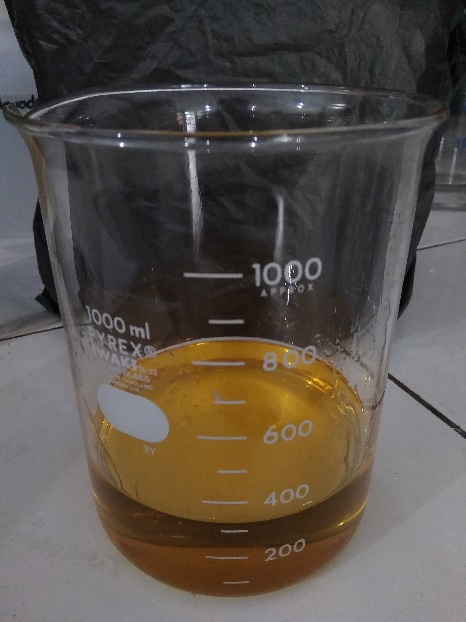
**Lampiran 1.** Minyak Jelantah dan Minyak Hasil Transesterifikasi Minyak Jelantah

** **

Penyaringan Minyak Jelantah



Minyak Hasil Transesterifikasi Minyak Jelantah

**Lampiran 2.** Perhitungan dan Cara Pembuatan Larutan KOH 0,1 N

Normalitas KOH : 0,1 N

Volume KOH : 250 ml

BM KOH : 56,1 g/mol

Berat KOH : M x V x BM

: 0,1 mol/L x 250 ml/1000 x 56,1 g/mol

: 1,4025 g

Cara Pembuatan:

* + - 1. Ditimbang KOH sebanyak 1,4023 g
      2. Dimasukkan dalam beaker kemudian dilarutkan dengan 100 ml aquades
      3. Dipindahkan kedalam labu tentukur 250 ml, kemudian ad dengan aquades sampai garis tanda

**Lampiran 3.** Perhitungan Asam Lemak Bebas, Bilangan Asam, Massa Jenis, dan Bilangan Penyabunan Minyak Jelantah

Perhitungan Asam Lemak Bebas

Diketahui :

Vol KOH = 37,9 ml

Berat Minyak = 5 gram

N KOH = 0,1 N

FFA : x N KOH

:x 0,1 N

: 0,75

Uji Bilangan Asam

Diketahui:

V KOH = 45,7 ml

N KOH = 0,1

BM KOH =56,1 g/mol

Berat sampel = 10 gram

Angka Asam =

=

=

= 25,634

**Lampiran 3.** (Lanjutan)

Massa Jenis

Diketahui:

m1 = 16,3440 g

m2 = 25,8 g

V = 10,570 ml

=

=

=

= 0,8949 g/ml

* + - 1. Bilangan Penyabunan

Diketahui:

Vb = 25,9 ml

Vt = 24,8 ml

N = 0,5 N

BM = 56,1

M = 5 g

Angka Penyabunan =

=

= 6,171

**Lampiran 4.** Perhitungan Asam Lemak Bebas, Bilangan Asam, Massa Jenis, dan Bilangan Penyabunan Minyak Hasil Transesterifikasi

Perhitungan Asam Lemak Bebas

Diketahui:

Vol KOH = 30,6 ml

Berat Minyak = 5 gram

N KOH = 0,1 N

FFA : x N KOH

:x 0,1 N

: 0,62

Uji Bilangan Asam

Diketahui:

V KOH = 6,5 ml

N KOH = 0,1

BM KOH =56,1 g/mol

Berat sampel = 10 gram

Angka Asam =

=

= 3,64

**Lampiran 4.** (Lanjutan)

Massa Jenis

Diketahui:

m1 = 17,5 g

m2 = 26,5 g

V = 10,511 ml

=

=

=

= 0,8562 g/ml

* + - 1. Bilangan Penyabunan

Diketahui:

