# Test Report

| | |
|---|---|
| Report No. | : AGC05443231224-001S1 |

| | | |
|---|---|---|
| **SAMPLE NAME** | : | Lanyard in RPET |
| **MODEL NAME** | : | MO6100 |
| **APPLICANT** | : | MID OCEAN BRANDS B.V. |
| **STANDARD(S)** | : | Please refer to the following page(s). |
| **DATE OF ISSUE** | : | Aug. 29, 2024 |

***Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd.***

| | | |
|---|---|---|
| Applicant | : | MID OCEAN BRANDS B.V. |
| Address | : | 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong. |
| Test Site | : | 6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China |

**Report on the submitted sample(s) said to be:**

| | | |
|---|---|---|
| Sample Name | : | Lanyard in RPET |
| Model | : | MO6100 |
| Vendor code | : | 115628 |
| Country of Origin | : | CHINA |
| Country of Destination | : | EUROPE |
| Sample Received Date | : | Dec. 20, 2023(Test point: 1-1 to 1-4)<br>Aug. 26, 2024(Test point: 1-5 to 1-9) |
| Testing Period | : | Dec. 20, 2023 to Dec. 28, 2023(Test point: 1-1 to 1-4)<br>Aug. 26, 2024 to Aug. 29, 2024(Test point: 1-5 to 1-9) |
| Test Requested | : | Selected test(s) as requested by client. |

| **Test Requested:** | **Conclusion** |
|---|---|
| Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63<br>- Lead(Pb) Content | Pass |
| Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23<br>-Cadmium(Cd) Content | Pass |
| Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52<br>- Phthalates Content | Pass |
| Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50<br>- Polycyclic-aromatic Hydrocarbons (PAHs) Content | Pass |
| Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 43<br>- Aromatic Amines Azodyes (AZO) Content | Pass |
| Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 27<br>- Nickel Release | Pass |
| - Colour fastness to rubbing | Pass |

Approved by: Leon

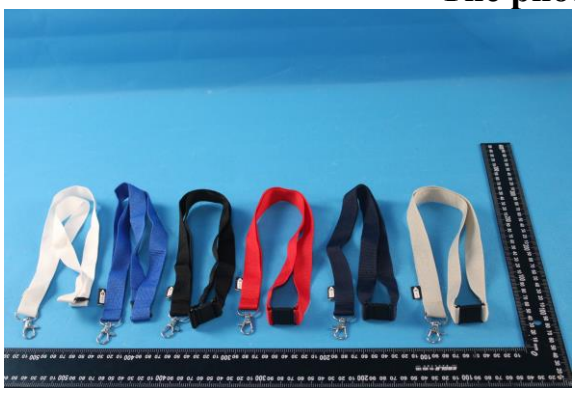
Suhongliang, Leon

Technical Director

Report Revise Record

| Report Version | Issued Date | Valid Version | Notes |
|---|---|---|---|
| / | Dec. 28, 2023 | Invalid | Initial release |
| S1 | Aug. 29, 2024 | Valid | Add test |

# The photo of the sample



The photo of AGC05443231224-001S1 is for use only with the original report.

**Test Point Description**

| Test point | Test point description |
|---|---|
| 1-1 | Grey webbing |
| 1-2 | Black plastic buckle |
| 1-3 | Metal D-buckle |
| 1-4 | Metal buckle |
| 1-5 | Rose red rope |
| 1-6 | Green rope |
| 1-7 | Fluorescent green rope |
| 1-8 | Blue rope |
| 1-9 | Orange rope |
| 1-5+1-6+1-7 | Rose red rope+Green rope+Fluorescent green rope |
| 1-8+1-9 | Blue rope+Orange rope |

**Test Results:**

Note: N.D.=Not Detected (less than method detection limit), MDL = Method Detection Limit, 1mg/kg=0.0001%

**Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63**

**- Lead(Pb) Content**

Test Methods and Equipment：IEC 62321-5:2013; ICP-OES

| Test Item(s) | Unit | Limit | MDL | Test Result(s) | |
|---|---|---|---|---|---|
| | | | | 1-1 | 1-2 |
| Lead(Pb) | mg/kg | 500 | 10 | N.D. | 43 |
| Conclusion | | | | Conformity | Conformity |

| Test Item(s) | Unit | Limit | MDL | Test Result(s) | |
|---|---|---|---|---|---|
| | | | | 1-3 | 1-4 |
| Lead(Pb) | mg/kg | 500 | 10 | 15 | 21 |
| Conclusion | | | | Conformity | Conformity |

| Test Item(s) | Unit | Limit | MDL | Test Result(s) | |
|---|---|---|---|---|---|
| | | | | 1-5+1-6+1-7 | 1-8+1-9 |
| Lead(Pb) | mg/kg | 500 | 10 | N.D. | N.D. |
| Conclusion | | | | Conformity | Conformity |

