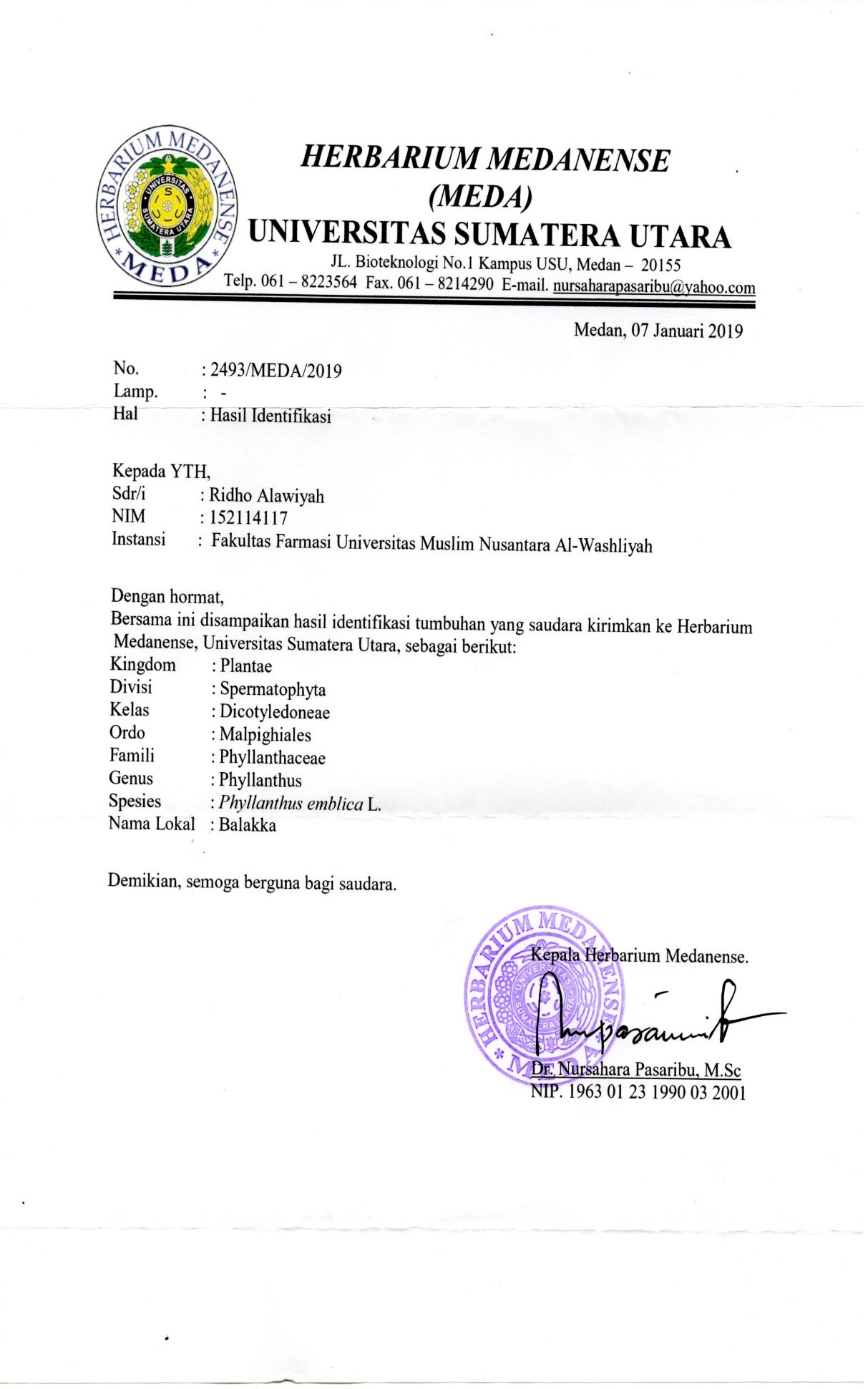
******Lampiran 1.** Surat Hasil Identifikasi Sampel Daun Malaka