Vb = 25,9 ml

Vt = 23,5 ml

N = 0,5 N

BM = 56,1

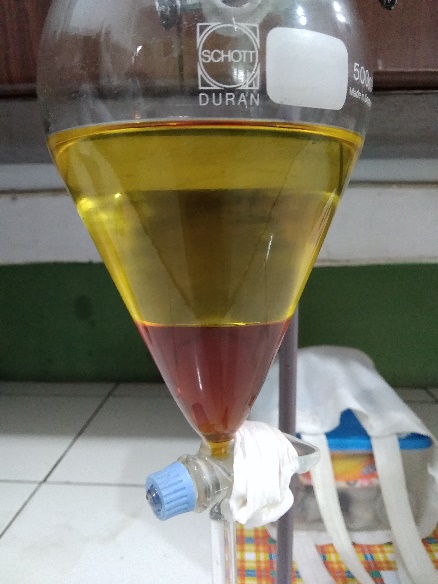
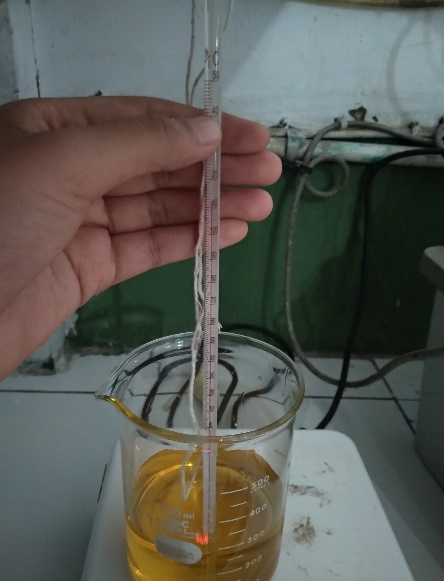
M = 5 g

Angka Penyabunan =

=

= 13,464

**Lampiran 5.** Proses Transesterifikasi



Setelah dimasukkan larutan KOH dalam metanol ke sampel minyak jelantah, terjadi 2 lapisan lalu di pindahkan kedalam corong pisah, didiamkan selama 8 jam

Minyak transesterifikasi setelah dipisahkan Menjadi lebih bening disbanding minyak jelantah

Perubahan warna setelah didiamkan 8 jam

Diukur suhu sampai 60o

Minyak jelantah dipanaskan di hotplate

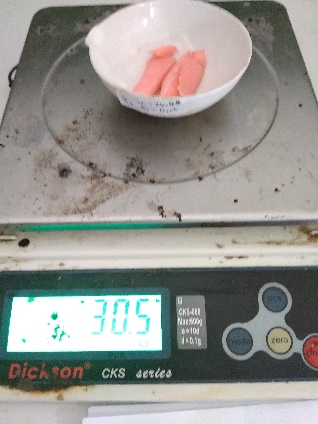
**Lampiran 6.** Sediaan Sabun Padat dari Bahan Dasar Minyak Hasil Transesterifikasi Minyak Jelantah



**Lampiran 7.** Pengujian Kadar Air



Sabun saat diletakkan pada oven dan didiamkan selama 3 jam



Penimbangan Sabun Padat Setelah didiamkan pada oven selama 3 jam

**Lampiran 8.** Perhitungan Kadar Air Sabun Padat dengan Bahan Dasar Minyak Hasil Transesterifikasi Minyak Jelantah

Kadar Air = x 100 %

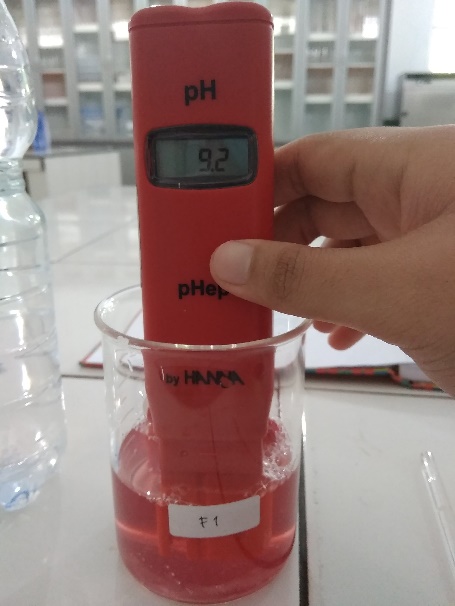
Keterangan :

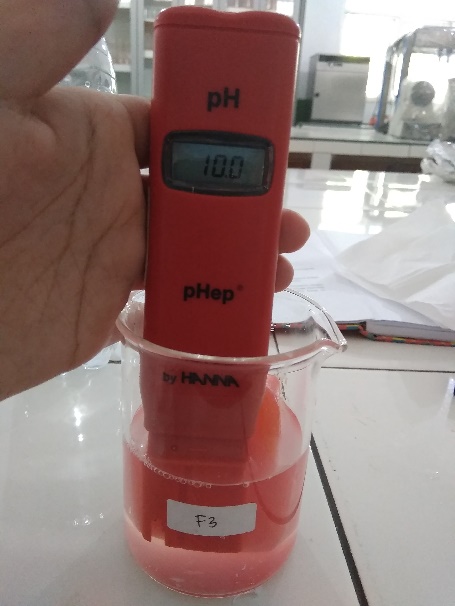
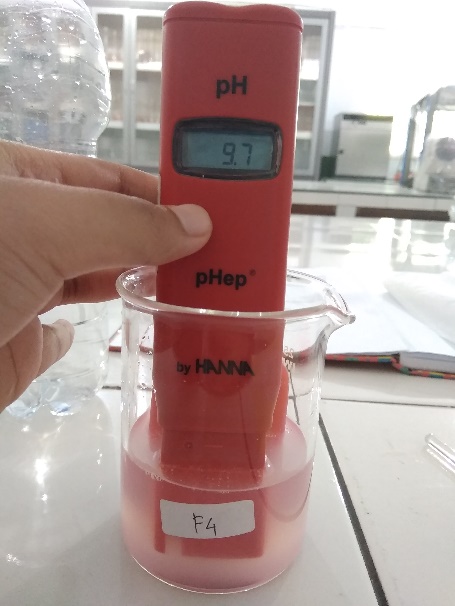
W1 = Berat Cawan Kosong

