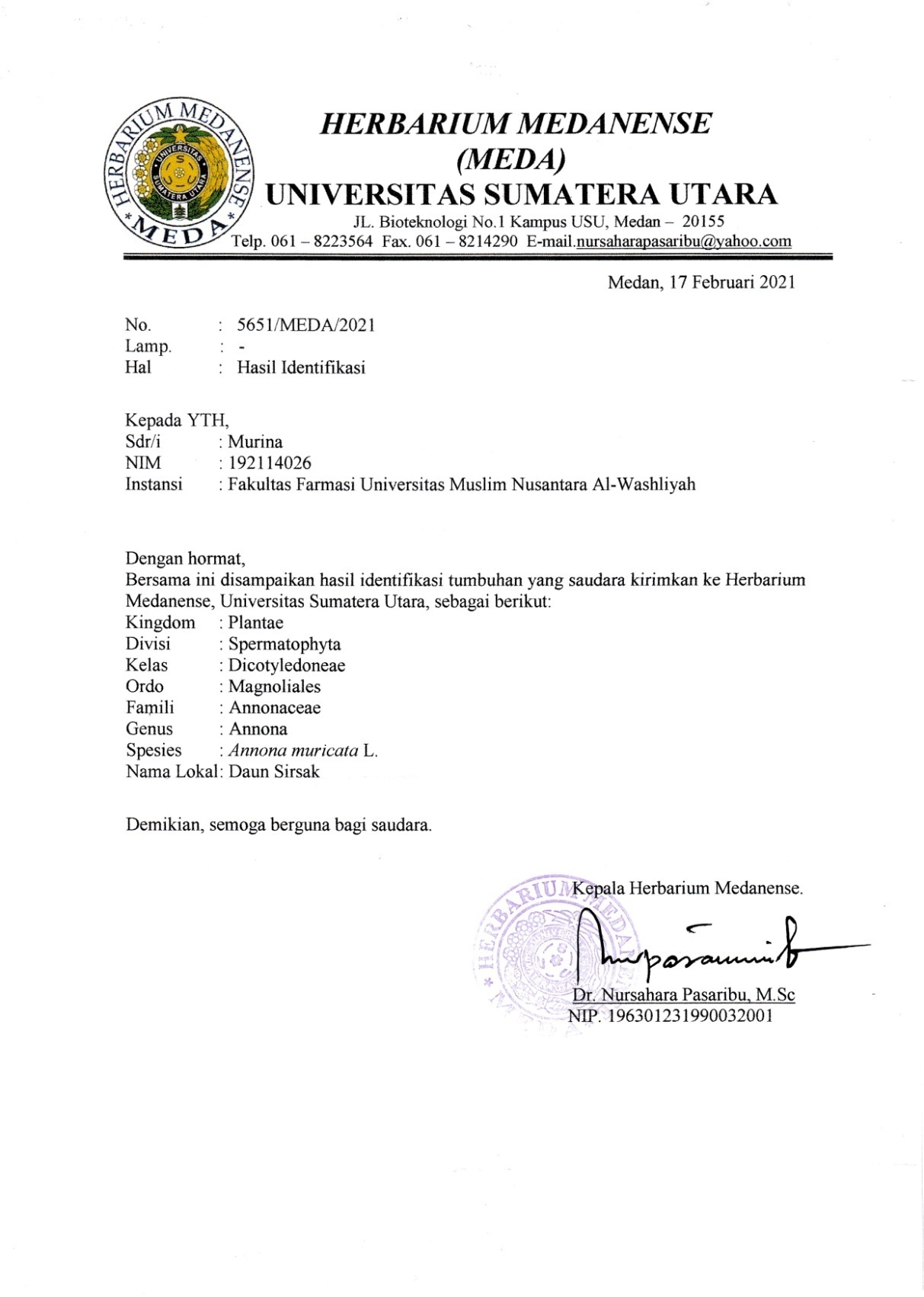
**Lampiran 1.** Surat Determin asi Tumbuhan 

**Lampiran 2.** Surat Etical Clearens

**Lampiran 3.** Bagan Alir Penelitian Pembuatan Serbuk Simplisia Daun Sirsak (*Annona muricata* L.)

Daun sirsak segar

Sortasi basah

Dicuci pada air mengalir

Ditiriskan lalu dirajang

Berat basah yang diperoleh ( 3,5 kg )

dikeringkan didalam lemari pengering pada suhu 40

Sortasi kering

Berat simplisia kering 1 kg

Dihaluskan menggunakan blender

Diserkai dengan ayakan

Dimasuka didalam wadah tertutup dan disimpan dalam suhu ruangan

Serbuk simplisia yang diperoleh (700 gram)