Surat Hasil Identifikasi Sampel Daun Malaka

# Lampiran 2. Bagan Alir Pembuatan Ekstrak Etanol Daun Malaka

# *(Phyllanthus emblica* L.*)*

500 gram serbuk simplisia daun Malaka

Dimasukkan kedalam bejana tertutup

Ditambahkan pelarut etanol 96% sebanyak 75 bagian (3750 ml) dan diaduk

Didiamkan selama 5 hari sambil diaduk

Disaring

Maserat I

Ampas

Ditambahkan dengan etanol 96% sebanyak 25 bagian (1250 ml) dan diaduk

Dimaserasi kembali selama 2 hari sambil diaduk

Disaring

Maserat II

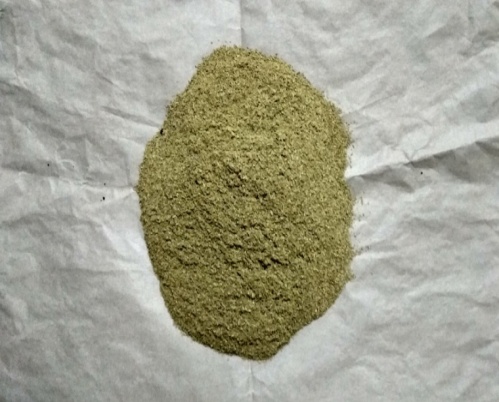
Maserat Daun Malaka

Dipekatkan dengan alat rotary evapator pada suhu 40oC

Diuapkan dengan penangas air

Ekstrak etanol 121,53 g (Cokelat tua)

# Lampiran 3. Pembuatan Ekstrak Etanol Daun Malaka *(Phyllanthus emblica* L.)

Serbuk Simplisia Daun Malaka Maserasi Daun Malaka

****

Alat Rotary Evapator Ekstrak Etanol Daun Malaka

# Lampiran 4. Perhitungan Randemen Simplisia dan Ekstrak

Perhitungan randemen =

1. Persen randemen simplisia

Randemen daun malaka =

1. Persen randemen ekstrak

Randemen ekstrak daun malaka

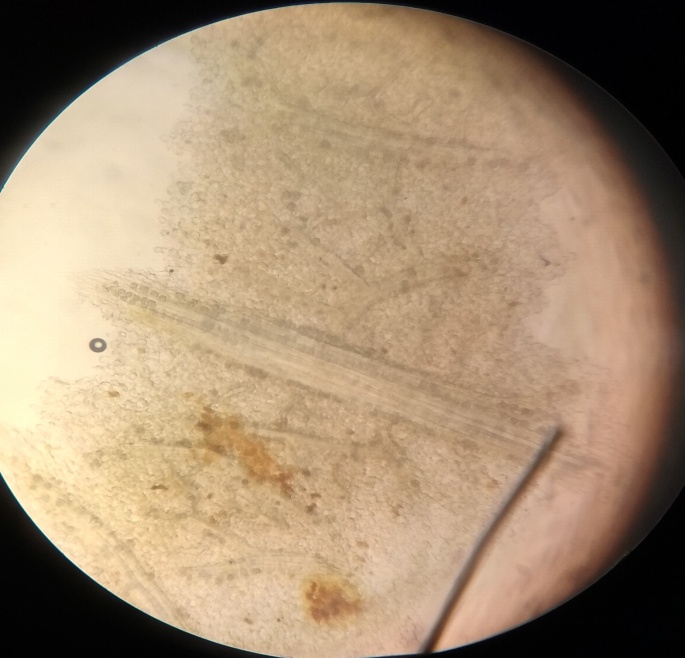
# IMG_20190425_093437.jpgLampiran 5. Makroskopik Daun Malaka *(Phyllanthus emblica* L*.)*