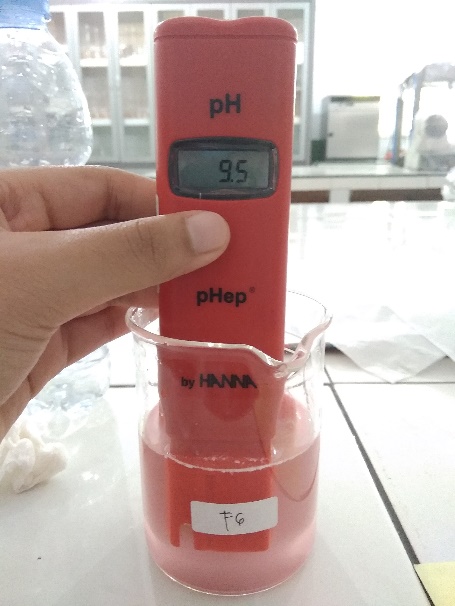
W2 = Berat Cawan + Isi (setelah oven)

* Formula 1 = x 100% = 17,5 %
* Formula 2 = x 100% = 16 %
* Formula 3 = x 100% = 15 %
* Formula 4 = x 100% = 14 %
* Formula 5 = x 100 % = 13 %
* Formula 6 = x 100% = 12,2 %

**Lampiran 9.** Pengujian pH Sabun Padat

**Lampiran 10.** Pengujian Tinggi Busa Sabun Padat

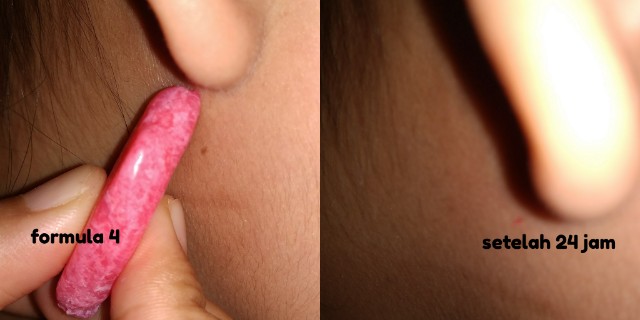
**Lampiran 11.** Uji Iritasi Sabun Padat







**Lampiran 11.** (Lanjutan)







**Lampiran 12.** Alat Viskometer



**Lampiran 13.** Bagan Alir Pengujian Asam Lemak Bebas

Dititrasi dengan KOH 0,1 N sampai merah muda mantap

5 gram sampel minyak

Dimasukkan

Dalam erlenmeyer

Dipanaskan sampai mendidih

Setelah dingin

Ditetesi 2-3 tetes ind.pp

**Lampiran 14.** Bagan Alir Bilangan Asam

Dititrasi dengan KOH 0,1 N sampai merah muda mantap

Dipanaskan sampai mendidih

10 gram sampel minyak

Ditambah 25 ml alkohol netral, ditutup pakai plastik putih

Di gojlok kuat

Setelah dingin ditetesi 2-3 tetes ind.pp

**Lampiran 15.** Bagan Alir Bilangan Penyabunan

5 gram sampel

Dititrasi dengan HCl 0,5 N sampai merah muda hilang

Direfluks selama 30 menit

Dimasukkan dalam erlenmeyer

Ditambah 25 ml KOH 0,5 N beralkohol

Setelah dingin ditambah 2-3 tetes ind.pp

**Lampiran 16.** Bagan Alir Transesterifikasi

500 ml Minyak Jelantah yang telah disaring

Dipanaskan dengan hotplate sampai suhu 110oC

Setelah suhu tercapai 1100C, suhu diturunkan sampai 60oC

Lapisan teratas dipisahkan dengan corong pisah

Larutan didiamkan pada corong pisah selama 8 jam

Ditambahkan 25 gram KOH yang telah dilarutkan dengan 250 ml metanol

Diaduk selama 1 jam

**Lampiran 17.** Bagan Alir Pembuatan Sabun Padat Dari Minyak Hasil Transesterifikasi Minyak Jelantah

Asam Stearat

TEA

NaCl

Asam Sitrat

Gliserin

NaOH 30%

Minyak Hasil Transesterifikasi (MHT)