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-5+1-6+1-7,1-8+1-9

**Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23**

**-Cadmium(Cd) Content**

Test Methods and Equipment：IEC 62321-5:2013; ICP-OES

| Test Item(s) | Unit | Limit | MDL | Test Result(s) |
|---|---|---|---|---|
| | | | | 1-2 |
| Cadmium(Cd) | mg/kg | 100 | 10 | N.D. |
| Conclusion | | | | Conformity |

**Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52**

**- Phthalates Content**

Test Methods and Equipment：IEC 62321-8:2017; GC-MS

| Test Item(s) | Unit | Limit | MDL | Test Result(s) |
|---|---|---|---|---|
| | | | | 1-2 |
| Diisobutyl phthalate (DIBP)<br>CAS:84-69-5 | % | 0.1 | 0.005 | N.D. |
| Dibutyl phthalate (DBP)<br>CAS:84-74-2 | % | 0.1 | 0.005 | 0.007 |

| Test Item(s) | Unit | Limit | MDL | Test Result(s) |
|---|---|---|---|---|
| | | | | 1-2 |
| Butylbenzyl phthalate (BBP) CAS:85-68-7 | % | 0.1 | 0.005 | N.D. |
| Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7 | % | 0.1 | 0.005 | 0.019 |
| Di-n-octyl phthalate (DNOP) CAS:117-84-0 | % | / | 0.005 | N.D. |
| Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0 | % | / | 0.005 | 0.020 |
| Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1 | % | / | 0.005 | N.D. |
| Sum of DIBP +DBP+BBP+DEHP | % | 0.1 | / | 0.026 |
| Sum of DNOP+DINP+DIDP | % | 0.1 | / | 0.020 |
| Conclusion | | | | Conformity |

Limit requirements of Phthalates

| | |
|---|---|
| Toys and childcare articles | Each of DEHP, DBP, BBP, DIBP is less than 0.1% or the sum of DEHP+DBP+BBP+DIBP is less than 0.1% |
| Toys and childcare articles which can be placed in the mouth by children | The sum of DINP+DIDP+DNOP is less than 0.1% |

**Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50**

**- Polycyclic-aromatic Hydrocarbons (PAHs) Content**

Test Methods and Equipment：Afps GS 2019:01 PAK; GC-MS

| Test Item(s) | Unit | Limit | MDL | Test Result(s) |
|---|---|---|---|---|
| | | | | 1-2 |
| Benzo[a]pyrene(BaP) | mg/kg | 1 | 0.1 | N.D. |
| Benzo[e]pyrene(BeP) | mg/kg | 1 | 0.1 | N.D. |
| Benzo[a]anthracene(BaA) | mg/kg | 1 | 0.1 | N.D. |
| Benzo[b]fluoranthene(BbF) | mg/kg | 1 | 0.1 | N.D. |
| Benzo[j]fluoranthene(BjFA) | mg/kg | 1 | 0.1 | N.D. |
| Benzo[k]fluoranthene(BkF) | mg/kg | 1 | 0.1 | N.D. |
| Chrysene(CHR) | mg/kg | 1 | 0.1 | N.D. |
| Dibenzo[a,h]anthracene(DBA) | mg/kg | 1 | 0.1 | N.D. |
| Conclusion | | | | Conformity |

Limit requirements of Polycyclic-aromatic Hydrocarbons (PAHs) (Unit: mg/kg)

