



ΠΑΝΕΠΙΣΤΗΜΙΟ
ΘΕΣΣΑΛΙΑΣ

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, 2022

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2. – μ :
3. :

« Effect of the bioactive ingredients of rose and arnica on the quality of cosmetic creams»

Abstract

The purpose of this work was to study the effect of the active ingredients of rose (*Rosa Damascena*) and arnica (*Arnica Montana*) on the quality during the preparation of cosmetic creams for the face.

Rose oil is known for its antioxidant, anti-inflammatory, nourishing, healing and restorative properties. It is suitable for all skin types especially mature and dry skins, it penetrates the skin very quickly giving hydration and shine, protects the skin from premature aging, increases the levels of collagen and elastin and reduces the appearance of spots, freckles, fine lines and wrinkles for a completely youthful appearance.

Arnica oil has antibacterial, analgesic and anti-edematous effects. It contributes to the faster recovery of blows and soft tissue injuries, reduces bruises and swelling

Both oils give good quality cosmetic creams with a rich, silky texture and a light, invigorating fragrance.

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1.	μ μ	7
1.1	μ	7
1.2		26
1.3		30
2.		33
3.	μ	52
4.1		56
5	μ	62
5.1	μ	62
5.2	μ μ	62
5.2.1	μ μ	65
5.3	μ	66
6		71
6.1		72
6.2		72
6.3		75
6.4	μ	84
6.5	μ	85
7.1	μ	89
7.2	μ μ	90
7.3	μ	99
7.4	μ μ	102

1.2

2000

μ , , Lamiaceae (), Umbelliferae (), Lauraceae (), Myrtaceae () Compositae (). (Abietaceae, Anacardiaceae, Apiaceae, Asteraceae, Geraniaceae, Lamiaceae, Labiatae, Rutaceae, Iridaceae, Rosaceae).

μ μ μ

μ

, :

μ μ (*Matricaria chamomilla* – μ μ) Asteraceae,

(*Ocimum basilicum* – μ) Lamiaceae,

(*Laurus nobilis* –) Lauraceae,

(*Foeniculum vulgare* –) Apiaceae . .

μ μ Lamiaceae (). Η μ μ Lamiaceae μ

μ μ , μ μ

μ μ ,

μ μ , μ μ μ μ ,

, .() Lamiaceae μ

μ μ μ μ , μ μ μ μ

μ . :

- μ (*Thymus capitatus* – μ)
- μ (*Satureja thymbra* – μ)
- μ (*Salvia fruticosa* – μ)
- (*Origanum vulgare* –)
- μ (. *dictamnus* – μ)
- (*Melissa officinalis* – μ)
- (*Lavandula stoechas*)
- (*Sideritis scardica* –)
- (*Mentha spicata*)
- (*Rosmarinus officinalis* – μ μ) .

μ μ μ μ μ μ .

(Aburjai et.al. 2003)

1. LOE VERA

Aloe vera **Aloe barbadensis miller.**
Asphodelaceae (Liliaceae)
(*Andhra Pradesh*), (*Gujarat*), (*Rajasthan*),
(*Maharashtra*) (*Tamil Nadu*). (Surjushe et.al. 2008).

Aloe Vera,
(Surjushe et.al. 2008).



1) 99%
2) 15-20
(*phloem*). (xylem)
75 :
(Surjushe et.al. 2008).

1.
Aloe Vera
Aloe Vera,
(, C, A, B1, 2, 3, 6, 12,)



2.
Aloe Vera,
(, C, A, B1, 2, 3, 6, 12,)

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μ , μ .

3. μ
, μ μ , μ
μ μ . , μ μ ,
μ μ , μ μ ,
μ , μ
μ , μ
Aloe Vera μ ,
μ , μ μ μ .

4. μ **Aloe Vera** μ (99%), μ μ
, μ . ,
μ . (Christaki et. al. 2010)

5. &
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μ μ μ μ &
μ μ .

6. μ μ μ μ *Aloe Vera*
μ μ : μ , μ μ μ
μ μ μ μ μ .
(Surjushe et. al 2008).

7. μ μ
μ μ μ μ μ μ
μ μ μ μ μ μ

8. μ μ :

Aloe Vera, μ μ , μ
 μ , μ
 , , μ
 μ .