Dilebur pada penangas air dengan suhu 70-80OC

Diaduk sampai terbentuk massa penyabunan

Diangkat dari penangas air

Etanol 96%

SLS

Pewangi & Pewarna

Aquades ad 100

**Lampiran 18.** Bagan Alir Pengujian Kadar Air

4 gram sabun

Dimasukkan dalam cawan kosong yang sebelumnya telah ditimbang

Dimasukkan dalam oven selama 3 jam

Dihitung selisih berat cawan kosong dengan cawan+isi yang telah di oven selama 3 jam

Ditimbang berat cawan(+)sampel

**Lampiran 19.** Bagan Alir Pengujian pH

1 gram sabun

Digerus halus

Ditambahkan 10 ml air

Dimasukkan dalam beaker gelas

Dilihat pH yang tercantum pada Ph meter

Dimasukkan pH meter

**Lampiran 20.** Bagan Alir Pengujian Tinggi Busa

Gelas ukur

1 gram sabun

Digerus halus

Ditambah 10 ml air

Dimasukkan dalam labu tentukur 100 ml

Ditutup gelas ukur

Dikocok selama 10 menit

Diukur tinggi busa (Ho)

Dihitung selisih tinggi busa

Didiamkan 5 menit

Dihitung tinggi busa setelah 5 menit (Hs)

**Lampiran 21.** Lembar Kuisioner Uji Hedonik (kesukaan)

Nama Panelis :

Tanggal Pengujian :

Jenis Produk : Sabun Padat

Instruksi : Nyatakan Penilaian Anda Sesuai Kriteria

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Formula | Paramater | | | | |
| Tekstur | Aroma | Warna | Busa | Tampilan |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 6 |  |  |  |  |  |

Kriteria :

1. : Sangat Tidak Suka
2. : Tidak Suka
3. : Agak Suka
4. : Suka
5. : Sangat Suka

**Lampiran 22.** Tabel Hasil Uji Kesukaan *(Hedonic test)*

* 1. Data Uji Kesukaan Pada Tekstur

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Panelis | Data Hasil Uji Kesukaan Tekstur dari Sediaan | | | | | | | | | | | |
| F1 | | F2 | | F3 | | F4 | | F5 | | F6 | |
| Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai |
| 1 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 2 | S | 4 | SS | 5 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 3 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 4 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | S | 4 |
| 5 | S | 4 | SS | 5 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 6 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 7 | S | 4 | SS | 5 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 8 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 9 | TS | 2 | TS | 2 | AS | 3 | TS | 2 | S | 4 | SS | 5 |
| 10 | S | 4 | SS | 5 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 11 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 12 | TS | 2 | TS | 2 | AS | 3 | TS | 2 | S | 4 | SS | 5 |
| 13 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 14 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 15 | TS | 2 | AS | 3 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 16 | TS | 2 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 17 | TS | 2 | TS | 2 | AS | 3 | TS | 2 | S | 4 | SS | 5 |
| 18 | TS | 2 | AS | 3 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 19 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | S | 4 |
| 20 | AS | 3 | TS | 2 | AS | 3 | SS | 5 | S | 4 | S | 4 |
| 21 | AS | 3 | TS | 2 | AS | 3 | SS | 5 | S | 4 | S | 4 |
| 22 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 23 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | S | 4 |
| 24 | AS | 3 | TS | 2 | AS | 3 | SS | 5 | S | 4 | S | 4 |
| 25 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 26 | TS | 2 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 27 | TS | 2 | TS | 2 | AS | 3 | TS | 2 | S | 4 | SS | 5 |
| 28 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | AS | 3 | S | 4 |
| 29 | AS | 3 | AS | 3 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 30 | AS | 3 | TS | 2 | AS | 3 | SS | 5 | S | 4 | S | 4 |

