

TEST REPORT 22 26 00027

**STABILITY TEST REPORT**

**9 MONTHS PROTOCOL**

**MEDI CLEAN**

**MOBILEFRESH AG**

**DECEMBER 2022**

## PRODUCT DESCRIPTION

The product 'MEDI CLEAN' is a pop-up towel (leave one product), of white color and characteristic odor that is kept in a plastic container.

## TEST PRODUCT DESCRIPTION

PRODUCT MANUFACTURED BY	: MOBILEFRESH AG
RECEIPT DATE	: 28/02/2022
STUDY PERIOD	: 28/02/2022 - 07/11/2022
LAB ID	: 22 26 00027
TEST PRODUCT	: MEDI CLEAN
PRODUCT TYPE	: POP-UP TOWEL
LOT	: V1.0
STUDY SPONSOR	: MOBILEFRESH AG

## OBJECTIVE

The objective of stability testing is to ensure that the cosmetic product maintains its intended physical, chemical and microbiological quality and properties, as well as its functionality and aesthetics when stored under appropriate conditions. Main scope is to provide data by foreseeing the stability of the product overtime within its useful life span and the compatibility between the formulation and the container material.

## METHOD DESIGN

The method was designed to include testing of the properties of the cosmetic product that are susceptible to change during storage and are likely to influence quality, safety, and performance characteristics. The testing covers the sensorial, physical, chemical, and microbiological attributes, the preservation system and its efficacy. Analytical procedures are performed in accordance with standard protocols. For the measurable attributes, a  $\pm 20\%$  variation from the initial assay value (time zero) is set as the action limit. A stable product should meet standard requirements for sensorial, physical and microbiological properties. A sample stored at room temperature is considered as reference for sensorial properties.

## REFERENCES

- ISO-9001: 2015
- ICH Q 1 A (R2)
- EC 1223/2009
- COLIPA Guide on stability testing of cosmetic products, 2004
- IFSCC Monograph No2 The Fundamentals of Stability Testing

## PROTOCOL

The stability study includes the evaluation of the below attributes at specific storage conditions and time intervals.

- ✓ Organoleptic: appearance, color, odor and texture
- ✓ Physical-chemical: pH, assay of preservatives
- ✓ Compatibility between product and container

### STABILITY ROOM TEMPERATURE (RT, 25 °C)

The samples are stored at room temperature (25 °C ± 2 °C). At the beginning of the stability (week 0) all parameters are evaluated (time zero). Organoleptic - physicochemical controls are carried out weekly. Upon conclusion of the study (9 months) all parameters are reexamined.

### STABILITY ACCELERATED (40 °C / 75% RH)

The samples are stored in a chamber (40 °C ± 2 / 75% RH ± 5). Compatibility between the formulation and the container material is monitored on a weekly basis. Upon conclusion of the study (9 months) all the above parameters are reevaluated.

### STABILITY REFRIGERATOR (5 °C)

The samples are stored in a refrigerator (5 °C ± 2 °C). Organoleptic - physicochemical controls are carried out weekly. Upon conclusion of the study (9 months) physicochemical parameters are also reexamined.

### STABILITY CYCLES

The samples are stored in a freezer (-20 °C ± 2 °C) for eight hours and permitted to thaw at room temperature. The organoleptic and sensorial attributes are evaluated. The same samples are left at room temperature (25 °C ± 2 °C) for 16 hours and then reevaluated. The study is completed after five -5- days, during which a total of 5 freeze - thaw cycles are completed.

### STABILITY DARK & WINDOW

Samples are kept in a closed cabinet (dark) and nearby a window (diffused light). Organoleptic sensorial attributes, are evaluated weekly. The study is completed within nine months.

### STABILITY TEST SCHEDULE AND PLANNING

The test schedule of the product has been adjusted according to its nature and formula.

The time schedule below describes the time intervals at which samples stored at different conditions are tested and what tests are applied at each examination.