Skrining fitokima

Karakterisasi simplisia

Ekstraksi

**Lampiran 4**. Bagan Alir Pembuatan Ekstrak Etanol Daun Sirsak *Annona muricata* L.).

500 gram serbuk simplisia daun sirsak

Dimasukan kedalam bejana

Dituangkan dengan 75 bagian caira penyari 70% (3750 ml)

Ditutup dan dibiarkan selama 5 hari sambil di aduk sesekali

Setelah 5 hari campuran diserkai dan peras dengan kain flanel

Ampas

Maserat I

Dicuci dengan 25 bagian etanol 70% (1250 ml)

Maserat II

Maserat I + maserat II

Dimasukan kedalam bejana tertutup dan dibiarkan selama 2 hari lalu disring

Dipekatkan dengan alat Rotary evaporator

Diuapkan diatas Waterbath

Ekstrak etanol

**Lampiran 5**. Pengolahan Sampel (Daun Sirsak)

Pengumpulan sampel Pengeringan

Penghalusan sampel Serbuk simplisia

Vacum Rotary Evaporator Ekstrak kental **Lampiran 6**. Perhitungan Rendemen Daun Sirsak

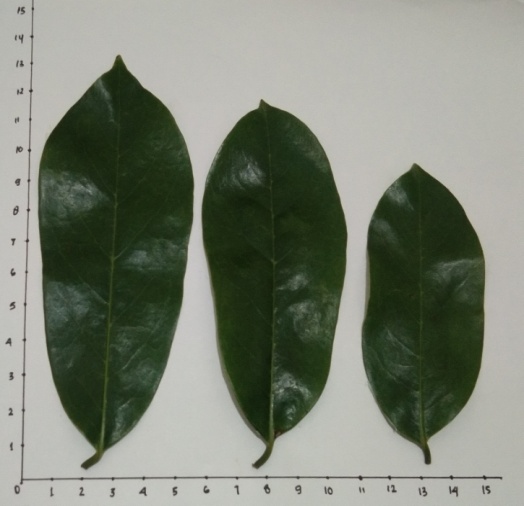
% Rendemen Ekstrak

Berat sampel = 500 gram

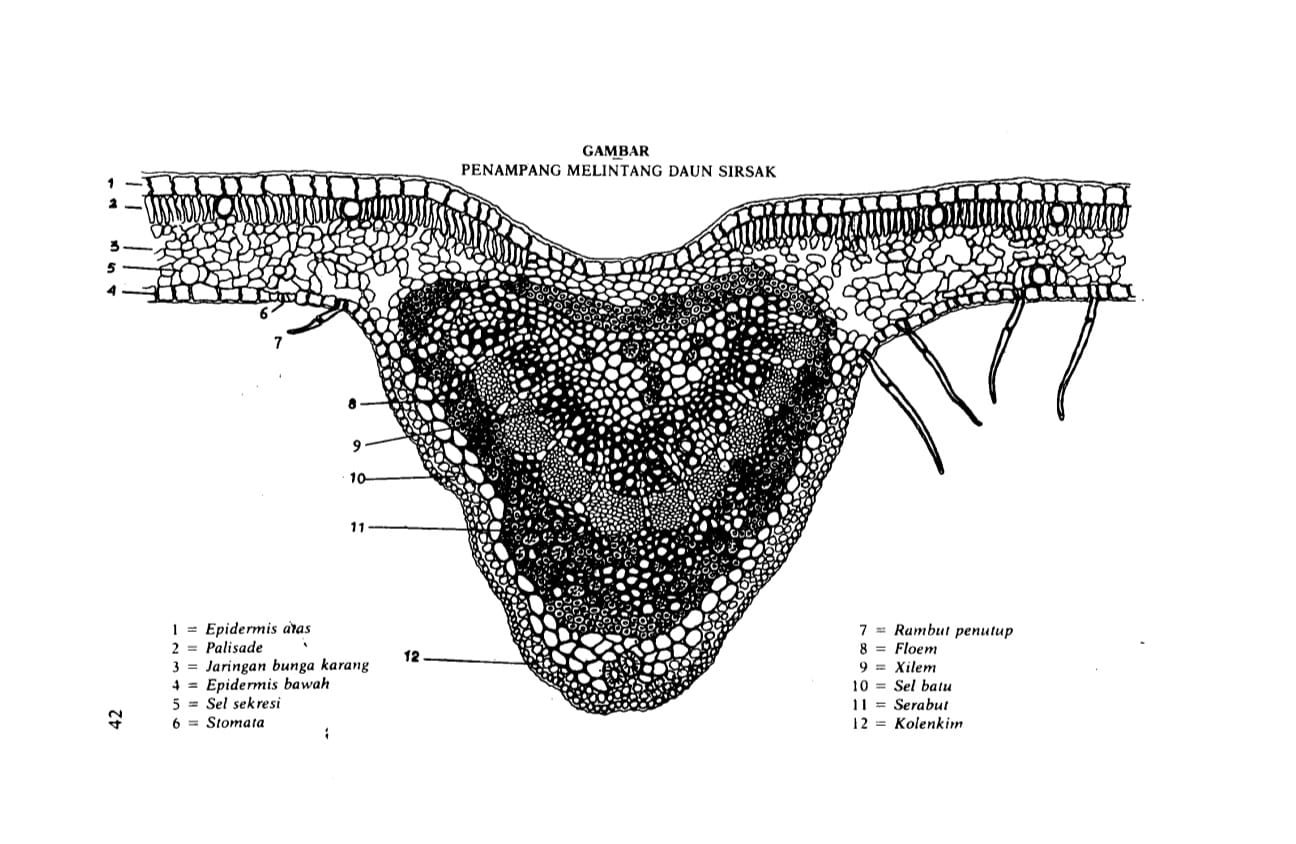
Berat ekstrak etanol = 80,00 gram

% Rendemen Ekstrak Daun Sirsak

**Lampiran 7**. Makroskopik Daun Sirsak (*Annona muricata* L.)



**Lampiran 8.** Mikroskopik Daun Sirsak ( *Annona muricata* L.)



(Materia Medika Indonesia Jilid V,1989)

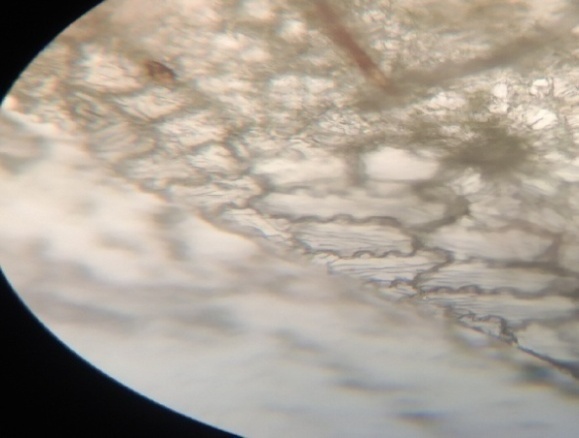


Sel sekresi

Epidermis atas



Rambut penutup

**Lampiran 9.** Uji Karakterisasi Simplisia Daun Sirsak

Pembuluh kayu

Kadar abu total Kadar abu tidak larut asam

Penetapan kadar air Kadar sari larut etanol



Kadar sari larut dalam air

**Lampiran 10.** Perhitungan Karakteristik Ekstrak Etanol Daun Sirsak

1. Penetapan kadar air ( MMI tidak lebih dari 10 % )