9. μ :
 μ , *Aloe Vera*,
 Streptococcus mutans, μ .
 , μ μ
 μ μ μ .

10. :
 μ , μ
 μ μ , μ
 μ μ . μ , μ
 μ μ , μ
 μ μ .

11. :
 μ μ ,
 μ μ μ
 μ μ μ , *Aloe Vera*, μ μ
 μ μ . (Manvitha et. al.
 2014)

2. μ **Ocimum basilicum** – μ ,
Lamiaceae. μ , 20-80
 cm. μ , μ
 μ , μ (Chang et. al. 2009).



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- μ , μ μ μ μ , .
- μ μ .
- μ , μ .
- μ .
- μ μ μ μ μ μ ,
- μ μ μ μ μ .
- μ , μ .(Ahmad et. al. 2015)

3.

μ **Rosemarinus officinalis**

Lamiaceae

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Rosmarinus

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ros () *marinus* (),

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6.

μ (Lavandula angustifolia)
Lamiaceae. μ 25 .
μ v . , μ ,
μ . μ _____ .



, μ , μ 30 80 .
μ . μ , μ , μ
μ . μ μ , μ
μ . μ μ , μ ,
μ , μ , μ ,
μ . μ anti HIV, (),
μ , μ . μ μ
μ μ «lavare», μ « »,
μ μ μ μ μ μ
μ , μ μ
μ μ μ .



μ Lavandula angustifolia 16
(17,29%) μ μ - (15,22%)
4-O- μ , μ μ μ i-
μ -3- μ - μ μ μ
μ μ (9,53%), μ μ
(0,23%) (Spiridon et. al. 2011).
μ , μ , μ , -
μ - μ , μ - μ , μ , μ ,
-1- μ -2- , 7 , 9 - -1- μ . (Gülçin et. al. 2004).
μ μ μ μ μ μ , μ

25 :

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μ :

μ 6: μ

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Panax — μ

(ginsenosides),

, μ

μ μ , ,



μ μ μ μ , (KIEFER et. al. 2003)

μ μ , μ



Panax ginseng μ

, μ

8.

μ μ μ
Lamiaceae. μ μ
common sage. μ , μ , μ
μ , μ μ μ , μ
μ , μ

Salvia officinalis
sage, garden sage,



μ μ μ μ 60% μ μ μ μ 0,25%
μ , μ μ μ μ μ μ μ
μ .

7. μ

μ , μ , μ μ μ
μ μ μ
(Singh et. al. 2011).

10.

μ **Camelia sinensis** Theaceae.
μ .
μ _____.
μ _____ (Namita et. al. 2012).

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μ μ , μ
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μ μ .



1. μ
μ μ EGCG. μ , μ μ μ μ
μ (-).
: **gallic acid** (GA),
Epigallocatechin (EGC), Epicatechin () Epigallocatechin gallate (EGCG).
EGCG μ
μ μ

2. μ
“ ”
μ . μ **L-theanine,** μ
μ

3.

μ , μ μ μ .

4.

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μ μ μ

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μ , μ μ μ :

- 20-30% μ
- 48%
- 42%

5.

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Alzheimer,

Parkinson,

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200 Rosa
 25
 20.000

✓ Centifolia

R. damascena

Rosa Damascena

1. (28-35%)
2. (15-20%)
3. (7-10%)

2/3 (62%)
 -4 (<1%) - (<1%). (Mahboubi. 2016)



3
 &
 .(Boskabady et. al. 2011).



1



μ .1
0,032-0,049% (w/w). (Mahboubi. 2016)

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μ μ 3-5

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100-150! T

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1.2

(ARNICA MONTANA)

. Asteraceae

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Arnica Montana

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μ

μ *arnica*

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montana

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(Kumar et. al. 2017)

μ .(GASPAR et.al. 2014).

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(Raza.2021)

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(Iannitti et. al. 2016)

« μ »

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Pierandrea Mattioli.