| Items | CAS No. | Extender oils or used for the production of tyres or parts of tyres | Any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity | Toys, including activity toys, and childcare articles, any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity |
|---|---|---|---|---|
| Benzo[a]pyrene(BaP) | 50-32-8 | ≤ 1 | ≤ 1 | ≤ 0.5 |
| Benzo[e]pyrene(BeP) | 192-97-2 | / | ≤ 1 | ≤ 0.5 |
| Benzo[a]anthracene(BaA) | 56-55-3 | / | ≤ 1 | ≤ 0.5 |
| Benzo[b]fluoranthene(BbF) | 205-99-2 | / | ≤ 1 | ≤ 0.5 |
| Benzo[j]fluoranthene(BjFA) | 205-82-3 | / | ≤ 1 | ≤ 0.5 |
| Benzo[k]fluoranthene(BkF) | 207-08-9 | / | ≤ 1 | ≤ 0.5 |
| Chrysene(CHR) | 218-01-9 | / | ≤ 1 | ≤ 0.5 |
| Dibenzo[a,h]anthracene(DBA) | 53-70-3 | / | ≤ 1 | ≤ 0.5 |
| Sum of BaP+ BeP+ BaA+ BbF+ BjFA+ BkF+ CHR+ DBA | / | ≤ 10 | / | / |

**Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 43**

**- Aromatic Amines Azodyes (AZO) Content**

Test Methods and Equipment：EN ISO 14362-1:2017; GC-MS

| Test Item(s) | Unit | Limit | MDL | Test Result(s) |
|---|---|---|---|---|
| | | | | 1-1 |
| 4-Aminobiphenyl CAS:92-67-1 | mg/kg | 30 | 5 | N.D. |
| Benzidine CAS:92-87-5 | mg/kg | 30 | 5 | N.D. |
| 4-Chloro-o-toluidine CAS:95-69-2 | mg/kg | 30 | 5 | N.D. |
| 2-Naphthylamine CAS:91-59-8 | mg/kg | 30 | 5 | N.D. |
| o-Aminoazotoluene CAS:97-56-3 | mg/kg | 30 | 5 | N.D. |
| 5-Nitro-o-toluidine CAS:99-55-8 | mg/kg | 30 | 5 | N.D. |
| p-Chloroaniline CAS:106-47-8 | mg/kg | 30 | 5 | N.D. |
| 4-Methoxy-m-phenylenediamine CAS:615-05-4 | mg/kg | 30 | 5 | N.D. |
| 4,4'-Diaminodiphenylmethane CAS:101-77-9 | mg/kg | 30 | 5 | N.D. |

| Test Item(s) | Unit | Limit | MDL | Test Result(s) |
|---|---|---|---|---|
| | | | | 1-1 |
| 3,3'-Dichlorobenzidine CAS:91-94-1 | mg/kg | 30 | 5 | N.D. |
| 3,3'-Dimethoxybenzidine CAS:119-90-4 | mg/kg | 30 | 5 | N.D. |
| 3,3'-Dimethybenzidine CAS:119-93-7 | mg/kg | 30 | 5 | N.D. |
| 4,4'-Methylenedi-o-toluidine CAS:838-88-0 | mg/kg | 30 | 5 | N.D. |
| p-Cresidine CAS:120-71-8 | mg/kg | 30 | 5 | N.D. |
| 4,4'-Methylenebis[2-chloroaniline] CAS:101-14-4 | mg/kg | 30 | 5 | N.D. |
| 4,4'-Oxydianiline CAS:101-80-4 | mg/kg | 30 | 5 | N.D. |
| 4,4'-Thiodianiline CAS:139-65-1 | mg/kg | 30 | 5 | N.D. |
| 2-Aminotoluene CAS:95-53-4 | mg/kg | 30 | 5 | N.D. |
| 2,4-Toluylendiamine CAS:95-80-7 | mg/kg | 30 | 5 | N.D. |
| 2,4,5-Trimethylaniline CAS:137-17-7 | mg/kg | 30 | 5 | N.D. |
| o-Anisidine CAS:90-04-0 | mg/kg | 30 | 5 | N.D. |
| 4-Aminoazobenzene CAS:60-09-3 | mg/kg | 30 | 5 | N.D. |
| Conclusion | | | | Conformity |

| Test Item(s) | Unit | Limit | MDL | Test Result(s) | |
|---|---|---|---|---|---|
| | | | | 1-5+1-6+1-7 | 1-8+1-9 |
| 4-Aminobiphenyl CAS:92-67-1 | mg/kg | 30 | 5 | N.D. | N.D. |
| Benzidine CAS:92-87-5 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4-Chloro-o-toluidine CAS:95-69-2 | mg/kg | 30 | 5 | N.D. | N.D. |
| 2-Naphthylamine CAS:91-59-8 | mg/kg | 30 | 5 | N.D. | N.D. |
| o-Aminoazotoluene CAS:97-56-3 | mg/kg | 30 | 5 | N.D. | N.D. |
| 5-Nitro-o-toluidine CAS:99-55-8 | mg/kg | 30 | 5 | N.D. | N.D. |
| p-Chloroaniline CAS:106-47-8 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4-Methoxy-m-phenylenediamine CAS:615-05-4 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4,4'-Diaminodiphenylmethane CAS:101-77-9 | mg/kg | 30 | 5 | N.D. | N.D. |
| 3,3'-Dichlorobenzidine CAS:91-94-1 | mg/kg | 30 | 5 | N.D. | N.D. |

