D. | N.D.     | N.D. | -       | 0.005    |
| 6 | DINP              | Di-iso-nonyl phthalate<br>CAS# 28553-12-0    | N.D. | N.D.     | N.D. | -       | 0.005    |
| 7 | DIDP              | Diisodecyl phthalate<br>CAS# 26761-40-0      | N.D. | N.D.     | N.D. | - /     | 0.005    |
| 8 | Sum of            | 1, 2, 3 & 4                                  | N.D. | N.D.     | N.D. | 0.1     | <u> </u> |
| 9 | 9 Sum of 5, 6 & 7 |  | N.D. | N.D.     | N.D. | 0.1     | -        |
|   | Conclu            | sion   | PASS | PASS     | PASS | -       | -        |

Remark(s): (a) RL: Report limit

(b) N.D.: Not detected (result is less than RL)

#### 2. **Cadmium content**

IEC 62321-5:2013, determined by AAS

| Compound |                               |      | Material |      | Limit   | RL      |
|----------|-------------------------------|------|----------|------|---------|---------|
|          |                               | 1    | 2+3+5    | 4    | (mg/kg) | (mg/kg) |
| 1        | Cadmium (Cd)<br>CAS#7440-43-9 | N.D. | N.D.     | N.D. | 100     | 10      |
|          | Conclusion                    | PASS | PASS     | PASS | -       | -       |

Remark(s): (a) mg/kg: milligram per kilogram (b) RL: Report limit

(c) N.D.: Not detected (result is less than RL)



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### **Total Lead content**

IEC 62321-5:2013, determined by AAS

| Compound |                           |      | Material |      | Limit   | RL      |
|----------|---------------------------|------|----------|------|---------|---------|
|          |                           | 1    | 2+3+5    | 4    | (mg/kg) | (mg/kg) |
| 1        | Lead(Pb)<br>CAS#7439-92-1 | N.D. | N.D.     | N.D. | 500     | 10      |
|          | Conclusion                | PASS | PASS     | PASS | -       | -       |

Remark(s): (a) mg/kg: milligram per kilogram

(b) RL: Report limit (c) N.D.: Not detected (result is less than RL)

## Overall migration for Plastic Materials in Contact with Foodstuffs EN 1186-1:2002 & EN 1186-3:2002

|                    |                          |      | Material        |                 |                   |                |
|--------------------|--------------------------|------|-----------------|-----------------|-------------------|----------------|
| Test specification |                          |      | 2               |                 | Limit<br>(mg/dm²) | RL<br>(mg/dm²) |
|                    |                          |      | 2 <sup>nd</sup> | 3 <sup>rd</sup> | , , ,             |                |
| 1                  | 10%Ethanol, 70℃, 2h      | N.D. | N.D.            | N.D.            | 10                | 3              |
| 2                  | 3%acetic acid , 70℃ , 2h | N.D. | N.D.            | N.D.            | 10                | 3              |
|                    | Conclusion               | -    | -               | PASS            | -                 | -              |

|                    |                           |                 | Material        |                 |                   |                |  |
|--------------------|---------------------------|-----------------|-----------------|-----------------|-------------------|----------------|--|
| Test specification |                           |                 | 3               |                 | Limit<br>(mg/dm²) | RL<br>(mg/dm²) |  |
|                    |                           | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                   |                |  |
| 1                  | 10%Ethanol, 70℃, 2h       | N.D.            | N.D.            | N.D.            | 10                | 3              |  |
| 2                  | 3%acetic acid , 70°C , 2h | N.D.            | N.D.            | N.D.            | 10                | 3              |  |
|                    | Conclusion                | -               | -               | PASS            | -                 | -              |  |