Arnica Montana μ

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μ (Ernst et.al. 1998)

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(Smith et. al. 2021),

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(Plezbert et. al. 2005)

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(Sherban et. al. 2021),

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(Seeley et.al. 2006)

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(μ μ

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μ μ jojoba μ μ , μ
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 jojoba μ μ () . μ
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 μ μ jojoba μ μ μ
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 μ μ , jojoba μ μ μ
 jojoba μ μ μ . μ μ μ
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- μ () , μ .
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 - μ μ μ , μ μ μ μ μ jojoba, μ μ μ μ .
 - μ μ μ μ .
 - μ μ μ μ .
 - _____ , _____ , μ μ , _____ , _____ .
 - μ μ _____ μ μ μ μ jojoba (μ μ μ μ μ μ μ μ) .

- T $\mu \mu \mu$ *Staphylococcus aureus*
- μ *Candida Albicans* μ
- μ jojoba.
- , (μ , $\mu \mu$)
- μ μ .

4. ARGAN

(*Argania spinosa* L. Skeels)

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μ $\mu \mu$. μ μ μ , μ .



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μ -6 () μ -9 () (μ) ,

μ , μ ,

μ , μ , μ , μ , μ , μ ,

μ , μ , μ , μ , $\mu\mu$, μ .

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• μ μ : μ , μ μ μ .

• _____ μ : μ " " μ ,

• _____ μ : $\mu \mu$, μ .

• _____ μ _____ : μ , μ , .



- _____: μ μ ,” μ ” ”
- _____: μ μ
- _____: μ μ
- _____: / μ
- _____” ”: μ μ , μ
- _____: , μ μ
- ! μ



5. AVOCADO

(*Persea americana* Mil.)

μ 5–30 m.

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(Woolf et.al. 2009)

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(sterolin): μ

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(Maranz et al., 2004a).
 (Alander, 2004, Maranz and Wiesman, 2004).

(5-17%),
 (1%).
 (-9)



6). F
 A, D, E
 shea butter

shea butter
 A, E F. UV
 (6 SPF).
 shea butter



- 1.
- 2.
- 3.



4.

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SPF 4

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Macadamia Ternifolia,



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μ μ , μ _____, μ

. μ A, B1, B2, B3, C E,

μ , μ

μ macadamia oil , μ

μ , μ μ μ - , -

- . To μ -7,



μ μ , μ 16-24%

μ μ ,

μ μ μ μ μ .

3-4.

μ μ μ . (Kaseke et. al. 2022)

μ μ μ , μ

1.



μ **Macadamia** ,

μ μ ,

μ μ μ ! μ

μ μ μ μ μ μ

μ .

2.

μ μ ,

μ μ μ μ ,

« . » μ μ μ ,

macadamia oil μ μ μ

μ !

3.

μ

macadamia oil μ , μ μ .
μ μ .

4. , : , μ μ .
μ , .

5. μμ
μ macadamia oil μ
μ . μ μ , μ μ μ
μ , μ . μ *macadamia oil*
μ μ μ ,
μ μ μ !

6. μ μ
μ μ μ μ μ ,
macadamia oil μ μ μ
μ . μ μ
μ μ μ μ μ .

7. μ
macadamia oil μ μ μ
μ .
μ μ μ μ μ ,
μ , , μ .

8. μ & SPF
μ μ μ μ μ
μ ; macadamia oil SPF 6 8 μ
μ μ μ μ μ
μ μ μ μ μ
μ .

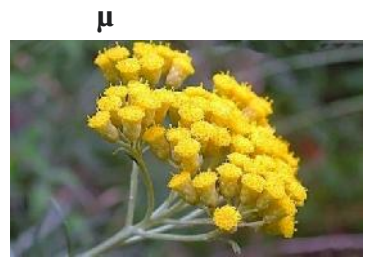
9. μ μ μ μ μ
μ macadamia oil μ μ μ
μ . μ μ μ
μ μ μ .

10. μ

μ μ μ , **macadamia oil**
 μ . μ μ , μ
 μ μ μ . μ

8.

μ μ μ μ **Helichrysum stoechas** –



μ
 (Compositae), (Asteraceae). μ
 60 ., μ μ μ ,
 μ , μ

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 N μ , μ
 . μ μ μ ,
 μ . μ
 – , « μ » « μ ».
 , , ,
 μ μ μ , μ μ μ
 . μ μ μ ,
 μ μ μ , μ μ μ
 μ μ μ . μ μ μ .