**Lampiran 22.** (Lanjutan)

Nilai Kesukaan Tekstur Formula 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Panelis | Hasil Uji Kesukaan Tekstur Pada Panelis | | | |
| Kode | Nilai Kesukaan (Xi) | (Xi-) | (Xi-) 2 |
| 1 | AS | 3 | 0,2 | 0,04 |
| 2 | S | 4 | 1,2 | 1,44 |
| 3 | TS | 2 | -0,8 | 0,64 |
| 4 | AS | 3 | 0,2 | 0,04 |
| 5 | S | 4 | 1,2 | 1,44 |
| 6 | AS | 3 | 0,2 | 0,04 |
| 7 | S | 4 | 1,2 | 1,44 |
| 8 | TS | 2 | -0,8 | 0,64 |
| 9 | TS | 2 | -0,8 | 0,64 |
| 10 | S | 4 | 1,2 | 1,44 |
| 11 | AS | 3 | 0,2 | 0,04 |
| 12 | TS | 2 | -0,8 | 0,64 |
| 13 | AS | 3 | 0,2 | 0,04 |
| 14 | AS | 3 | 0,2 | 0,04 |
| 15 | TS | 2 | -0,8 | 0,64 |
| 16 | TS | 2 | -0,8 | 0,64 |
| 17 | TS | 2 | -0,8 | 0,64 |
| 18 | TS | 2 | -0,8 | 0,64 |
| 19 | AS | 3 | 0,2 | 0,04 |
| 20 | AS | 3 | 0,2 | 0,04 |
| 21 | AS | 3 | 0,2 | 0,04 |
| 22 | AS | 3 | 0,2 | 0,04 |
| 23 | AS | 3 | 0,2 | 0,04 |
| 24 | AS | 3 | 0,2 | 0,04 |
| 25 | AS | 3 | 0,2 | 0,04 |
| 26 | TS | 2 | -0,8 | 0,64 |
| 27 | TS | 2 | -0,8 | 0,64 |
| 28 | AS | 3 | 0,2 | 0,04 |
| 29 | AS | 3 | 0,2 | 0,04 |
| 30 | AS | 3 | 0,2 | 0,04 |
| Nilai rata-rata (Xi) | | 2,8 | ∑(Xi-) 2 | 12,8 |

**Lampiran 22.** (Lanjutan)

Standar Deviasi (SD) =

=

= 0,6643

Rentang Nilai Kesukaan dari parameter tekstur formula 1 sediaan sabun padat dengan bahan dasar minyak hasil transesterifikasi minyak jelantah:

= Nilai rata – rata ( ) – 0,6643 ≥ µ ≤ Nilai rata – rata ( ) + 0,6643

= 2,8 – 0,6643 ≥ µ ≤ 2,8 + 0,6643

= 2,1357 ≥ µ ≤ 3,4643

Dengan cara yang sama dihitung nilai rata-rata, nilai standar deviasi dan nilai rentang kesukaan untuk F1,F2,F3,F4,F5 dan F6 terhadap uji kesukaan pada Tekstur, Aroma, Warna, Busa dan Tampilan.

Data Nilai rata-rata, Standar Deviasi dan Nilai Kesukaan pada segi Tekstur:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Formula 1 | Formula 2 | Formula 3 | Formula 4 | Formula 5 | Formula 6 |
| Rata-Rata Nilai Kesukaan | 2,8 | 3,033 | 3,633 | 3,6 | 4,033 | 4,433 |
| Standar Deviasi | 0,6643 | 0,9994 | 0,7648 | 0,8944 | 0,556 | 0,504 |
| Rentang Nilai Kesukaan | 2,1357 sampai 3,4643 | 2,0336 sampai 4,0324 | 2,8682 sampai 4,3978 | 2,7056 sampai 4,4944 | 3,477 sampai 4,589 | 3,929 sampai 4,937 |

Kesimpulan:

Dari hasil uji kesukaan terhadap tekstur sabun padat dapat disimpulkan bahwa formula 6 yang paling disukai panelis dengan rentang nilai kesukaan 3,929 sampai 4,937.