Time (Weeks)	5 °C	25 °C	40 °C	Dark-Window	-20 °C 8h-+25 °C 16h
0	P	P	PX	P	P
1	P	P	P	P	P
2	P	P	P	P	-
3	P	P	P	P	-
4	P	P	P	P	-
5	P	P	P	P	-
6	P	P	P	P	-
7	P	P	P	P	-
8	P	P	P	P	-
9	P	P	P	P	-
10	P	P	P	P	-
11	P	P	P	P	-
12	P	P	P	P	-
13	P	P	P	P	-
14	P	P	P	P	-
15	P	P	P	P	-
16	P	P	P	P	-
17	P	P	P	P	-
18	P	P	P	P	-
19	P	P	P	P	-
20	P	P	P	P	-
21	P	P	P	P	-
22	P	P	P	P	-
23	P	P	P	P	-
24	P	P	P	P	-
25	P	P	P	P	-
26	P	P	P	P	-
27	P	P	P	P	-
28	P	P	P	P	-
29	P	P	P	P	-
30	P	P	P	P	-
31	P	P	P	P	-
32	P	P	P	P	-
33	P	P	P	P	-
34	P	P	P	P	-
35	P	P	P	P	-
36	P	P	PX	P	-

Where:

P= Appearance, Odor, Texture, Color, pH, Packaging Compatibility

C= Preservative challenge tests

X= Assay of preservatives

- : Not tested

## RAW DATA

Customer	<b>MOBILEFRESH AG</b>
Product	<b>MEDI CLEAN</b>
Conditions	<b>25 °C</b>
Lab ID	<b>22 26 00027</b>
Manufacture batch	<b>V1.0</b>
Manufacture date	<b>N/A</b>
Stability Start date	<b>28/02/2022</b>

TEMPERATURE	DATE	WEEKS	APPEARANCE	ODOR	COLOR	TEXTURE	CONTAINER	pH
25° C	28/02/2022	0	OK	OK	OK	OK	OK	6,39
	07/03/2022	1	OK	OK	OK	OK	OK	6,62
	14/03/2022	2	OK	OK	OK	OK	OK	6,29
	21/03/2022	3	OK	OK	OK	OK	OK	6,22
	28/03/2022	4	OK	OK	OK	OK	OK	6,30
	04/04/2022	5	OK	OK	OK	OK	OK	6,33
	11/04/2022	6	OK	OK	OK	OK	OK	6,35
	18/04/2022	7	OK	OK	OK	OK	OK	6,35
	25/04/2022	8	OK	OK	OK	OK	OK	5,35
	02/05/2022	9	OK	OK	OK	OK	OK	6,36
	09/05/2022	10	OK	OK	OK	OK	OK	6,36
	16/05/2022	11	OK	OK	OK	OK	OK	6,37
	23/05/2022	12	OK	OK	OK	OK	OK	6,37
	30/05/2022	13	OK	OK	OK	OK	OK	6,37
	06/06/2022	14	OK	OK	OK	OK	OK	6,34
	13/06/2022	15	OK	OK	OK	OK	OK	6,34
	20/06/2022	16	OK	OK	OK	OK	OK	6,36
	27/06/2022	17	OK	OK	OK	OK	OK	6,36
	04/07/2022	18	OK	OK	OK	OK	OK	6,40
	11/07/2022	19	OK	OK	OK	OK	OK	6,41
	18/07/2022	20	OK	OK	OK	OK	OK	6,42
	25/07/2022	21	OK	OK	OK	OK	OK	6,42
	01/08/2022	22	OK	OK	OK	OK	OK	6,43
8/08/2022	23	OK	OK	OK	OK	OK	6,45	

	15/08/2022	24	OK	OK	OK	OK	OK	6,46
	22/08/2022	25	OK	OK	OK	OK	OK	6,46
	29/08/2022	26	OK	OK	OK	OK	OK	6,47
	05/09/2022	27	OK	OK	OK	OK	OK	6,47
	12/09/2022	28	OK	OK	OK	OK	OK	6,48
	19/09/2022	29	OK	OK	OK	OK	OK	6,48
	26/09/2022	30	OK	OK	OK	OK	OK	6,49
	03/10/2022	31	OK	OK	OK	OK	OK	6,49
	10/10/2022	32	OK	OK	OK	OK	OK	6,49
	17/10/2022	33	OK	OK	OK	OK	OK	6,50
	24/10/2022	34	OK	OK	OK	OK	OK	6,50
	31/10/2022	35	OK	OK	OK	OK	OK	6,51
	07/11/2022	36	OK	OK	OK	OK	OK	6,51
Variation from initial value %								1,9
Conclusion								Pass