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| Test specification |                          |                 | Material        |                 |                   |                |  |
|--------------------|--------------------------|-----------------|-----------------|-----------------|-------------------|----------------|--|
|                    |                          |                 | 4               |                 | Limit<br>(mg/dm²) | RL<br>(mg/dm²) |  |
|                    |                          | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                   |                |  |
| 1                  | 10%Ethanol, 70°C , 2h    | N.D.            | N.D.            | N.D.            | 10                | 3              |  |
| 2                  | 3%acetic acid , 70℃ , 2h | N.D.            | N.D.            | N.D.            | 10                | 3              |  |
|                    | Conclusion               | -               | -               | PASS            | -                 | -              |  |

|   |                          |                 | Material        |                 | Limit      |                |
|---|--------------------------|-----------------|-----------------|-----------------|------------|----------------|
|   | Test specification       |                 | 5               |                 |            | RL<br>(mg/dm²) |
|   |                          | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | _ (mg/dm²) |                |
| 1 | 10%Ethanol, 70℃ , 2h     | N.D.            | N.D.            | N.D.            | 10         | 3              |
| 2 | 3%acetic acid , 70℃ , 2h | N.D.            | N.D.            | N.D.            | 10         | 3              |
|   | Conclusion               | -               | -               | PASS            | -          | -              |

Remark(s): (a) mg/dm<sup>2</sup>: milligram square decimetre

(b) RL: Report limit (c) N.D.: Not detected (result is less than RL)

# Specific migration of Heavy Metal for Plastic Materials in Contact with Foodstuffs EN 13130-1: 2004, determined by ICP-OES

Test condition: 3% acetic acid, 70 °C , 2h

|   |               |                 | Material        |                  | 1.514           | DI    |
|---|---------------|-----------------|-----------------|------------------|-----------------|-------|
|   | Compound      |                 | 2               | Limit<br>(mg/kg) | RL<br>(mg/kg)   |       |
|   |               | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup>  |                 | , , , |
| 1 | Aluminum (Al) | N.D.            | N.D.            | N.D.             | 1               | 0.1   |
| 2 | Ammonium      | N.D.            | N.D.            | N.D.             | -               | 0.1   |
| 3 | Antimony (Sb) | N.D.            | N.D.            | N.D.             | 0.04            | 0.01  |
| 4 | Arsenic (As)  | N.D.            | N.D.            | N.D.             | Not<br>Detected | 0.01  |
| 5 | Barium (Ba)   | N.D.            | N.D.            | N.D.             | 1               | 0.1   |



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| 6  | Cadmium(Cd)     | N.D. | N.D. | N.D. | Not<br>Detected | 0.002 |
|----|-----------------|------|------|------|-----------------|-------|
| 7  | Calcium(Ca)     | N.D. | N.D. | N.D. |                 | 0.1   |
| 8  | Chromium (Cr)   | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 9  | Cobalt (Co)     | N.D. | N.D. | N.D. | 0.05            | 0.01  |
| 10 | Copper (Cu)     | N.D. | N.D. | N.D. | 5               | 0.5   |
| 11 | Europium (Eu)   | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 12 | Gadolinium (Gd) | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 13 | Iron (Fe)       | N.D. | N.D. | N.D. | 48              | 1     |
| 14 | Lanthanum (La)  | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 15 | Lead(Pb)        | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 16 | Lithium (Li)    | N.D. | N.D. | N.D. | 0.6             | 0.1   |
| 17 | Magnesium(Mg)   | N.D. | N.D. | N.D. | - (             | 0.1   |
| 18 | Manganese (Mn)  | N.D. | N.D. | N.D. | 0.6             | 0.05  |
| 19 | Mercury(Hg)     | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 20 | Nickel (Ni)     | N.D. | N.D. | N.D. | 0.02            | 0.01  |
| 21 | Potassium(K)    | N.D. | N.D. | N.D. | -               | 0.1   |
| 22 | Sodium(Na)      | N.D. | N.D. | N.D. | -               | 0.1   |
| 23 | Terbium (Tb)    | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 24 | Zinc (Zn)       | N.D. | N.D. | N.D. | 5               | 1     |
|    | Conclusion      | -    | -    | PASS | -               | -     |

| Compound |               |                 | Material        |                 | 1 : :4           | DI.           |
|----------|---------------|-----------------|-----------------|-----------------|------------------|---------------|
|          |               |                 | 3               |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|          |               | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                  |               |
| 1        | Aluminum (Al) | N.D.            | N.D.            | N.D.            | 1                | 0.1           |
| 2        | Ammonium      | N.D.            | N.D.            | N.D.            | -                | 0.1           |