**Lampiran 22.** (Lanjutan)

* 1. Data Uji Kesukaan Pada Aroma

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Panelis | Data Hasil Uji Kesukaan Aroma dari Sediaan | | | | | | | | | | | |
| F1 | | F2 | | F3 | | F4 | | F5 | | F6 | |
| Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai |
| 1 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 2 | AS | 3 | S | 4 | S | 4 | AS | 3 | S | 4 | AS | 3 |
| 3 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 4 | AS | 3 | S | 4 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 5 | AS | 3 | S | 4 | S | 4 | AS | 3 | S | 4 | AS | 3 |
| 6 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 7 | AS | 3 | S | 4 | S | 4 | AS | 3 | S | 4 | AS | 3 |
| 8 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 9 | S | 4 | TS | 2 | S | 4 | AS | 3 | SS | 5 | AS | 3 |
| 10 | AS | 3 | S | 4 | S | 4 | AS | 3 | S | 4 | AS | 3 |
| 11 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 12 | S | 4 | TS | 2 | S | 4 | AS | 3 | SS | 5 | AS | 3 |
| 13 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 14 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 15 | AS | 3 | AS | 3 | S | 4 | S | 4 | AS | 3 | AS | 3 |
| 16 | TS | 2 | AS | 3 | S | 4 | TS | 2 | TS | 2 | TS | 2 |
| 17 | S | 4 | TS | 2 | S | 4 | AS | 3 | SS | 5 | AS | 3 |
| 18 | AS | 3 | AS | 3 | S | 4 | S | 4 | AS | 3 | AS | 3 |
| 19 | AS | 3 | S | 4 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 20 | AS | 3 | S | 4 | AS | 3 | AS | 3 | S | 4 | AS | 3 |
| 21 | AS | 3 | S | 4 | AS | 3 | AS | 3 | S | 4 | AS | 3 |
| 22 | AS | 3 | AS | 3 | S | 4 | S | 4 | SS | 5 | S | 4 |
| 23 | AS | 3 | S | 4 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 24 | AS | 3 | S | 4 | AS | 3 | AS | 3 | S | 4 | AS | 3 |
| 25 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 26 | TS | 2 | AS | 3 | S | 4 | TS | 2 | TS | 2 | TS | 2 |
| 27 | S | 4 | TS | 2 | S | 4 | AS | 3 | SS | 5 | AS | 3 |
| 28 | AS | 3 | S | 4 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 29 | AS | 3 | S | 4 | S | 4 | AS | 3 | S | 4 | AS | 3 |
| 30 | AS | 3 | S | 4 | AS | 3 | AS | 3 | S | 4 | AS | 3 |

**Lampiran 22.** (Lanjutan)

Data Nilai rata-rata, Standar Deviasi dan Nilai Kesukaan pada segi Aroma:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Formula 1 | Formula 2 | Formula 3 | Formula 4 | Formula 5 | Formula 6 |
| Rata-Rata Nilai Kesukaan | 3 | 3,36667 | 3,8 | 3,2333 | 3,8333 | 3,3 |
| Standar Deviasi | 0,5252 | 0,8087 | 0,4068 | 0,5683 | 0,7914 | 0,7022 |
| Rentang Nilai Kesukaan | 2,4748 sampai 3,5252 | 2.5579 sampai 4,1754 | 3,3932 sampai 4,2068 | 2,665 sampai 3,8016 | 3,0419 sampai 4,6247 | 2,5978 sampai 4,0022 |

Kesimpulan:

Dari hasil uji kesukaan terhadap aroma sabun padat dapat disimpulkan bahwa formula 5 yang paling disukai panelis dengan rentang nilai kesukaan 3,0419 sampai 4,6247

**Lampiran 22.** (Lanjutan)

* 1. Data Uji Kesukaan Pada Warna

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Panelis | Data Hasil Uji Kesukaan Warna dari Sediaan | | | | | | | | | | | |
| F1 | | F2 | | F3 | | F4 | | F5 | | F6 | |
| Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai |
| 1 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 2 | S | 4 | SS | 5 | SS | 5 | AS | 3 | SS | 5 | SS | 5 |
| 3 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 4 | S | 4 | SS | 5 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 5 | S | 4 | SS | 5 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 6 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 7 | S | 4 | SS | 5 | SS | 5 | AS | 3 | SS | 5 | SS | 5 |
| 8 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 9 | TS | 2 | TS | 2 | SS | 5 | TS | 2 | SS | 5 | SS | 5 |
| 10 | S | 4 | SS | 5 | SS | 5 | AS | 3 | SS | 5 | SS | 5 |
| 11 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 12 | TS | 2 | TS | 2 | SS | 5 | TS | 2 | SS | 5 | SS | 5 |
| 13 | AS | 3 | AS | 3 | S | 4 | S | 4 | SS | 5 | SS | 5 |
| 14 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 15 | AS | 3 | TS | 2 | AS | 3 | S | 4 | S | 4 | SS | 5 |
| 16 | TS | 2 | AS | 3 | S | 4 | AS | 3 | S | 4 | S | 4 |
| 17 | TS | 2 | TS | 2 | SS | 5 | TS | 2 | SS | 5 | SS | 5 |
| 18 | AS | 3 | TS | 2 | AS | 3 | S | 4 | S | 4 | SS | 5 |
| 19 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 20 | TS | 2 | TS | 2 | S | 4 | S | 4 | S | 4 | S | 4 |
| 21 | TS | 2 | TS | 2 | S | 4 | S | 4 | S | 4 | S | 4 |
| 22 | AS | 3 | AS | 3 | S | 4 | S | 4 | SS | 5 | SS | 5 |
| 23 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 24 | TS | 2 | TS | 2 | S | 4 | S | 4 | S | 4 | S | 4 |
| 25 | AS | 3 | AS | 3 | S | 4 | S | 4 | SS | 5 | SS | 5 |
| 26 | AS | 3 | AS | 3 | S | 4 | AS | 3 | S | 4 | S | 4 |
| 27 | TS | 2 | TS | 2 | SS | 5 | TS | 2 | SS | 5 | SS | 5 |
| 28 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 29 | S | 4 | S | 4 | SS | 5 | AS | 3 | SS | 5 | SS | 5 |
| 30 | TS | 2 | TS | 2 | S | 4 | S | 4 | S | 4 | S | 4 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Formula 1 | Formula 2 | Formula 3 | Formula 4 | Formula 5 | Formula 6 |
| Rata-Rata Nilai Kesukaan | 2,9333 | 3,06667 | 4,2 | 3,46667 | 4,433 | 4,567 |
| Standar Deviasi | 0,8276 | 1,1121 | 0,6434 | 0,7301 | 0,504 | 0,493 |
| Rentang Nilai Kesukaan | 2,0573 sampai 3,7609 | 1,9546 sampai 4,1787 | 3,5566 sampai 4,8434 | 2,7366 sampai 4,1967 | 3,929 sampai 4,937 | 4,074 sampai 5,06 |