**

Makroskopik Daun Malaka *(Phyllanthus emblica* L*.)*

Makroskopik Daun Malaka *(Phyllanthus emblica* L*.)*

# Lampiran 6. Hasil Pengamatan Mikroskopik Penampang Melintang Daun Malaka Segar *(Phyllanthus emblica* L*.)*



a

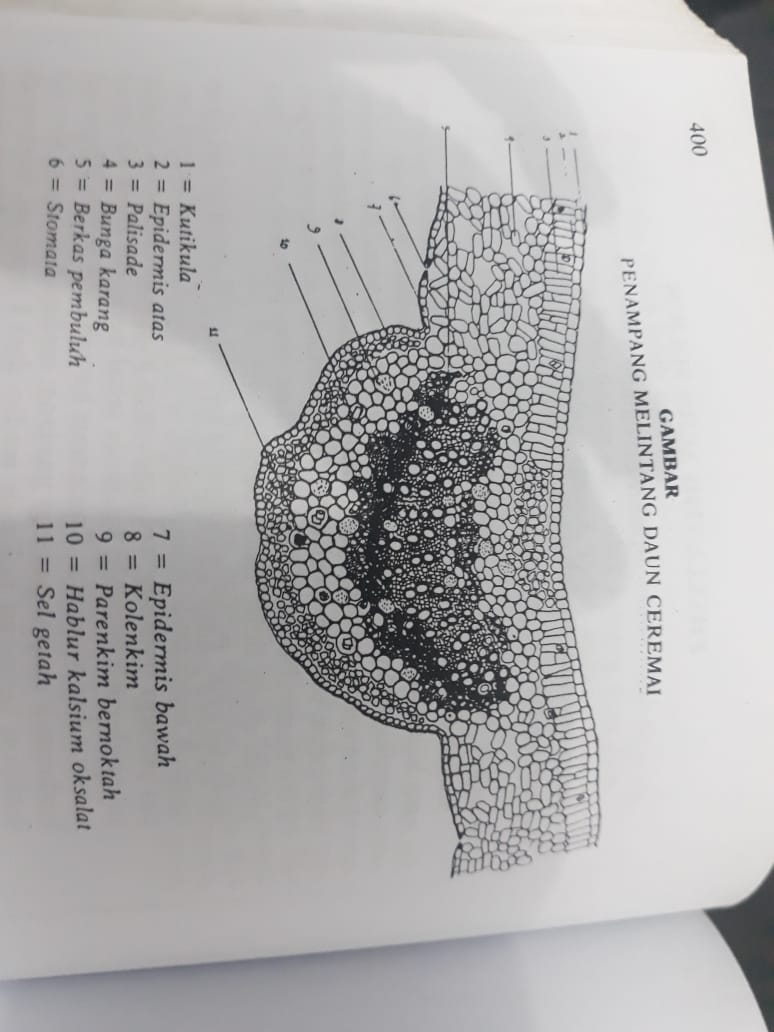
b

c

Mikroskopik Daun Malaka *(Phyllanthus emblica* L*.)*

Keterangan:

a: kolenkim

b: berkas pembuluh

c: sel getah

Mikroskopik family *Phyllanthus* menurut MMI

# Lampiran 7 Perhitungan Kadar Air Serbuk Simplisia Daun Malaka *(Phyllanthus emblica* L*.)*

Perhitungan kadar air simplisia daun malaka

Kadar air =x 100 %

1. Sampel I

Berat sampel = 5 gram

Volume I = 1,6 ml

Volume II = 1,8 ml

Kadar air = x 100% = 4 %

1. Sampel II

Berat sampel = 5 gram

Volume I = 1,6 ml

Volume II = 1,9 ml

Kadar air = x 100% = 6 %

1. Sampel III

Berat sampel = 5 gram

Volume I = 1,7 ml

Volume II = 1,9 ml

Kadar air = x 100% = 4 %

Kadar air rata-rata == 4,6 %

# Lampiran 8. Bagan Formulasi Krim Antijerawat Ekstrak Daun Malaka

# *(Phyllanthus emblica* L*.)*

Formulasi dasar krim

Fase minyak Fase air

Sorbitol, propilen glikol, trietanolamin, gliserin, nipagin dan aquadest

Asam stearat dan setil alkohol

Ditimbang Ditimbang

Dimasukkan kedalam cawan penguap Dimasukkan kedalam cawan penguap

Dilebur diatas penangas air Dilebur diatas penangas air

Massa II

Massa I

Massa I dimasukkan kedalam lumpang panas, kemudian ditambah massa II

Digerus secara terus menerus

Dasar krim

Ditambahkan ekstrak daun malaka dan digerus sampai homogen

Krim anti jerawat kosentrasi 5%, 10%, 15%

Diuji mutu fisik krim

* Uji stabilitas
* Uji homogenitas
* Uji pH
* Uji tipe krim
* Uji iritasi sediaan
* Uji *hedonic*

