

## Test Report

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**Applicant:**

Name : Mid Ocean Brands B.V.  
Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

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**Sample Description:**

Sample No. : HBPF240030  
Sample Name : Sun lotion (Sunscreen lotion)  
Batch No./Production Date : /  
Specification : MO6115, MO8512  
Sample Quantity : 30g\*4  
Predictive PFA Value : /

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**Reference:**

ISO 24443:2021 Cosmetic-Determination of sunscreen UVA photoprotection in vitro

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**Test Result:**

According to the test result, the PFA value of sample is "23", "PA++++".

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To be continued

**Authorized By:**

For Intertek Testing Services Ltd., Shanghai

shirley Zhou  
Shirley Zhou  
Lab Manager

This report replaces CRS-2024-162-45-04 Report Date: Feb.22,2024  
This report modified the Applicant Name and Address.

### Test Item

In vitro determination of sunscreen UVA protection

### Reference

ISO 24443:2021 Cosmetic-Determination of sunscreen UVA photoprotection in vitro

According to the requirements of *ISO 24443:2021 Cosmetic-Determination of sunscreen UVA photoprotection in vitro*, with the dosage of 1.3 mg/cm<sup>2</sup>, using special syringe to suck up a certain volume of test sample or standard sunscreen, pointing uniformly on the surface of PMMA, applying product with naked finger so that it can be separated evenly on the surface of PMMA. The whole board is protected from light and dry for at least 30min and no more than 60 min. Then UV 2000S instrument is used to measure the transmittance of ultraviolet light, and each sample is repeated for 4 test plates, each plate is tested for 5 points, the SPF values, C values and irradiation dose of the standard sunscreen and the sample are recorded, respectively. After the test, putting the PMMA plate, which is applied with sample, to SOL-UV-6 solar simulator (keep samples within the range of 25 °C to 35 °C) to expose, and stop irradiation when the irradiation dose reaches the dose recorded above and recorded the irradiation time and the corresponding values of irradiance meter, and then using the UV 2000S instrument to measure the transmittance of ultraviolet light, each sample is repeated for 4 test plates, each plate is tested for 5 points, and the PFA values of the standard sunscreen and the sample are recorded, respectively.

### Material

- 1、 Testing sample: Sun lotion (Sunscreen lotion)
- 2、 In vitro SPF value: 32 (Customer didn't provide SPF value in vivo and SPF value in vitro is used to calculate PFA value instead of SPF value in vivo)
- 3、 Standard control: P8 Reference Sunscreen (COSMETECH LABORATORIES, INC. 2302H)
- 4、 PMMA plate: HD6TM moulded PMMA plates (HelioScreen, Creil, France)
- 5、 Instrument: UV 2000S UV transmittance analyzer (Labsphere Co., Ltd.), SOL-UV-6 solar simulator (Newport)

### Test Result(s)

The PFA values of P8 Reference Sunscreen and sample

No.	Sample	P8 Reference Sunscreen (PFA21.1±2.0)
1	22.6	22.8
2	22.6	23.0
3	26.3	23.0
4	22.7	21.2
Average ± SD	23.6± 1.8	22.5±0.9
CI%	12.4%	6.2%

Note: M refers to HD6TM moulded PMMA, S refers to sand-blasted SB6TM PMMA.

Date Sample Received: Feb.4,2024

Testing Time: Feb. 9,2024

End of report

*The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band  $w = U$ ) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.*

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*Remark: \*The testing data and result issued by this report are just for scientific research, teaching, internal quality control, product research and development etc. on reference only in the territory of the People's Republic of China.*



## Test Report

### Applicant:

Name : Mid Ocean Brands B.V.  
Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

### Sample Description:

Sample No. : HBPF240030  
Sample Name : Sun lotion (Sunscreen lotion)  
Batch No./Production Date : /  
Specification : MO6115, MO8512  
Sample Quantity : 30g\*4  
Predictive SPF Value : 30

### Test Item:

In vitro determination of the sun protection factor (SPF)

### Reference:

Colipa -Cosmetics Europe - No 26 Use of Alternative Methods to ISO24444-2019: No\_26\_Double\_Plate\_Method\_Protocol.

### Test Result:

According to the test result, the SPF value of the sample is "32".

To be continued

### Authorized By:

For Intertek Testing Services Ltd., Shanghai

Shirley Zhou  
Lab Manager



This report replaces CRS-2024-162-46-03 Report Date: Feb.22,2024  
This report modified the Applicant Name and Address.



### Test Item

In vitro determination of the sun protection factor (SPF)

### Reference

Colipa -Cosmetics Europe - No 26 Use of Alternative Methods to ISO24444-2019: No\_26\_Double\_Plate\_ Method\_ Protocol

### Test Procedure

1. Preparation of reagents and materials: Store the plates (opened or removed plastic bag) and product, in the dark, at 27(±2) °C for at least twelve hours before the start of the test.
2. Apply the product with finger. 1.3mg/cm<sup>2</sup>(±1.6%) of product is applied to each moulded plate and 1.2mg/cm<sup>2</sup>(±1.5%) of product is applied to each sandblasted plate. (Reference: ISO 24443:2021)
3. Measurement of initial absorbance using two plate types (290 nm to 400 nm).
4. Calculation of initial in vitro SPF.
5. Calculation of irradiation dose (based on initial in vitro SPF).
6. Irradiation with calculated dose.
7. Measurement of final post-irradiation absorbance using two plate types (290 nm to 400 nm).
8. Calculation of final in vitro SPF.

### Material

1. Testing sample: Sun lotion (Sunscreen lotion)
2. Standard control: P8 Reference Sunscreen
3. PMMA plate: HD6TM moulded PMMA plates (HelioScreen, Creil, France),  
sand-blasted SB6TM PMMA plates (HelioScreen, Creil, France)
4. Instrument: UV 2000S UV transmittance analyzer (Labsphere Co., Ltd.), SOL-UV-6 solar simulator (Newport)

### Test Result(s)

Final in vitro SPF value			
PMMA No.	M	S	M+S
1	34.4	31.1	34.7
2	29.2	29.6	32.1
3	30.6	28.0	31.1
MEAN	31.4	29.6	32.6
SD	2.7	1.5	1.9
CI	/	/	14.1%

Note: M refers to HD6TM moulded PMMA, S refers to sand-blasted SB6TM PMMA.

Date Sample Received: Feb.4,2024

Testing Time: Feb.8,2024

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End of report

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