- : Not tested

Customer	<b>MOBILEFRESH AG</b>
Product	<b>MEDI CLEAN</b>
Conditions	<b>25 °C</b>
Lab ID	<b>22 26 00027</b>
Manufacture batch	<b>V1.0</b>
Manufacture date	<b>N/A</b>
Stability Start date	<b>28/02/2022</b>

Parameter	Result (%)		Variation from initial value (%)
	Week 0	Week 12	
Methyl Paraben	0,14	0,13	-7,1

Product	<b>MOBILEFRESH AG</b>
Conditions	<b>MEDI CLEAN</b>
Lab ID	<b>40 °C, 75% RH</b>
Manufacture batch	<b>22 26 00027</b>
Manufacture date	<b>V1.0</b>
Stability Start date	<b>N/A</b>
	<b>28/02/2022</b>

TEMPERATURE	DATE	WEEKS	APPEARANCE	ODOR	COLOR	TEXTURE	CONTAINER	pH
40° C / 75 %RH	28/02/2022	0	OK	OK	OK	OK	OK	6,40
	07/03/2022	1	OK	OK	OK	OK	OK	6,63
	14/03/2022	2	OK	OK	OK	OK	OK	6,34
	21/03/2022	3	OK	OK	OK	OK	OK	6,30
	28/03/2022	4	OK	OK	OK	OK	OK	6,30
	04/04/2022	5	OK	OK	OK	OK	OK	6,32
	11/04/2022	6	OK	OK	OK	OK	OK	6,33
	18/04/2022	7	OK	OK	OK	OK	OK	6,33
	25/04/2022	8	OK	OK	OK	OK	OK	6,34
	02/05/2022	9	OK	OK	OK	OK	OK	6,34
	09/05/2022	10	OK	OK	OK	OK	OK	6,34
	16/05/2022	11	OK	OK	OK	OK	OK	6,34
	23/05/2022	12	OK	OK	OK	OK	OK	6,34
	30/05/2022	13	OK	OK	OK	OK	OK	6,35
	06/06/2022	14	OK	OK	OK	OK	OK	6,33
	13/06/2022	15	OK	OK	OK	OK	OK	6,33
	20/06/2022	16	OK	OK	OK	OK	OK	6,34
	27/06/2022	17	OK	OK	OK	OK	OK	6,34
	04/07/2022	18	OK	OK	OK	OK	OK	6,40
	11/07/2022	19	OK	OK	OK	OK	OK	6,41
	18/07/2022	20	OK	OK	OK	OK	OK	6,41
	25/07/2022	21	OK	OK	OK	OK	OK	6,42
	01/08/2022	22	OK	OK	OK	OK	OK	6,43
	8/08/2022	23	OK	OK	OK	OK	OK	6,49
15/08/2022	24	OK	OK	OK	OK	OK	6,50	



	22/08/2022	25	OK	OK	OK	OK	OK	6,50
	29/08/2022	26	OK	OK	OK	OK	OK	6,51
	05/09/2022	27	OK	OK	OK	OK	OK	6,51
	12/09/2022	28	OK	OK	OK	OK	OK	6,52
	19/09/2022	29	OK	OK	OK	OK	OK	6,52
	26/09/2022	30	OK	OK	OK	OK	OK	6,53
	03/10/2022	31	OK	OK	OK	OK	OK	6,53
	10/10/2022	32	OK	OK	OK	OK	OK	6,53
	17/10/2022	33	OK	OK	OK	OK	OK	6,54
	24/10/2022	34	OK	OK	OK	OK	OK	6,54
	31/10/2022	35	OK	OK	OK	OK	OK	6,55
	07/11/2022	36	OK	OK	OK	OK	OK	6,55
Variation from initial value %								2,3
Conclusion								Pass

- : Not tested

Customer	<b>MOBILEFRESH AG</b>
Product	<b>MEDI CLEAN</b>
Conditions	<b>5 °C</b>
Lab ID	<b>22 26 00027</b>
Manufacture batch	<b>V1.0</b>
Manufacture date	<b>N/A</b>
Stability Start date	<b>28/02/2022</b>