Hasil

# Lampiran 9. Sediaan Krim Ekstrak Etanol Daun Malaka

# *(Phyllanthus emblica* L*.)*



Sediaan Krim Ekstrak Etanol Daun Malaka *(Phyllanthus emblica* L*.)*

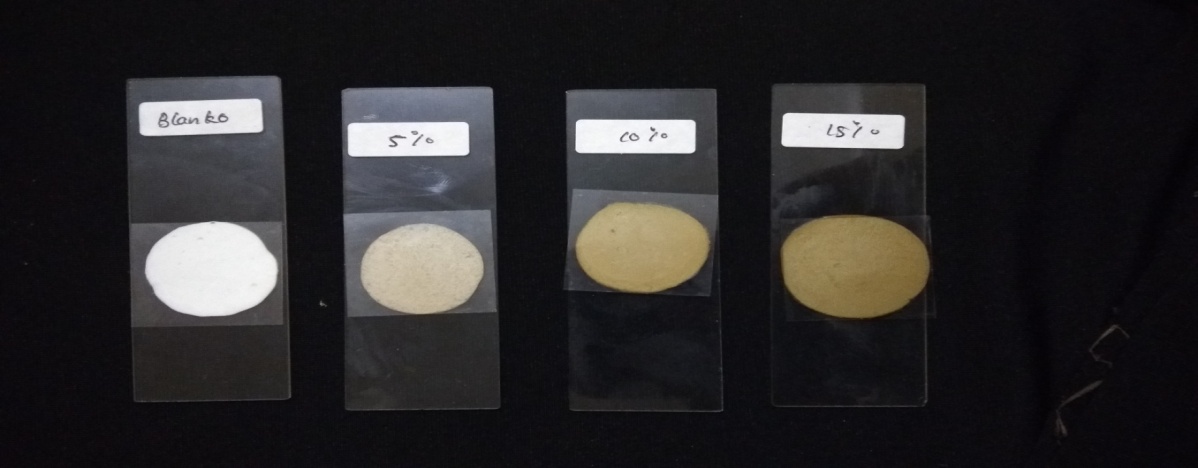


Navagreen Herbal Acne (pembanding)

pH Meter

# IMG_20190609_155933_HDR.jpgLampiran 10. Hasil Uji Stabilitas, Homogenitas dan Tipe emulsi Sedian Krim Antijerawat

Hasil Uji Stabilitas Sedian Krim Antijerawat sediaan krim ekstrak etanol daun malaka *(Phyllanthus emblica* L.*)*

**

Hasil Pemeriksaan Homogenitas sediaan krim ekstrak etanol daun malaka *(Phyllanthus emblica* L.*)*

Hasil pemeriksaan uji tipe emulsi krim sediaan krim ekstrak etanol daun malaka

*(Phyllanthus emblica* L*.)*

# Lampiran 11. Pengamatan Uji pH Krim Antijerawat

****

Pengenceran sediaan krim

****

Pengukuran pH sediaan krim

Sebelum *cycling test*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | | | | |
| Nilai pH | | | | | | | | |
|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| Lower Bound | Upper Bound |
| 0 | 3 | 5.467 | .1155 | .0667 | 5.180 | 5.754 | 5.4 | 5.6 |
| 5 | 3 | 5.300 | .2646 | .1528 | 4.643 | 5.957 | 5.0 | 5.5 |
| 10 | 3 | 5.167 | .2517 | .1453 | 4.542 | 5.792 | 4.9 | 5.4 |
| 15 | 3 | 4.867 | .1528 | .0882 | 4.487 | 5.246 | 4.7 | 5.0 |
| Total | 12 | 5.200 | .2892 | .0835 | 5.016 | 5.384 | 4.7 | 5.6 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ANOVA** | | | | | |
| Konsentrasi | | | | | |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .580 | 3 | .193 | 4.549 | .038 |
| Within Groups | .340 | 8 | .042 |  |  |
| Total | .920 | 11 |  |  |  |