(Viegas et. al. 2014)



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 (9) (6),
 μ (& F), , ,

μ μ , , μ
 , μ μ , μ μ μ ,
 μ μ , μ μ μ μ ,

μ . , μ , μ μ . μ , μ . μ μ μ μ . μ , lip balms, μ μ . μ μ μ .

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- μ : μ μ μ ,
 - μ (-):
 - μ (μ μ μ - , μ , μ) μ μ , - μ ,
 - μ : μ μ .(Górna et. al. 2017)

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- μ μ μ .
 - μ , μ μ .
 - , μ μ .
 - , μ .
 - μ, μ .
 - μ .
 - μ foundation :
 - μ μ μ
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 - μ μ , μ μ



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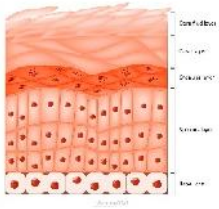
(enfleurage), 8-10
 24
 2:1.
 (*pomade*)
 -150 C
 "extrait d' enfleurage".

➤ **(maceratio)**
 57 - 80 kg, 20 kg
 80 C. 8-10
pomade
extrait.

➤ **(CO2) (SFE)**
 CO2
 CO2
 •
 •
 •
 •
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)
μ
) μ μ . (μ , 1988) μ
μ

μ



1. (stratum basale) -

2. (stratum spinosum) -

UV

(langerhans)

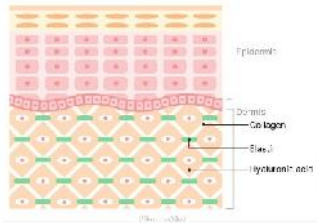
3. (stratum granulosum) -

4. (stratum lucidum) -

5. (stratum corneum) -

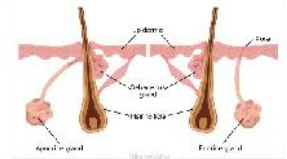
(NMF). (Dehdashtian et al., 2018).

(TEWL)



1.

- Ηλεκτρομαγνητική ακτινοβολία (ECM), η οποία είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.
- Ηλεκτρομαγνητική ακτινοβολία (ECM) - Ηλεκτρομαγνητική ακτινοβολία (ECM) είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.
- Ηλεκτρομαγνητική ακτινοβολία (MMP) - Ηλεκτρομαγνητική ακτινοβολία (MMP) είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.
- Ηλεκτρομαγνητική ακτινοβολία (MMP) - Ηλεκτρομαγνητική ακτινοβολία (MMP) είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.
- Ηλεκτρομαγνητική ακτινοβολία (MMP) - Ηλεκτρομαγνητική ακτινοβολία (MMP) είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.
- Ηλεκτρομαγνητική ακτινοβολία (MMP) - Ηλεκτρομαγνητική ακτινοβολία (MMP) είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.

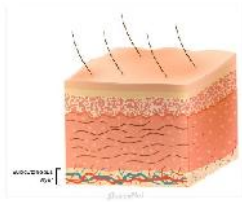


μ . (Lucas, 2017, Dehdashtian et. al. 2018)

μ :

- Ηλεκτρομαγνητική ακτινοβολία (MMP) - Ηλεκτρομαγνητική ακτινοβολία (MMP) είναι μια μορφή ενέργειας που μπορεί να επηρεάσει την ανάπτυξη των οστών.

μ . (Lucas, 2017, Dehdashtian et. al. 2018)



μ , μ , μ .
 μ μ μ , μ .
 μ μ

5.2.1

μ μ μ μ μ , μ
 , μ μ .

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μ (Dehdashtian et. al. 2018).

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μ , μ μ μ μ , ,
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μ μ μ μ (Dehdashtian et. al. 2018).

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 μ μ μ μ

μ , μ
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 μ μ DNA. UVB UVA
 μ μ (μ , UVB μ
 μ).
 UV , μ ,
 μ μ . μ ,
 , μ , μ μ μ
 , μ μ (Kohl et. al. 2011).
 μ UVB (280–320 nm) μ μ UVA (320–400 nm), μ
 μ UVC (100–280 nm),
 . UVB μ 0,3% μ
 UVA .
 UV μ μ μ μ . UVA (μ
 μ μ μ), μ UVB
 μ . (Pérez-Sánchez et. al. 2018).

UV μ .