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| 3  | Antimony (Sb)   | N.D. | N.D. | N.D. | 0.04            | 0.01  |
|----|-----------------|------|------|------|-----------------|-------|
| 4  | Arsenic (As)    | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 5  | Barium (Ba)     | N.D. | N.D. | N.D. | 1               | 0.1   |
| 6  | Cadmium(Cd)     | N.D. | N.D. | N.D. | Not<br>Detected | 0.002 |
| 7  | Calcium(Ca)     | N.D. | N.D. | N.D. | -               | 0.1   |
| 8  | Chromium (Cr)   | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 9  | Cobalt (Co)     | N.D. | N.D. | N.D. | 0.05            | 0.01  |
| 10 | Copper (Cu)     | N.D. | N.D. | N.D. | 5               | 0.5   |
| 11 | Europium (Eu)   | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 12 | Gadolinium (Gd) | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 13 | Iron (Fe)       | N.D. | N.D. | N.D. | 48              | 1     |
| 14 | Lanthanum (La)  | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 15 | Lead(Pb)        | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 16 | Lithium (Li)    | N.D. | N.D. | N.D. | 0.6             | 0.1   |
| 17 | Magnesium(Mg)   | N.D. | N.D. | N.D. | -               | 0.1   |
| 18 | Manganese (Mn)  | N.D. | N.D. | N.D. | 0.6             | 0.05  |
| 19 | Mercury(Hg)     | N.D. | N.D. | N.D. | Not<br>Detected | 0.01  |
| 20 | Nickel (Ni)     | N.D. | N.D. | N.D. | 0.02            | 0.01  |
| 21 | Potassium(K)    | N.D. | N.D. | N.D. |                 | 0.1   |
| 22 | Sodium(Na)      | N.D. | N.D. | N.D. | <u></u>         | 0.1   |
| 23 | Terbium (Tb)    | N.D. | N.D. | N.D. | 0.05*           | 0.01  |
| 24 | Zinc (Zn)       | N.D. | N.D. | N.D. | 5               | 1     |
|    | Conclusion      | -    | -    | PASS | -               | -     |





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|    |                 | Material        |                 |                 |                  |               |
|----|-----------------|-----------------|-----------------|-----------------|------------------|---------------|
|    | Compound        |                 | 4               |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|    |                 | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                  | , , ,         |
| 1  | Aluminum (Al)   | N.D.            | N.D.            | N.D.            | 1                | 0.1           |
| 2  | Ammonium        | N.D.            | N.D.            | N.D.            | -                | 0.1           |
| 3  | Antimony (Sb)   | N.D.            | N.D.            | N.D.            | 0.04             | 0.01          |
| 4  | Arsenic (As)    | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 5  | Barium (Ba)     | N.D.            | N.D.            | N.D.            | 1                | 0.1           |
| 6  | Cadmium(Cd)     | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.002         |
| 7  | Calcium(Ca)     | N.D.            | N.D.            | N.D.            | -                | 0.1           |
| 8  | Chromium (Cr)   | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 9  | Cobalt (Co)     | N.D.            | N.D.            | N.D.            | 0.05             | 0.01          |
| 10 | Copper (Cu)     | N.D.            | N.D.            | N.D.            | 5                | 0.5           |
| 11 | Europium (Eu)   | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
| 12 | Gadolinium (Gd) | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
| 13 | Iron (Fe)       | N.D.            | N.D.            | N.D.            | 48               | 1             |
| 14 | Lanthanum (La)  | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
| 15 | Lead(Pb)        | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 16 | Lithium (Li)    | N.D.            | N.D.            | N.D.            | 0.6              | 0.1           |
| 17 | Magnesium(Mg)   | N.D.            | N.D.            | N.D.            | <b>E</b> \-      | 0.1           |
| 18 | Manganese (Mn)  | N.D.            | N.D.            | N.D.            | 0.6              | 0.05          |
| 19 | Mercury(Hg)     | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 20 | Nickel (Ni)     | N.D.            | N.D.            | N.D.            | 0.02             | 0.01          |
| 21 | Potassium(K)    | N.D.            | N.D.            | N.D.            | - (              | 0.1           |
| 22 | Sodium(Na)      | N.D.            | N.D.            | N.D.            | -                | 0.1           |
| 23 | Terbium (Tb)    | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
|    |                 |                 | 1               | 1000            | 1                | L             |