| Test Item(s) | Unit | Limit | MDL | Test Result(s) | |
|---|---|---|---|---|---|
| | | | | 1-5+1-6+1-7 | 1-8+1-9 |
| 3,3'-Dimethoxybenzidine CAS:119-90-4 | mg/kg | 30 | 5 | N.D. | N.D. |
| 3,3'-Dimethybenzidine CAS:119-93-7 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4,4'-Methylenedi-o-toluidine CAS:838-88-0 | mg/kg | 30 | 5 | N.D. | N.D. |
| p-Cresidine CAS:120-71-8 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4,4'-Methylenebis[2-chloroaniline] CAS:101-14-4 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4,4'-Oxydianiline CAS:101-80-4 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4,4'-Thiodianiline CAS:139-65-1 | mg/kg | 30 | 5 | N.D. | N.D. |
| 2-Aminotoluene CAS:95-53-4 | mg/kg | 30 | 5 | N.D. | N.D. |
| 2,4-Toluylendiamine CAS:95-80-7 | mg/kg | 30 | 5 | N.D. | N.D. |
| 2,4,5-Trimethylaniline CAS:137-17-7 | mg/kg | 30 | 5 | N.D. | N.D. |
| o-Anisidine CAS:90-04-0 | mg/kg | 30 | 5 | N.D. | N.D. |
| 4-Aminoazobenzene CAS:60-09-3 | mg/kg | 30 | 5 | N.D. | N.D. |
| Conclusion | | | | Conformity | Conformity |

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-5+1-6+1-7,1-8+1-9

Note: 4-aminoazobenzene: The EN ISO 14362-1:2017 or ISO 17234-1:2020 methods will enable further cleavage of 4-aminoazobenzene to aniline and / or 1,4-phenylenediamine. If aniline and / or 1,4-phenylenediamine are detected, 4-aminoazobenzene shall be further determined by EN ISO 14362-3:2017 or ISO 17234-2:2011.

**Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 27**

**- Nickel Release**

Test Methods and Equipment：EN 12472:2020 & EN 1811:2023; ICP-OES

| Test Point(s) | Parallel Sample | Unit | Limit | MDL | Test Result(s) Nickel Release | Conclusion |
|---|---|---|---|---|---|---|
| 1-3 | A | $\mu g \cdot cm^{-2} \cdot week^{-1}$ | 0.5 | 0.05 | N.D. | Conformity |
| | B | $\mu g \cdot cm^{-2} \cdot week^{-1}$ | 0.5 | 0.05 | N.D. | |
| | C | $\mu g \cdot cm^{-2} \cdot week^{-1}$ | 0.5 | 0.05 | N.D. | |
| 1-4 | A | $\mu g \cdot cm^{-2} \cdot week^{-1}$ | 0.5 | 0.05 | N.D. | Conformity |
| | B | $\mu g \cdot cm^{-2} \cdot week^{-1}$ | 0.5 | 0.05 | N.D. | |
| | C | $\mu g \cdot cm^{-2} \cdot week^{-1}$ | 0.5 | 0.05 | N.D. | |

Limit requirements of Nickel Release

| Nickel Release | | |
|---|---|---|
| Type of sample | Pass | Fail |
| Article with Nickel release limit of 0.5μg/cm$^2$/week (Non-body piercing) | <0.88μg · cm$^{-2}$ · week$^{-1}$ | ≥0.88μg · cm$^{-2}$ · week$^{-1}$ |
| Article with Nickel release limit of 0.2μg/cm$^2$/week (Body piercing) | <0.35μg · cm$^{-2}$ · week$^{-1}$ | ≥0.35μg · cm$^{-2}$ · week$^{-1}$ |