UV μ μ μ (μ
 μ) μ μ . μ μ μ , μ μ μ μ ,
 UV. μ μ μ
 μ D μ μ ,
 (9). μ μ μ μ μ
 μ μ D μ . μ μ μ μ μ
 μ D, μ μ μ μ μ
 (Pérez-Sánchez et. al.2018).
 μ / , μ UV μ μ
 (μ), , DNA, .
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 UV μ μ , μ μ μ
 UVB, μ μ UVA.

UVB
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 μ μ , μ
 μ Langerhans
 μ Langerhans , μ
 μ . μ . μ
 - μ
 μ UVB μ
 Langerhans, μ
 , UVB ,
 (Pérez-Sánchez et. al. 2018).
 UV ,
 μ μ (MMPs), μ . MMPs,
 μ ECM (extracellular matrix)
 , MMPs
 μ , μ
 μ μ .
 μ μ ,
 μ ECM, μ μ ,
 . μ μ μ μ
 μ μ (Pérez-Sánchez et. al. 2018)
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 1920, Coco Chanel μ μ «
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 (Singh & Griffiths, 2006).

μ , μ

(Zasada & Budzisz, 2019).

μ
Kligman et al. 1984 ,

μ (Kligman et. al.1984).

μ μ μ , μ μ , μ μ

μ μ μ , μ μ μ μ μ .

μ μ , μ

(Zasada & Budzisz, 2019)

μ

μ μ μ , μ , μ , μ , μ , μ , μ ,


, mascara, μ μ , μ μ , μ μ , μ μ , μ μ , μ μ ,

μ eau de toilette.

6.

« » μ « » μ μ .
μ 'cosmetic', μ , μ
« μ », μ . μ , μ
'cosmetic' μ μ (Steve
Barton et. al. 2021).

μ « » μ μ
. μ μ μ () . 1223/2009
μ 30 μ 2009 « «
» μ μ μ μ μ
μ (μ , μ μ , ,
) μ μ
, μ , μ μ ,
μ μ , μ » (μ 1223/2009, 2.1.).
μ μ μ (FDA),
μ , : «
μ μ μ ,
μ , μ , μ ,
» (Lewis, 1998).

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- μ μ μ μ μ , ,

μ μ . [μ () 1223/2009
μ 30 μ 2009].

6.1

- μ (rinse-off),
- μ (leave-on),
- μ , μ , μ .
- 1. _____ : μ , , ,
- μ , μ .
- 2. _____ : μ , (serum), μ
- μ , μ μ
- μ , , μ , .
- 3. _____ : , μ , μ ,
- , μ , μ ,
- .
- 4. _____ : μ , μ , , μ ,
- , μ , μ μ , .
- 5. μ : μ , μ , μ μ .
- 6. μ : μ , foundations,
- μ , mascaras, ,, .
- 7. _____ : μ ,
- μ , (Steve Barton et. al 2021)

6.2

- μ μ μ ,
- μ μ .
- μ μ μ
- μ μ .
- :
- ❖ μ ():
- μ . μ μ μ
- (Steve Barton et. al. 2021).
- ❖ μ - : μ
- / μ μ μ μ
- μ μ .



μ : μμ , μ , μ
(, , tapioca, μ), (Steve Barton et. al. 2021).

❖ : μ
μ μ ,
μ μ
μ μ
μ .

1) :
μ ,
μ μ . μ ,

2) μ , μ ,
μ , μ (TEWL7).

μ
3) , μ
μ μ , μ
μ μ (Steve Barton et. al. 2021).

❖ : μ
(dyes),
pigments (Steve Barton et al., 2021).



❖ μ : μ
μ μ , μ
μ (Steve Barton et. al. 2021).

❖ : μ
μ . μ ,
μ μ - μ , μ
DMDM . μ μ
(Steve Barton et. al. 2021).

❖ μ : μ μ μ .
B3 5. μ μ , μ C,
μ . μ
μ μ ,
μ μ , μ
μ μ μ , μ
μ μ μ . μ
μ μ , μ .



μ , μ, μ .
 , (AHA) , μ μ .



T



μ .
 μ
 - , μ μ μ « »
 μ μ
 μ .
 μ , μ , μ
μ



μ μ μ
 μ () , μ μ ,
 . , , ,
 μ .