TEMPERATURE	DATE	WEEKS	APPEARANCE	ODOR	COLOR	TEXTURE	CONTAINER	pH
5° C	28/02/2022	0	OK	OK	OK	OK	OK	6,40
	07/03/2022	1	OK	OK	OK	OK	OK	6,60
	14/03/2022	2	OK	OK	OK	OK	OK	6,28
	21/03/2022	3	OK	OK	OK	OK	OK	6,25
	28/03/2022	4	OK	OK	OK	OK	OK	6,28
	04/04/2022	5	OK	OK	OK	OK	OK	6,30
	11/04/2022	6	OK	OK	OK	OK	OK	6,32
	18/04/2022	7	OK	OK	OK	OK	OK	6,32
	25/04/2022	8	OK	OK	OK	OK	OK	6,33
	02/05/2022	9	OK	OK	OK	OK	OK	6,33
	09/05/2022	10	OK	OK	OK	OK	OK	6,34
	16/05/2022	11	OK	OK	OK	OK	OK	6,34
	23/05/2022	12	OK	OK	OK	OK	OK	6,35
	30/05/2022	13	OK	OK	OK	OK	OK	6,35
	06/06/2022	14	OK	OK	OK	OK	OK	6,33
	13/06/2022	15	OK	OK	OK	OK	OK	6,33
	20/06/2022	16	OK	OK	OK	OK	OK	6,36
	27/06/2022	17	OK	OK	OK	OK	OK	6,36
	04/07/2022	18	OK	OK	OK	OK	OK	6,39
	11/07/2022	19	OK	OK	OK	OK	OK	6,40
	18/07/2022	20	OK	OK	OK	OK	OK	6,41
	25/07/2022	21	OK	OK	OK	OK	OK	6,41
	01/08/2022	22	OK	OK	OK	OK	OK	6,42
	8/08/2022	23	OK	OK	OK	OK	OK	6,43
15/08/2022	24	OK	OK	OK	OK	OK	6,43	

	22/08/2022	25	OK	OK	OK	OK	OK	6,44
	29/08/2022	26	OK	OK	OK	OK	OK	6,44
	05/09/2022	27	OK	OK	OK	OK	OK	6,45
	12/09/2022	28	OK	OK	OK	OK	OK	6,45
	19/09/2022	29	OK	OK	OK	OK	OK	6,45
	26/09/2022	30	OK	OK	OK	OK	OK	6,46
	03/10/2022	31	OK	OK	OK	OK	OK	6,46
	10/10/2022	32	OK	OK	OK	OK	OK	6,47
	17/10/2022	33	OK	OK	OK	OK	OK	6,47
	24/10/2022	34	OK	OK	OK	OK	OK	6,48
	31/10/2022	35	OK	OK	OK	OK	OK	6,50
	07/11/2022	36	OK	OK	OK	OK	OK	6,50
Variation from initial value %								1,6
Conclusion								Pass

- : Not tested

Customer	<b>MOBILEFRESH AG</b>
Product	<b>MEDI CLEAN</b>
Conditions	<b>DARK/WINDOW</b>
Lab ID	<b>22 26 00027</b>
Manufacture batch	<b>V1.0</b>
Manufacture date	<b>N/A</b>
Stability Start date	<b>28/02/2022</b>

START DATE	WEEKS	DARK				WINDOW			
		APPEARANCE	ODOR	COLOR	TEXTURE	APPEARANCE	ODOR	COLOR	TEXTURE
7/2/2022	0	OK	OK	OK	OK	OK	OK	OK	OK
14/2/2022	1	OK	OK	OK	OK	OK	OK	OK	OK
21/2/2022	2	OK	OK	OK	OK	OK	OK	OK	OK
28/2/2022	3	OK	OK	OK	OK	OK	OK	OK	OK
7/3/2022	4	OK	OK	OK	OK	OK	OK	OK	OK
14/3/2022	5	OK	OK	OK	OK	OK	OK	OK	OK
21/3/2022	6	OK	OK	OK	OK	OK	OK	OK	OK
28/3/2022	7	OK	OK	OK	OK	OK	OK	OK	OK
4/4/2022	8	OK	OK	OK	OK	OK	OK	OK	OK
11/4/2022	9	OK	OK	OK	OK	OK	OK	OK	OK
18/4/2022	10	OK	OK	OK	OK	OK	OK	OK	OK
25/4/2022	11	OK	OK	OK	OK	OK	OK	OK	OK
2/5/2022	12	OK	OK	OK	OK	OK	OK	OK	OK
30/05/2022	13	OK	OK	OK	OK	OK	OK	OK	OK
06/06/2022	14	OK	OK	OK	OK	OK	OK	OK	OK
13/06/2022	15	OK	OK	OK	OK	OK	OK	OK	OK
20/06/2022	16	OK	OK	OK	OK	OK	OK	OK	OK
27/06/2022	17	OK	OK	OK	OK	OK	OK	OK	OK
04/07/2022	18	OK	OK	OK	OK	OK	OK	OK	OK
11/07/2022	19	OK	OK	OK	OK	OK	OK	OK	OK
18/07/2022	20	OK	OK	OK	OK	OK	OK	OK	OK
25/07/2022	21	OK	OK	OK	OK	OK	OK	OK	OK
01/08/2022	22	OK	OK	OK	OK	OK	OK	OK	OK
8/08/2022	23	OK	OK	OK	OK	OK	OK	OK	OK