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|    | Conclusion | -    | - TV.D. | PASS | - | <u> </u> |
|----|------------|------|---------|------|---|----------|
| 24 | Zinc (Zn)  | N.D. | N.D.    | N.D. | 5 | 1        |

|    |                 |                 | Material        |                 |                  | RL<br>(mg/kg) |
|----|-----------------|-----------------|-----------------|-----------------|------------------|---------------|
|    | Compound        |                 | 5               |                 | Limit<br>(mg/kg) |               |
|    |                 | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                  |               |
| 1  | Aluminum (Al)   | N.D.            | N.D.            | N.D.            | 1                | 0.1           |
| 2  | Ammonium        | N.D.            | N.D.            | N.D.            | -                | 0.1           |
| 3  | Antimony (Sb)   | N.D.            | N.D.            | N.D.            | 0.04             | 0.01          |
| 4  | Arsenic (As)    | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 5  | Barium (Ba)     | N.D.            | N.D.            | N.D.            | 1                | 0.1           |
| 6  | Cadmium(Cd)     | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.002         |
| 7  | Calcium(Ca)     | N.D.            | N.D.            | N.D.            | - (              | 0.1           |
| 8  | Chromium (Cr)   | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 9  | Cobalt (Co)     | N.D.            | N.D.            | N.D.            | 0.05             | 0.01          |
| 10 | Copper (Cu)     | N.D.            | N.D.            | N.D.            | 5                | 0.5           |
| 11 | Europium (Eu)   | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
| 12 | Gadolinium (Gd) | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
| 13 | Iron (Fe)       | N.D.            | N.D.            | N.D.            | 48               | 1             |
| 14 | Lanthanum (La)  | N.D.            | N.D.            | N.D.            | 0.05*            | 0.01          |
| 15 | Lead(Pb)        | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 16 | Lithium (Li)    | N.D.            | N.D.            | N.D.            | 0.6              | 0.1           |
| 17 | Magnesium(Mg)   | N.D.            | N.D.            | N.D.            | -                | 0.1           |
| 18 | Manganese (Mn)  | N.D.            | N.D.            | N.D.            | 0.6              | 0.05          |
| 19 | Mercury(Hg)     | N.D.            | N.D.            | N.D.            | Not<br>Detected  | 0.01          |
| 20 | Nickel (Ni)     | N.D.            | N.D.            | N.D.            | 0.02             | 0.01          |



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|    | Conclusion   | -    | -    | PASS | -     | -    |
|----|--------------|------|------|------|-------|------|
| 24 | Zinc (Zn)    | N.D. | N.D. | N.D. | 5     | 1    |
| 23 | Terbium (Tb) | N.D. | N.D. | N.D. | 0.05* | 0.01 |
| 22 | Sodium(Na)   | N.D. | N.D. | N.D. |       | 0.1  |
| 21 | Potassium(K) | N.D. | N.D. | N.D. | -     | 0.1  |

Remark(s): (a) mg/kg: milligram per kilogram

(b) RL: Report limit

(c) N.D.: Not detected (result is less than RL)

(d) The sum of all lanthanide substances migrating to the food or food simulant does not exceed the specific migration limit of 0,05 mg/kg

## 6. Specific migration of Primary Aromatic Amine for Plastic Materials in Contact with Foodstuffs EN 13130-1:2004, determined by GC/MS