Siklus 3

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | | | | |
|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| Lower Bound | Upper Bound |
| blanko | 3 | 5.433 | .1155 | .0667 | 5.146 | 5.720 | 5.3 | 5.5 |
| 5% | 3 | 5.200 | .1732 | .1000 | 4.770 | 5.630 | 5.1 | 5.4 |
| 10% | 3 | 5.133 | .1528 | .0882 | 4.754 | 5.513 | 5.0 | 5.3 |
| 15% | 3 | 4.800 | .1000 | .0577 | 4.552 | 5.048 | 4.7 | 4.9 |
| Total | 12 | 5.142 | .2644 | .0763 | 4.974 | 5.310 | 4.7 | 5.5 |

**Lampiran 11.** Lanjutan

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ANOVA** | | | | | |
| Konsentrasi | | | | | |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .616 | 3 | .205 | 10.710 | .004 |
| Within Groups | .153 | 8 | .019 |  |  |
| Total | .769 | 11 |  |  |  |

Siklus 6

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | | | | |
| Nilai pH | | | | | | | | |
|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| Lower Bound | Upper Bound |
| 0 | 3 | 5.300 | .2646 | .1528 | 4.643 | 5.957 | 5.0 | 5.5 |
| 5 | 3 | 5.167 | .2517 | .1453 | 4.542 | 5.792 | 4.9 | 5.4 |
| 10 | 3 | 4.867 | .1528 | .0882 | 4.487 | 5.246 | 4.7 | 5.0 |
| 15 | 3 | 4.767 | .2082 | .1202 | 4.250 | 5.284 | 4.6 | 5.0 |
| Total | 12 | 5.025 | .2958 | .0854 | 4.837 | 5.213 | 4.6 | 5.5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ANOVA** | | | | | |
| Konsentrasi | | | | | |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .562 | 3 | .187 | 3.750 | .060 |
| Within Groups | .400 | 8 | .050 |  |  |
| Total | .962 | 11 |  |  |  |

# Lampiran 12. Pengamatan Uji Iritasi Sediaan Krim Antijerawat

Pengolesan krim setelah 24 jam

** **

Krim EEDM 5% Krim EEDM 5%

** **

Krim EEDM 10%Krim EEDM 10%

** **

Krim EEDM 15% Krim EEDM 5%

# Lampiran 13. Kuisioner Kesukaan Sediaan

**ANGKET KUISIONER SEDIAAN KRIM ANTIJERAWAT DARI EKSTRAK ETANOL DAUN MALAKA(*Phyllanthus emblica* L.)**

Nama :

Umur :

Tanggal :

Alamat :

**Petunjuk Pengisian**

Berikan nilai dengan tanda ceklis (√) pada kolom dan diisi sesuai kesukaan dengan mengamati warna, bentuk/tekstur dan aroma dari masing-masing sampel tersebut.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Warna | Kode sampel | | | |
| F1 | F2 | F3 | F4 |
| Sangat suka |  |  |  |  |
| Suka |  |  |  |  |
| Kurang suka |  |  |  |  |
| Tidak suka |  |  |  |  |
| Sangat tidak suka |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Aroma | Kode sampel | | | |
| F1 | F2 | F3 | F4 |
| Sangat suka |  |  |  |  |
| Suka |  |  |  |  |
| Kurang suka |  |  |  |  |
| Tidak suka |  |  |  |  |
| Sangat tidak suka |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bentuk/tekstur | Kode sampel | | | |
| F1 | F2 | F3 | F4 |
| Sangat suka |  |  |  |  |
| Suka |  |  |  |  |
| Kurang suka |  |  |  |  |
| Tidak suka |  |  |  |  |
| Sangat tidak suka |  |  |  |  |

# Lampiran 14. Hasil Data Perhitungan Uji *Hedonic*

Data uji *hedonic*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Warna | Nilai kesukaan sediaan | | | |
| F1 | F2 | F3 | F4 |
| Sangat suka | 5 | 5 |  |  |
| Suka |  |  | 4 | 4 |
| Kurang suka |  |  |  |  |
| Tidak suka |  |  |  |  |
| Sangat tidak suka |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Aroma | Nilai kesukaan sediaaan | | | |
| F1 | F2 | F3 | F4 |
| Sangat suka | 5 | 5 | 5 |  |
| Suka |  |  |  |  |
| Kurang suka |  |  |  | 3 |
| Tidak suka |  |  |  |  |
| Sangat tidak suka |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bentuk/tekstur | Nilai kesukaan sediaaan | | | |
| F1 | F2 | F3 | F4 |
| Sangat suka | 5 | 5 | 5 |  |
| Suka |  |  |  |  |
| Kurang suka |  |  |  | 3 |
| Tidak suka |  |  |  |  |
| Sangat tidak suka |  |  |  |  |