**Lampiran 22.** (Lanjutan)

Data Nilai rata-rata, Standar Deviasi dan Nilai Kesukaan pada segi Warna

Kesimpulan:

Dari hasil uji kesukaan terhadap warna sabun padat dapat disimpulkan bahwa formula 6 yang paling disukai panelis dengan rentang nilai kesukaan 4,074 sampai 5,06

**Lampiran 22.** (Lanjutan)

* 1. Data Uji Kesukaan Pada Busa

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Panelis | Data Hasil Uji Kesukaan Busa dari Sediaan | | | | | | | | | | | |
| F1 | | F2 | | F3 | | F4 | | F5 | | F6 | |
| Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai |
| 1 | S | 4 | S | 4 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 2 | S | 4 | S | 4 | AS | 3 | S | 4 | SS | 5 | S | 4 |
| 3 | S | 4 | SS | 5 | S | 4 | S | 4 | AS | 3 | AS | 3 |
| 4 | S | 4 | S | 4 | AS | 3 | S | 4 | SS | 5 | S | 4 |
| 5 | S | 4 | S | 4 | AS | 3 | S | 4 | SS | 5 | S | 4 |
| 6 | S | 4 | S | 4 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 7 | S | 4 | S | 4 | AS | 3 | S | 4 | SS | 5 | S | 4 |
| 8 | S | 4 | SS | 5 | S | 4 | S | 4 | AS | 3 | AS | 3 |
| 9 | S | 4 | SS | 5 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 10 | S | 4 | S | 4 | AS | 3 | S | 4 | SS | 5 | S | 4 |
| 11 | S | 4 | S | 4 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 12 | S | 4 | SS | 5 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 13 | SS | 5 | S | 4 | SS | 5 | S | 4 | S | 4 | AS | 3 |
| 14 | S | 4 | S | 4 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 15 | S | 4 | SS | 5 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 16 | S | 4 | S | 4 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 17 | S | 4 | SS | 5 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 18 | S | 4 | SS | 5 | S | 4 | AS | 3 | AS | 3 | TS | 2 |
| 19 | SS | 5 | SS | 5 | SS | 5 | S | 4 | S | 4 | S | 4 |
| 20 | TS | 2 | AS | 3 | S | 4 | S | 4 | S | 4 | AS | 3 |
| 21 | TS | 2 | AS | 3 | S | 4 | S | 4 | S | 4 | AS | 3 |
| 22 | SS | 5 | S | 4 | SS | 5 | S | 4 | S | 4 | AS | 3 |
| 23 | SS | 5 | SS | 5 | SS | 5 | S | 4 | S | 4 | S | 4 |
| 24 | TS | 2 | AS | 3 | S | 4 | S | 4 | S | 4 | AS | 3 |
| 25 | SS | 5 | S | 4 | SS | 5 | S | 4 | S | 4 | AS | 3 |
| 26 | S | 4 | S | 4 | S | 4 | AS | 3 | S | 4 | TS | 2 |
| 27 | S | 4 | SS | 5 | S | 4 | AS | 3 | AS | 3 | AS | 3 |
| 28 | S | 4 | S | 4 | AS | 3 | S | 4 | S | 4 | S | 4 |
| 29 | SS | 5 | SS | 5 | AS | 3 | S | 4 | SS | 5 | S | 4 |
| 30 | TS | 2 | AS | 3 | S | 4 | S | 4 | S | 4 | AS | 3 |