Test condition: 3% acetic acid, 70  $^{\circ}$ C , 2h

| Compound |                                | Material        |                 |                 | Limit (mg/kg) |               |
|----------|--------------------------------|-----------------|-----------------|-----------------|---------------|---------------|
|          |                                | 2               |                 |                 |               | RL<br>(mg/kg) |
|          |                                | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | , , ,         |               |
| 1        | Primary Aromatic<br>Amine(PAA) | N.D.            | N.D.            | N.D.            | 0.01          | 0.002         |
|          | Conclusion                     | -               | -               | PASS            | -             | -             |

| Compound |                                |                 | Material        |                 |                  |               |
|----------|--------------------------------|-----------------|-----------------|-----------------|------------------|---------------|
|          |                                | 3               |                 |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|          |                                | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | , , ,            |               |
| 1        | Primary Aromatic<br>Amine(PAA) | N.D.            | N.D.            | N.D.            | 0.01             | 0.002         |
|          | Conclusion                     | -               | -               | PASS            | -                | -             |

|          | 1 88       |               |                                |      |                  |               |
|----------|------------|---------------|--------------------------------|------|------------------|---------------|
| Compound |            | Material<br>4 |                                |      | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|          |            |               |                                |      |                  |               |
|          |            | 1             | Primary Aromatic<br>Amine(PAA) | N.D. | N.D.             | N.D.          |
|          | Conclusion | -             | -                              | PASS | -                | -             |



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| Compound |                                | Material        |                 |                 |                  |               |
|----------|--------------------------------|-----------------|-----------------|-----------------|------------------|---------------|
|          |                                | 5               |                 |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|          |                                | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | , , ,            |               |
| 1        | Primary Aromatic<br>Amine(PAA) | N.D.            | N.D.            | N.D.            | 0.01             | 0.002         |
|          | Conclusion                     | -               | -               | PASS            | -                | -             |

Remark(s): (a) mg/kg: milligram per kilogram (b) RL: Report limit

(c) N.D.: Not detected (result is less than RL)

(d) 22 PAAs in entry 43 to Appendix 8 of REACH Annex XVII and 1 PAA in Table 1 of Annex I of (EU) No 10/2011 not exceed 0,002 mg/kg each; The sum of other PAAs not exceed 0,01 mg/kg

#### Specific migration of Bisphenol A for Plastic Materials in Contact with Foodstuffs 7. DD CEN/TS 13130-13:2005, determined by LC-MS

Test Condition: 3%Acetic acid, 70°C, 2h

| Compound |                   |                 | Material        |                 |                  |               |
|----------|-------------------|-----------------|-----------------|-----------------|------------------|---------------|
|          |                   | 2               |                 |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|          |                   | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                  |               |
| 1        | Bisphenol A (BPA) | N.D.            | N.D.            | N.D.            | 0.005            | 0.01          |
|          | Conclusion        | -               | -               | PASS            | -                | -             |

| Compound |                   | Material        |                 |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|----------|-------------------|-----------------|-----------------|-----------------|------------------|---------------|
|          |                   | 3               |                 |                 |                  |               |
|          |                   | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | , , ,            |               |
| 1        | Bisphenol A (BPA) | N.D.            | N.D.            | N.D.            | 0.005            | 0.01          |
|          | Conclusion        | -               | -               | PASS            | -                | -             |



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|          |                   | Material        |                 |                 |                  |               |
|----------|-------------------|-----------------|-----------------|-----------------|------------------|---------------|
| Compound |                   | 5               |                 |                 | Limit<br>(mg/kg) | RL<br>(mg/kg) |
|          |                   | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |                  |               |
| 1        | Bisphenol A (BPA) | N.D.            | N.D.            | N.D.            | 0.005            | 0.01          |
|          | Conclusion        | -               | -               | PASS            | -                | -             |

Remark(s): (a) mg/kg: milligram per kilogram

(b) RL: Report limit

(c) N.D.: Not detected (result is less than RL)