**- Colour fastness to rubbing**

**Test Method:** ISO 105-X12:2016

**Rubbing finger:** Cylinder

**The time of conditioning as well as the atmospheric conditions during testing:** 21.0 ℃, 65 %R.H., 4 hrs

**The percentage of soak of wet rubbing cloth:** 95%~100%

**The long direction of the specimen:** Endwise/ Crossrange

| **Test point** | **Test Result** | | **Conclusion** |
|---|---|---|---|
| | **Colour fastness to rubbing / (Grade)** | | |
| | Dry rubbing | Wet rubbing | |
| 1-1 | 4-5 | 4-5 | **Conformity** |
| **Limit (Client's Requirement)** | ≥2-3 | ≥2-3 | / |

**Test Method:** ISO 105-X12:2016

**Rubbing finger:** Cylinder

**The time of conditioning as well as the atmospheric conditions during testing:** 22.0 ℃, 63 %R.H., 4 hrs

**The percentage of soak of wet rubbing cloth:** 95%~100%

**The long direction of the specimen:** Endwise/ Crossrange

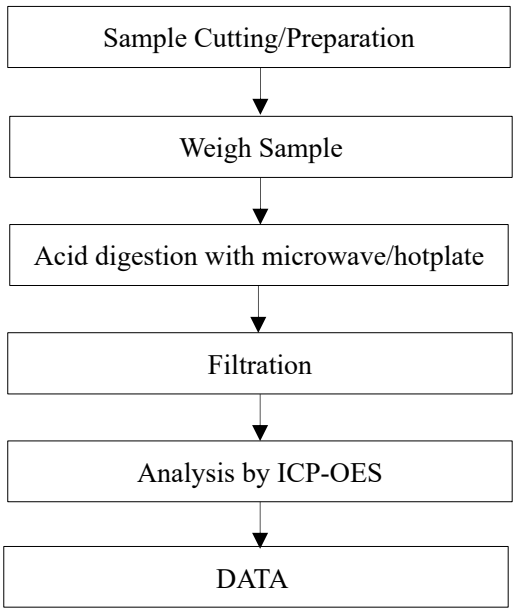
| **Test point** | **Test Result** | | **Conclusion** |
|---|---|---|---|
| | **Colour fastness to rubbing / (Grade)** | | |
| | Dry rubbing | Wet rubbing | |
| 1-5 | 4-5 | 4-5 | **Conformity** |
| 1-6 | 4-5 | 4-5 | **Conformity** |
| 1-7 | 4-5 | 4-5 | **Conformity** |
| 1-8 | 4-5 | 4-5 | **Conformity** |
| 1-9 | 4-5 | 4-5 | **Conformity** |
| **Limit (Client's Requirement)** | ≥2-3 | ≥2-3 | / |

**Note:**

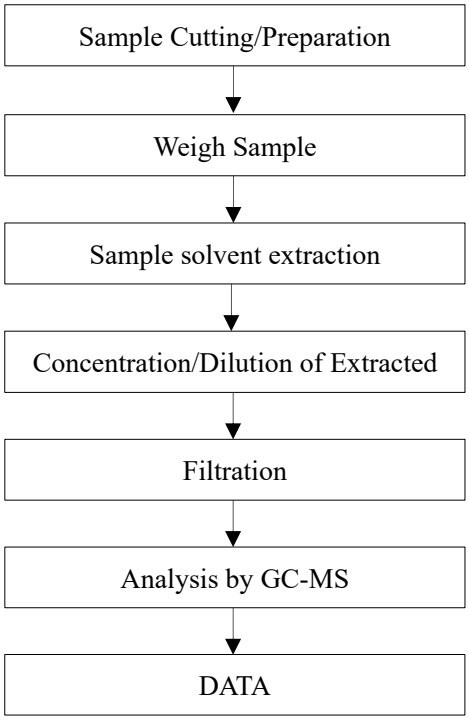
Colour Fastness Grade:
Grade 5 = No Colour Change (Best Grade)
Grade 1 = Colour Change Seriously (Bad Grade)

9 grades in gray sample card: 5, 4-5, 4, 3-4, 3, 2-3, 2, 1-2, 1.