# Lampiran 14. Lanjutan

# Hasil Data Perhitungan Uji *Hedonic*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Panelis | Nilai kesukaan warna F2 | | | |
| Kode | Nilai (Xi) | Xi **-** |  |
| 1 | S | 4 | 0,4 | 0,16 |
| 2 | SS | 5 | 0,6 | 0,36 |
| 3 | SS | 5 | 0,6 | 0,36 |
| 4 | SS | 5 | 0,6 | 0,36 |
| 5 | S | 4 | 0,4 | 0,16 |
| 6 | S | 4 | 0,4 | 0,16 |
| 7 | SS | 5 | 0,6 | 0,36 |
| 8 | SS | 5 | 0,6 | 0,36 |
| 9 | SS | 5 | 0,6 | 0,36 |
| 10 | S | 4 | 0,4 | 0,16 |
| 11 | S | 4 | 0,4 | 0,16 |
| 12 | S | 4 | 0,4 | 0,16 |
| 13 | S | 4 | 0,4 | 0,16 |
| 14 | S | 4 | 0,4 | 0,16 |
| 15 | S | 4 | 0,4 | 0,16 |
| Nilai kesukaan rata-rata () = 4,4 | | | Nilai total = 3,6 | |

Standar deviasi (SD) =

Standar deviasi (SD)== 0,5070

Rentang nilai kesukaan warna dari sediaan F2 krim antijerawat

= Nilai rata-rata (****) – 0,5070 ≥ µ ≤ Nilai rata-rata (****) + 0,5070

= 4,4 – 0,5070 ≥ µ ≤ 4,4 + 0,5070

= 3,893 ≥ µ ≤ 4,907

# Lampiran 15. Bagan Alir Pengujian Aktivitas Antibakteri

Biakan Murni

Diambil dengan jarum ose steril

Ditanam pada media Na miring diinkubasi pada suhu 35-37oC

Stok kultur bakteri

Diambil dengan jarum ose steril

Disuspensikan dalam 10 ml NaCl 0,9% steril

Dihomogenkan sampai kekeruhan yang sama dengan Mc. Farland

Suspensi bakteri 108 CFU/ml

Dipipet 0,1 ml kedalam tabung reaksi steril

Ditambahkan 9,9 ml NaCl 0,9% steril dan dihomogenkan

Suspensi bakteri 106 CFU/ml

Dituang 20 ml MHA steril cair (45-50oC), dibiarkan memadat

Suspensi bakteri 106 CFU/ml digoreskan kedalam cawan petri

yang sudah berisi media MHA

Dibuat lubang dengan *punch hole* pada permukaan media sebanyak 5 lubang, kemudian dimasukkan krim ekstrak etanaol daun malaka dan kontrol positif pada masing-masing lubang yang sudah dibuat