### 8. Overall Migration for Silicone Materials in Contact with Foodstuffs EN 1186-1:2002 & EN 1186-3:2002

| Test specification |                           | Material<br>1 | Limit<br>(mg/dm²) | RL<br>(mg/dm²) |
|--------------------|---------------------------|---------------|-------------------|----------------|
| 1                  | 10%Ethanol, 70°C , 2h     | N.D.          | 10                | 3              |
| 2                  | 3%acetic acid , 70°C , 2h | 3.41          | 10                | 3              |
|                    | Conclusion                | PASS          | -                 | -              |

Remark(s): (a) mg/dm<sup>2</sup>: milligram square decimetre

(b) RL: Report limit

(c) N.D.: Not detected (result is less than RL)

### 9. Volatile Compounds Content for Silicone Materials in Contact with Foodstuffs Order 25/11/1992

Test condition: 200 °C, 4h

| Commonad |                    | Material | Limit | RL  |
|----------|--------------------|----------|-------|-----|
|          | Compound           | 1        | (%)   | (%) |
| 1        | Volatile Compounds | 0.11     | 0.5   | 0.1 |
|          | Conclusion         | PASS     | -     | -   |

Remark(s): (a) RL: Report limit



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#### Peroxide Value for Silicone Materials in Contact with Foodstuffs 10. French pharmacopoeia method

| Compound |                | Material | Doguiroment |
|----------|----------------|----------|-------------|
|          |                | 1        | Requirement |
| 1        | Peroxide Value | Negative | Negative    |
|          | Conclusion     | PASS     | -           |

### **Organotin Content for Silicone Materials in Contact with Foodstuffs** EN 13130-1:2004, determined by ICP-OES

Test condition: 70°C, 2h

| Compound |                  | Material | Limit       | RL      |
|----------|------------------|----------|-------------|---------|
|          |                  | 1        | (mg/kg) (mg | (mg/kg) |
| 1        | Organotin(as Sn) | N.D.     | 0.1         | 0.01    |
|          | Conclusion       | PASS     | -           | -       |

Remark(s): (a) mg/kg: milligram per kilogram

(b) RL: Report limit
(c) N.D.: Not detected (result is less than RL)

#### 12. Bisphenol A Content for Silicone Materials in Contact with Foodstuffs In-house Method, determined by LC-MS

| Compound |             |      | Mate | Material |          | RL      |
|----------|-------------|------|------|----------|----------|---------|
|          |             |      | 1    | 4        | (mg/kg)  | (mg/kg) |
| 1        | Bisphenol A |      | N.D. | N.D.     | Prohibit | 0.1     |
|          | Conclusion  | PASS |      |          | -        | -       |

Remark(s): (a) mg/kg: milligram per kilogram

(b) RL: Report limit

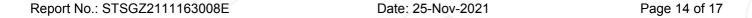
(c) N.D.: Not detected (result is less than RL)

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#### 13. Dishwasher safe test BS EN 12875-1:2005

|                | Sample   | RPET bottle |  |
|----------------|--|-------------|--|
|                | Color <sup>1)</sup>                                    | 0           |  |
|                | Gloss  | 0           |  |
| After 5 cycles | Clouding   | 0           |  |
|                | Resistant deposits and iridescent layers <sup>2)</sup> | 0           |  |
|                | Other aspects  | 0           |  |

1). If several colours are present on one article to be inspected, the colour with the greatest change shall be chosen.

2). For the elimination of easily removable deposits. 3). See photo bar for test photos

Note: Pictures are for reference only. Actual colours of the pictures may vary due to lighting and output process. Evaluation of inspection criteria quoted from BS EN 12875-1:2005.

| Classification | Rating                   |  |
|----------------|--------------------------|--|
| 0              | No visible change        |  |
| 1              | First discernible change |  |
| 2              | Clearly visible change   |  |

Requirements quoted from Publicly Available Specification PAS 54: 2003

Articles that are designated "dishwasher resistant", "dishwasher proof", "dishwasher safe" or any other similar description that suggests that the articles can be safety cleaned in a dishwasher shall, either show no visible

change compared with untreated tableware (Classification 0) or show very slightly visible change(Classification 1) but shall not show clearly visible change (Classification 2)

