

Final report no	014/001
Client	Oriental Group
Sample description	Argan oil 250mL
Sample batch	C06/17
Original packaging (type and size)	Plastic bottle with cap 250 ml
Sample received	12.4.2017
Date testing started	13.4.2017
Date testing completed	6.7.2017
Report completed	7.7.2017

# STABILITY AND COMPATIBILITY TEST REPORT

PREPARED BY:  
**TANJA ŽIDAN**



## EVALUATION OF PHYSICAL PROPERTIES OF THE PRODUCT IN GLASS CONTAINER

Parameter	Initial	Accelerated study 40°C				Accelerated study 5°C			
		2 weeks	6 weeks	10 weeks	12 weeks	2 weeks	6 weeks	10 weeks	12 weeks
Date	13.4.2017	27.4.2017	25.5.2017	22.6.2017	6.7.2017	27.4.2017	25.5.2017	22.6.2017	6.7.2017
Appearance	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid
Colour	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent
Odour	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic
pH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Density (g/ml)	0,906	0,905	0,905	0,904	0,905	0,909	0,910	0,909	0,910
Phase separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

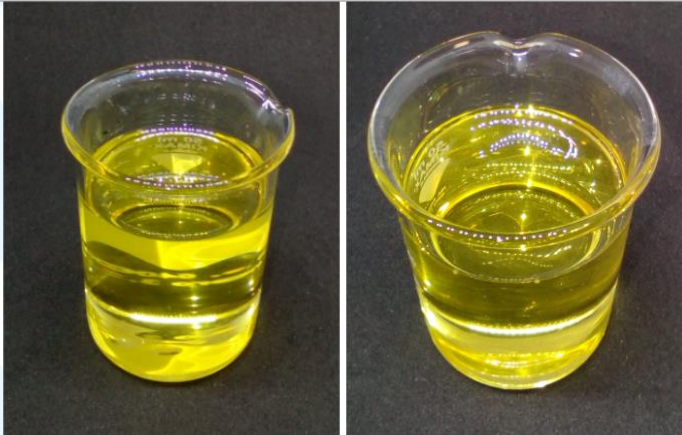


Figure 1: Product in glass container before (left) and at the end (right) of the 40°C stability test.

## EVALUATION OF PHYSICAL PROPERTIES OF THE PRODUCT IN ORIGINAL PACKAGING

Parameter	Initial	Accelerated study 40°C				Accelerated study 5°C			
		2 weeks	6 weeks	10 weeks	12 weeks	2 weeks	6 weeks	10 weeks	12 weeks
Date	13.4.2017	27.4.2017	25.5.2017	22.6.2017	6.7.2017	27.4.2017	25.5.2017	22.6.2017	6.7.2017
Appearance	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid	Oily liquid
Colour	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent	Yellow transparent
Odour	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic
pH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Density (g/ml)	0,906	0,904	0,905	0,904	0,904	0,911	0,910	0,910	0,910
Phase separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Figure 2: Product in its original packaging before (left) and at the end (right) of the 40°C stability test.

**EVALUATION OF ORGANOLEPTIC PROPERTIES OF AFTER FREEZE-THAW TESTING (-30°C → 25°C)**

<b>Parameter</b>	<b>Cycle 1</b>	<b>Cycle 2</b>	<b>Cycle 3</b>
<b>Date</b>	Oily liquid	Oily liquid	Oily liquid
<b>Appearance</b>	Yellow transparent	Yellow transparent	Yellow transparent
<b>Colour</b>	Characteristic	Characteristic	Characteristic
<b>Odour</b>	Oily liquid	Oily liquid	Oily liquid
<b>Phase separation</b>	N/A	N/A	N/A

## EVALUATION OF MICROBIOLOGICAL STABILITY OF THE PRODUCT – INITIAL

Test	Method	Result
<b>Total aerobic mesophilic bacteria</b>	According to ISO 21149:2009	< 10 CFU/g
<b>Enumeration of yeast and mould</b>	According to ISO 16212:2008	< 10 CFU/g
<b>Presence of <i>Candida albicans</i></b>	According to ISO 18416:2009	Absent in 1g
<b>Presence of <i>Pseudomonas aeruginosa</i></b>	According to ISO 22717:2016	Absent in 1g
<b>Presence of <i>Staphylococcus aureus</i></b>	According to ISO 22718:2016	Absent in 1g
<b>Presence of <i>Escherichia coli</i></b>	According to ISO 21150:2010	Absent in 1g

## EVALUATION OF MICROBIOLOGICAL STABILITY OF THE PRODUCT – FINAL

Test	Method	Result
Total aerobic mesophilic bacteria	According to ISO 21149:2009	< 10 CFU/g
Enumeration of yeast and mould	According to ISO 16212:2008	< 10 CFU/g
Presence of <i>Candida albicans</i>	According to ISO 18416:2009	Absent in 1g
Presence of <i>Pseudomonas aeruginosa</i>	According to ISO 22717:2016	Absent in 1g
Presence of <i>Staphylococcus aureus</i>	According to ISO 22718:2016	Absent in 1g
Presence of <i>Escherichia coli</i>	According to ISO 21150:2010	Absent in 1g

### CONCLUSION:

12 week stability and compatibility study of product in glass container and original packaging confirmed the shelf life of 36 months.

\*The results relate to the analysed samples only.