15/08/2022	24	OK	OK	OK	OK	OK	OK	OK	OK
22/08/2022	25	OK	OK	OK	OK	OK	OK	OK	OK
29/08/2022	26	OK	OK	OK	OK	OK	OK	OK	OK
05/09/2022	27	OK	OK	OK	OK	OK	OK	OK	OK
12/09/2022	28	OK	OK	OK	OK	OK	OK	OK	OK
19/09/2022	29	OK	OK	OK	OK	OK	OK	OK	OK
26/09/2022	30	OK	OK	OK	OK	OK	OK	OK	OK
03/10/2022	31	OK	OK	OK	OK	OK	OK	OK	OK
10/10/2022	32	OK	OK	OK	OK	OK	OK	OK	OK
17/10/2022	33	OK	OK	OK	OK	OK	OK	OK	OK
24/10/2022	34	OK	OK	OK	OK	OK	OK	OK	OK
31/10/2022	35	OK	OK	OK	OK	OK	OK	OK	OK
07/11/2022	36	OK	OK	OK	OK	OK	OK	OK	OK

- : Not tested

Customer	<b>MOBILEFRESH AG</b>
Product	<b>MEDI CLEAN</b>
Conditions	<b>-20°C/8h to +25°C/16h</b>
Lab ID	<b>22 26 00027</b>
Manufacture batch	<b>V1.0</b>
Manufacture date	<b>N/A</b>
Stability Start date	<b>28/02/2022</b>

START DATE	CYCLES	TIME	APPEARANCE	ODOR	COLOR
28/02/2022	END RT	09:00	OK	OK	OK
	END FREEZING	16:00	OK	OK	OK
01/03/2022	END RT	09:00	OK	OK	OK
	END FREEZING	16:00	OK	OK	OK
02/03/2022	END RT	09:00	OK	OK	OK
	END FREEZING	16:00	OK	OK	OK
03/03/2022	END RT	09:00	OK	OK	OK
	END FREEZING	16:00	OK	OK	OK
04/03/2022	END RT	09:00	OK	OK	OK
	END FREEZING	16:00	OK	OK	OK

## CONCLUSION

The following aspects of the product were evaluated within the frame of this study:

- ✓ Organoleptic: appearance, color, odor and texture
- ✓ Physical-chemical: pH, assay of preservatives
- ✓ Compatibility between product and container

At the end of the stability study the product was tested for phthalates with the below results:

Benzyl Butyl Phthalate <1 mg/kg

Di-n-Butyl Phthalate <1 mg/kg

Diethylhexyl Phthalate <1 mg/kg

Di (2-methoxyethyl) Phthalate <1 mg/kg

Di-n-Pentyl Phthalate <1 mg/kg

Diisobutyl Phthalate <1 mg/kg

The findings presented in the current study confirm that the product "MEDI CLEAN" presented satisfactory sensorial, physical and chemical characteristics, for a period of 9 months under accelerated storage conditions. Additionally, the product presented acceptable compatibility with its final container.

The product was tested in real time for 9 months (real use of the product was stimulated). Additionally, the product was tested under accelerated conditions for 9 months. At each testing interval a new package was used and then discarded. In theory, a temperature increase of 10 degrees doubles the rate of a reaction.

Taking into consideration the above stability study, a shelf life of 36 months can be attributed to the product.

Study Manager: Panagiota Tsafara

Printed name: Panagiotis Nikolakis BSc.

Date: 14/12/2022



Results refer to the sample as received and analyzed on the period specified.

The test report shall not be reproduced except in full, without written approval of the laboratory.

The laboratory book which contains all the information (raw data and results) regarding the study and the study reports are kept in the laboratory archives during 2

## PHOTOS