μ μ μ μ μ μ .
 μ , μ .
 , μ μ , μ ,
 μ .
 μ μ μ μ μ
 μ . μ , μ ,
 μ .
 μ μ μ μ μ μ μ μ μ .

1. μ .
2. μ .
3. μ .



Aceton: « » μ .
μ , , , μ μ .

Formaldehyde: μ formaldehyde
μ , , μ μ .

EDTA Ethylenedinitrilo : μ μ μ .
μ μ .

BenzylAcetate – :
(μ μ μ ,
μ .

BenzylAlcohol - : μ μ μ
μ , , μ , μ , μ , μ
μ

Mineral Oil – : μ , μ , μ , μ , μ , μ
μ , μ , μ (μ μ)
μ , μ , μ (–
) , μ .

6.5

μ μ :

- μ μ
- μ μ
- μ μ
- μ μ μ
- μ μ μ
- μ μ μ μ ,

μ :

- μ μ
- μ ,

μ :

- μ μ
- μ
- μ μ
- μ μ
- μ

μ μ μ μ μ / μ



- μ μ μ (... ,)
- μ μ (... μ , ,)
- (...)

μ μ μ μ , μ

-
-
-
- μ μ μ
- μ

(μ), μ , μ , μ .
 μ μ , μ μ . μ μ μ

μ μ μ :

- μ (0,2-50 μm)
- μ (0,01-0,2 μm)

μ μ μ :

(), μ
(μ). μ

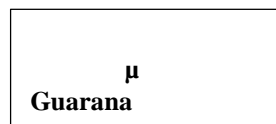
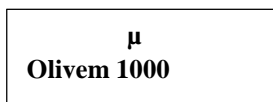
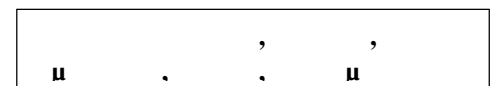
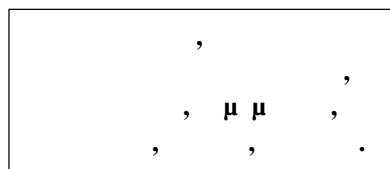


7.1

μ

μ

:





μ , Ylang-Ylang,
,

7.2

-

1

40 ml μ

: 5ml

5ml

2,00gr Olivem 1000

: 30ml

1,5ml

1%

0,15gr μ C

: 5

: 35

μ

(Leucidal)



μ

μ

μ

μ C.

μ

μ

μ

70 C

μ

μ

μ

μ

μ

μ

μ

, μ

μ μ

μ μ 5 min , μ μ 5
 35 μ
 , μ . 4μ .
2

 40 ml μ
 : 5ml
 5ml
 2,00gr Olivem 1000
 : 30ml
 1,5ml 1%
 0,15gr μ C
 : 5 μ
 : 35 μ (Leucidal)

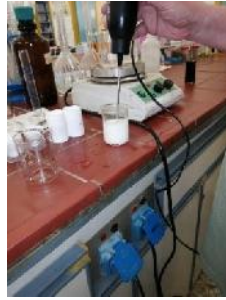


μ
 μ .
 μ C. μ μ μ ,
 μ μ μ μ μ μ μ 70 C
 μ μ μ .
 μ μ μ .
 μ μ , μ μ μ μ .
 μ μ μ 5 min , μ μ 5
 μ 35 μ .
 , μ 4μ .

3

 40 ml μ
 : 5ml
 5ml
 2,00gr Olivem 1000
 : 30ml
 1,5ml 1%

0,15gr μ C
 : 5
 : 35 μ (Leucidal)



μ
 μ
 μ C.
 μ μ μ 70 C
 μ μ
 μ μ
 μ μ 5 min ,
 μ μ 35
 μ μ 5
 μ μ 4 μ

4
 40 ml μ
 : 5ml
 5ml
 2,00gr Olivem 1000
 : 15ml
 15ml 1%
 0,15gr μ C
 : 5
 : 35 μ (Leucidal)



μ
 μ .
 μ C. μ ,
 μ μ μ μ 70 C
 μ μ μ .
 μ μ μ - μ μ
 μ μ , μ μ μ μ .
 μ μ 5 min , μ μ 5
 μ 35 μ .
 μ 4 μ .
5

40 ml μ
 : 5ml
 5ml jojoba
 2,00gr Olivem 1000
 : 15ml
 15ml 1%
 0,15gr μ C
 : 5
 : 35 μ (Leucidal)
 μ
 μ .
 μ C. μ ,
 μ μ μ μ 70 C
 μ μ μ .
 μ μ μ - μ μ μ .