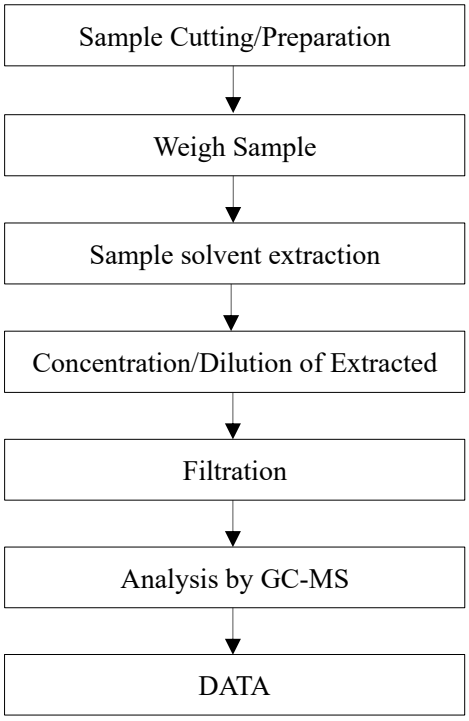
**Test Flow Chart of Heavy Metal Content**



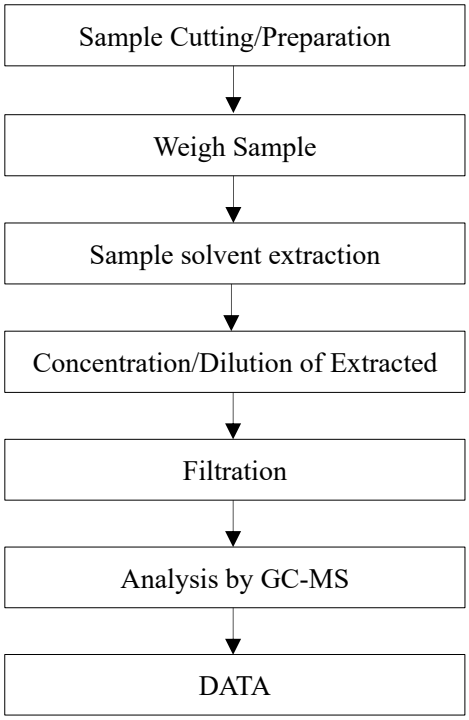
## Test Flow Chart of Phthalates



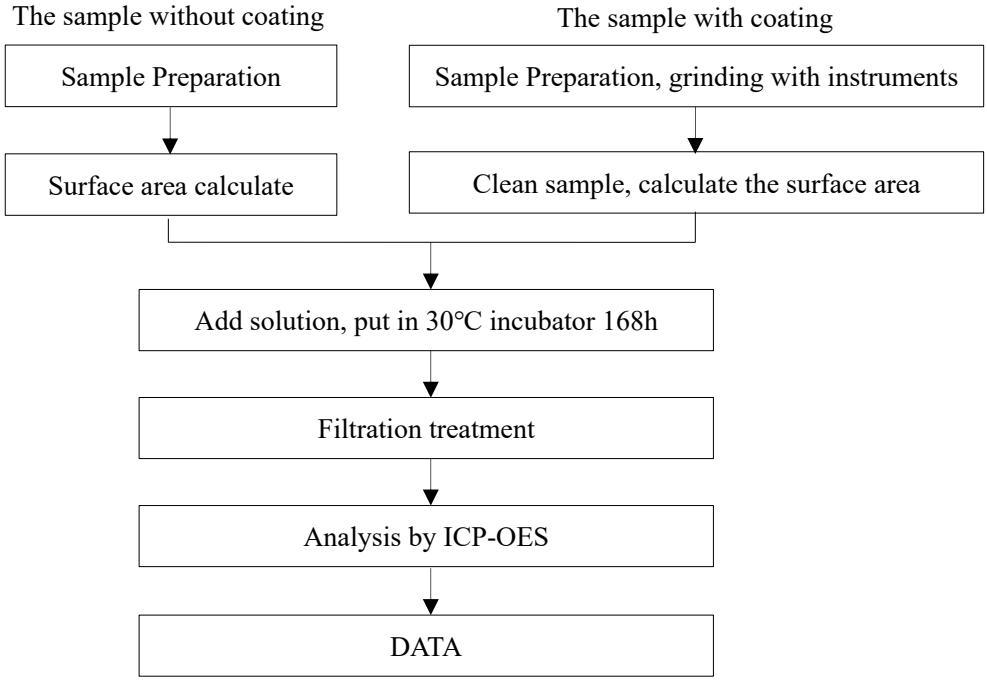
## Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)



**Test Flow Chart of AZO**



## Test Flow Chart of Nickel Release



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3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

*** End of Report ***