**Lampiran 22.** (Lanjutan)

Data Nilai rata-rata, Standar Deviasi dan Nilai Kesukaan pada segi Busa

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Formula 1 | Formula 2 | Formula 3 | Formula 4 | Formula 5 | Formula 6 |
| Rata-Rata Nilai Kesukaan | 3,993 | 4,233 | 3,933 | 3,6 | 3,767 | 3,033 |
| Standar Deviasi | 0,868 | 0,679 | 0,639 | 0,498 | 0,7738 | 0,7649 |
| Rentang Nilai Kesukaan | 3,065 sampai 4,801 | 3,554 sampai 4,911 | 3,294 sampai 4,575 | 3.102 sampai 4,098 | 2,9932 sampai 4,5408 | 2,2681 sampai 3,7979 |

Kesimpulan:

Dari hasil uji kesukaan terhadap busa sabun padat dapat disimpulkan bahwa formula 2 yang paling disukai panelis dengan rentang nilai kesukaan 3,554 sampai 4,911

**Lampiran 22.** (Lanjutan)

* 1. Data Uji Kesukaan Pada Tampilan

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Panelis | Data Hasil Uji Kesukaan Tampilan dari Sediaan | | | | | | | | | | | |
| F1 | | F2 | | F3 | | F4 | | F5 | | F6 | |
| Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai | Kode | Nilai |
| 1 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 2 | S | 4 | AS | 3 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 3 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 4 | S | 4 | S | 4 | SS | 5 | S | 4 | SS | 5 | S | 4 |
| 5 | S | 4 | AS | 3 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 6 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 7 | S | 4 | AS | 3 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 8 | TS | 2 | TS | 2 | AS | 3 | AS | 3 | S | 4 | SS | 5 |
| 9 | TS | 2 | AS | 3 | SS | 5 | AS | 3 | S | 4 | SS | 5 |
| 10 | S | 4 | AS | 3 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 11 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 12 | TS | 2 | AS | 3 | SS | 5 | AS | 3 | S | 4 | SS | 5 |
| 13 | TS | 2 | AS | 3 | S | 4 | S | 4 | SS | 5 | SS | 5 |
| 14 | AS | 3 | AS | 3 | S | 4 | S | 4 | S | 4 | S | 4 |
| 15 | TS | 2 | TS | 2 | AS | 3 | S | 4 | SS | 5 | SS | 5 |
| 16 | TS | 2 | AS | 3 | S | 4 | AS | 3 | S | 4 | S | 4 |
| 17 | TS | 2 | AS | 3 | SS | 5 | AS | 3 | S | 4 | SS | 5 |
| 18 | TS | 2 | TS | 2 | AS | 3 | S | 4 | SS | 5 | SS | 5 |
| 19 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 20 | S | 4 | S | 4 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 21 | S | 4 | S | 4 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 22 | TS | 2 | AS | 3 | S | 4 | S | 4 | SS | 5 | SS | 5 |
| 23 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 | S | 4 |
| 24 | S | 4 | S | 4 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 25 | TS | 2 | AS | 3 | S | 4 | S | 4 | SS | 5 | SS | 5 |
| 26 | TS | 2 | AS | 3 | AS | 3 | AS | 3 | S | 4 | S | 4 |
| 27 | TS | 2 | AS | 3 | SS | 5 | AS | 3 | S | 4 | SS | 5 |
| 28 | S | 4 | AS | 3 | SS | 5 | S | 4 | SS | 5 | SS | 5 |
| 29 | S | 4 | S | 4 | SS | 5 | SS | 5 | SS | 5 | SS | 5 |
| 30 | S | 4 | S | 4 | SS | 5 | S | 4 | SS | 5 | SS | 5 |

**Lampiran 22.** (Lanjutan)

Data Nilai rata-rata, Standar Deviasi dan Nilai Kesukaan pada segi Tampilan

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Formula 1 | Formula 2 | Formula 3 | Formula 4 | Formula 5 | Formula 6 |
| Rata-Rata Nilai Kesukaan | 3 | 3,133 | 4,333 | 3,7667 | 4,533 | 4,7 |
| Standar Deviasi | 0,9468 | 0,6288 | 0,7581 | 0,5039 | 0,5074 | 0,466 |
| Rentang Nilai Kesukaan | 2,0532 sampai 3,9468 | 2,5042 sampai 3,7618 | 3,5749 sampai 5,0911 | 3,2628 sampai 4,2706 | 4,0256 sampai 5,0404 | 4,234 sampai 5,166 |

Kesimpulan:

Dari hasil uji kesukaan terhadap tampilan sabun padat dapat disimpulkan bahwa formula 6 yang paling disukai panelis dengan rentang nilai kesukaan 4,234 sampai 5,166