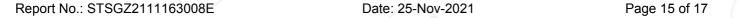
### **Material List:**

Remark(s):

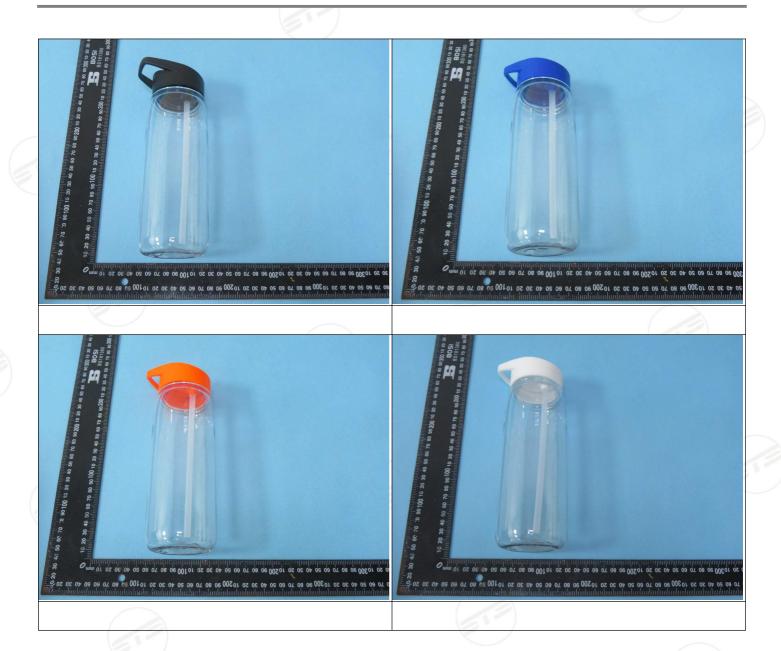
| Material # | Position / Sample Description             | Material |
|------------|---|----------|
| 1          | Translucent silicone, washer              | Silicone |
| 2          | Black plastic, cover                      | PP       |
| 3          | Translucent black plastic, suction nozzle | PS       |
| 4          | Translucent soft plastic, straw           | PE       |
| 5          | Transparent plastic, body                 | RPET     |

Remark(s): (a)The test material point is selected by client, the chemical test conclusions in the report only apply to the test material.





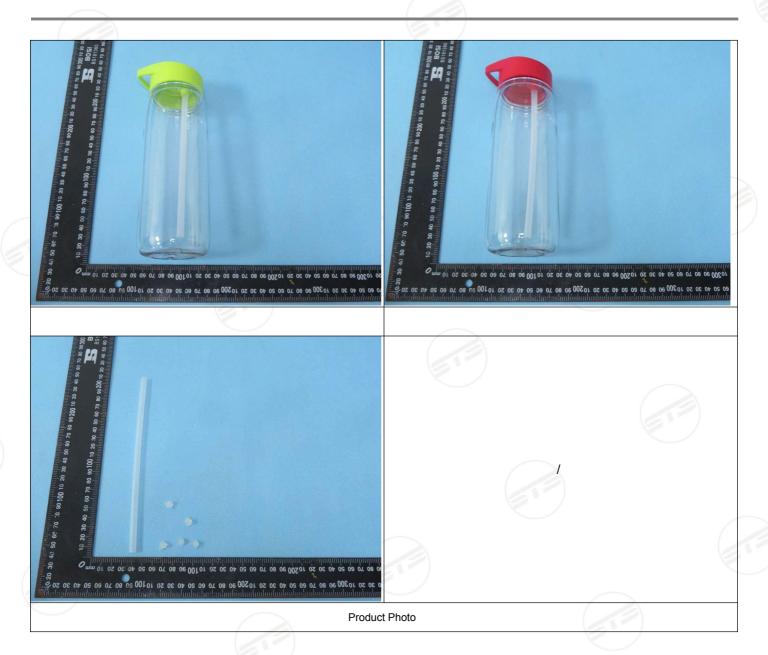
### Photo(s):







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<<< <<< END OF REPORT >>> >>>



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