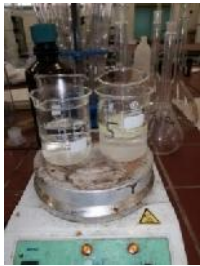


μ μ 5 min , μ μ 5
35 μ . 4 μ .

6

40 ml μ
: 5ml
5ml μ
2,00gr Olivem 1000
: 15ml
15ml 1%
0,15gr μ C
: 5
: 35 μ

(Leucidal)



μ
μ .
μ C. μ μ , μ
μ μ μ 70 C
μ μ μ .
μ μ μ
μ μ , μ μ μ μ .
μ μ 5 min , μ μ 5
35 μ .
μ 4 μ .

7

40 ml μ
: 5ml
5ml
2,00gr Olivem 1000
: 10ml
15ml 1%
5ml μ guarana

0,15gr μ C
: 5 .

: 35 μ

(Leucidal)



μ
μ .
μ C.
μ μ μ μ 70 C
μ μ μ .
μ μ μ - μ
μ μ μ μ μ μ .
μ μ 5 min , μ μ 5
μ 35 μ
, μ 4 μ .

8

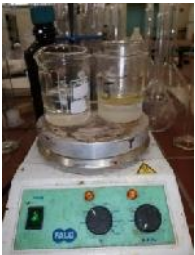
40 ml μ

: 2ml
4ml
4ml argan
2,00gr Olivem 1000

: 10ml
10ml μ guarana
0,15gr μ C

: 35 μ

(Leucidal)



μ
 μ .
 μ C. μ ,
 μ μ μ μ 70 C
 μ μ .
 μ μ .
 μ μ , μ μ μ
 μ μ 5 min , μ μ 35 .
 μ .
 μ 4 μ .

9

40 ml μ
 : 5ml
 5ml argan
 2,00gr Olivem 1000
 : 10ml
 15ml 1%
 5ml μ guarana
 0,15gr μ C
 : 5 μ
 : 35 μ (Leucidal)



μ
 μ .
 μ C. μ ,
 μ μ μ 70 C
 μ μ .
 μ μ .
 μ μ , μ μ μ .

μ μ 5 min , μ μ 5
 μ 35 μ 4 μ .

10

40 ml μ

: 5ml

5ml μ μ
 2,00gr Olivem 1000

: 10ml

15ml 1%

5ml μ guarana

0,15gr μ C

: 3

: 35

μ

3

(Leucidal)



μ
 μ .
 μ C. μ μ ,
 μ μ μ 70 C
 μ μ μ .
 μ μ μ
 μ μ , μ μ μ
 μ μ 5 min , μ μ 3
 3 . - 35
 μ .
 , μ 4 μ

11

40 ml μ

: 5ml

5ml

2,00gr Olivem 1000
 : 5ml
 15ml 1%
 10ml μ guarana
 0,15gr μ C
 : 5
 : 35 μ (Leucidal)



μ
 μ .
 μ C. μ
 μ μ μ 70 C
 μ μ
 μ μ
 μ μ μ
 μ μ μ 5 min , μ μ 5
 μ 35 μ
 , μ 4 μ .

12

40 ml μ
 : 5ml
 5ml μ
 2,00gr Olivem 1000
 : 10ml
 15ml 1%
 5ml μ guarana
 0,15gr μ C
 : 5
 : 35 μ (Leucidal)



μ
 μ .
 μ C. μ μ μ μ μ 70 C
 μ μ μ .
 μ μ μ .
 μ μ , μ μ μ μ μ 5 min ,
 μ μ μ 5
 μ 35 μ μ .
 μ μ 4 μ .



7.3

1
 μ μ μ μ , μ μ μ .
 μ μ μ μ μ μ μ μ .
 μ μ μ μ μ μ μ .
 μ μ μ μ μ μ μ .
2
 μ μ μ μ μ μ μ .
 μ μ μ μ μ μ μ .
 μ μ / μ .

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