Pra inkubasi selama 15 menit

Diinkubasi pada suhu 37oC selama 18-24 jam

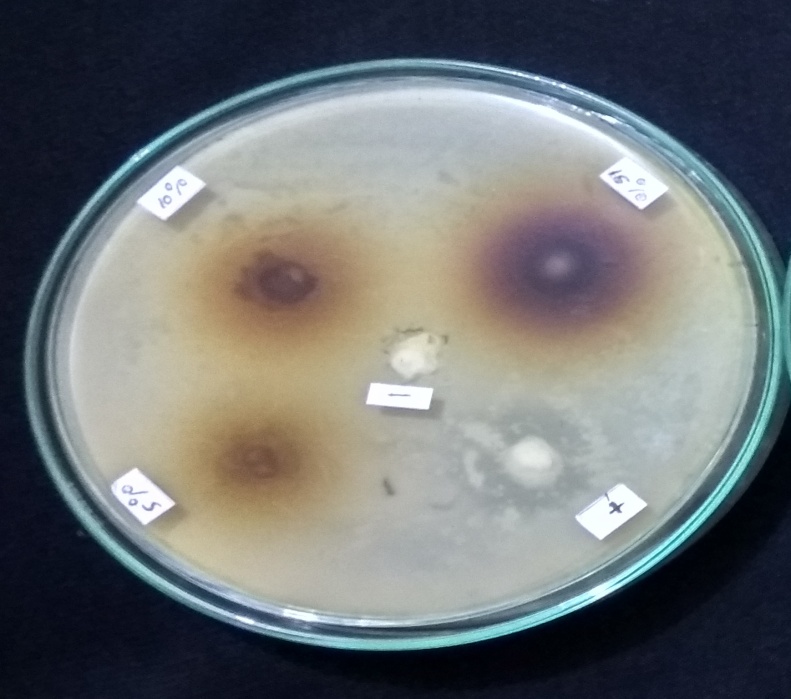
Hasil inkubasi

Diukur diameter zona hambat disekitar lubang *punch hole*

Diameter hambat

# Lampiran 16. Hasil Uji Aktivitas Antibakteri Sediaan Krim Antijerawat Esktrak Etanol Daun Malaka *(Phyllanthus emblica* L*.)* Terhadap Bakteri *Propionibacterium acne* Pada Kosentrasi 5%, 10%, 15%, Blanko

# (-) dan Pembanding (+)

 b

c

d

e

a

Keterangan:

1. Krim ekstrak etanol daun malaka konsentrasi 5%
2. Krim ekstrak etanol daun malaka konsentrasi 10%
3. Krim ekstrak etanol daun malaka konsentrasi 15%
4. Basis krim atau blanko tanpa ekstrak etanol daun malaka
5. Pembanding “Nava green tea cream acne”

# Lampiran 17. Hasil Descriptives, ANOVA dan Uji Duncan pada Diameter Zona Hambat Uji Aktivitas Antibakteri Krim Antijerawat Ekstrak Etanol Daun Malaka (*Phyllanthus emblica* L.) Terhadap Bakteri *Propionibacterium acne.*

**Oneway**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | | | | |
| Bakteri *Propionibacterium acne* | | | | | | | | |
|  | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| Lower Bound | Upper Bound |
| Kosentrasi 15% | 3 | 21,3000 | ,30000 | ,17321 | 20,5548 | 22,0452 | 21,00 | 21,60 |
| Kosentrasi 10% | 3 | 18,8667 | ,80829 | ,46667 | 16,8588 | 20,8746 | 18,00 | 19,60 |
| Kosentrasi 5% | 3 | 17,9667 | ,35119 | ,20276 | 17,0943 | 18,8391 | 17,60 | 18,30 |
| kontrol Positif | 3 | 15,7667 | ,40415 | ,23333 | 14,7627 | 16,7706 | 15,30 | 16,00 |
| kontrol Negatif | 3 | ,0000 | ,00000 | ,00000 | ,0000 | ,0000 | ,00 | ,00 |
| Total | 15 | 14,7800 | 7,87593 | 2,03356 | 10,4185 | 19,1415 | ,00 | 21,60 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ANOVA** | | | | | |
| Bakteri *Propionibacterium acne* | | | | | |
|  | Sum of Squares | Df | Mean Square | F | Sig. |
| Between Groups | 866,364 | 4 | 216,591 | 1051,413 | ,000 |
| Within Groups | 2,060 | 10 | ,206 |  |  |
| Total | 868,424 | 14 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Duncan** | | | | | | |
| Bakteri *Propionibacterium acne* | | | | | | |
| Diameter Zona Hambat | N | Subset for alpha = 0.05 | | | | |
| 1 | 2 | 3 | 4 | 5 |
| kontrol Negatif | 3 | ,0000 |  |  |  |  |
| kontrol Positif | 3 |  | 15,7667 |  |  |  |
| Kosentrasi 5% | 3 |  |  | 17,9667 |  |  |
| Kosentrasi 10% | 3 |  |  |  | 18,8667 |  |
| Kosentrasi 15% | 3 |  |  |  |  | 21,3000 |
| Sig. |  | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Means for groups in homogeneous subsets are displayed. | | | | | | |

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