2. Sampel I

Berat sampel = 5 g

Volume I = 1,7 mL

Volume II = 2.1 mL

Kadar air

1. Sampel II

Berat sampel = 5 g

Volume I = 1,9 ml

Volume II = 2.2 mL

Kadar air

1. Sampel III

Berat sampel = 5 g

Volume I = 1,7 mL

Volume II = 2.2 mL

Kadar air

Kadar air rata-rata

1. Penetapan kadar sari larut air ( MMI tidak kurang dari 18 % )
2. Sampel I

Berat sampel = 5 g

Berat sari = 0,2922

Kadar sari larut dalam air

1. Sample II

Berat sampel = 5 g

Berat sari = 0,2866

Kadar sari larut dalam air

1. Sampel III

Berat sampel = 5 g

Berat sari = 0,2591

Berat sari larut dalam air

Kadar sari larut air rata-rata

1. Kadar sari larut etanol ( MMi tidak kurang dari 12 % )

Kadar sari larut etanol

1. Sampel I

Berat sampel = 5 g

Berat sari = 0,1781

Kadar sari larut dalam etanol

1. Sampel II

Berat sampel = 5 g

Berat sari = 0,1986

Kadar sari larut dalam etanol

1. Sampel III

Berat sampel = 5 g

Berat sari = 0.1763

Kadar sari larut dalam etanol

Kadar sari larut etanol rata-rata

1. Kadar abu total ( MMI tidak lebih dari 6% )

Kadar abu total

1. Sampel I

Berat sampel = 5 g

Berat abu = 0,0928

Kadar abu total

1. Sampel II

Berat sampel = 5 g

Berat abu = 0,1186

Kadar abu total

1. Sampel III

Berat sampel = 5 g

Berat abu = 0,0809

Kadar abu total

Kadar sari larut etanol rata-rata

1. kadar abu tidak larut asam ( MMI tidak Lebih Dari 1,5 % )
2. Sampel I

Berat sampel = 2

Berat abu = 0.002 g

Kadar abu tidak larut asam

1. Sampel II

Berat sampel = 2

Berat abu = 0,050 g

Kadar abu tidak larut asam

1. Sampel III

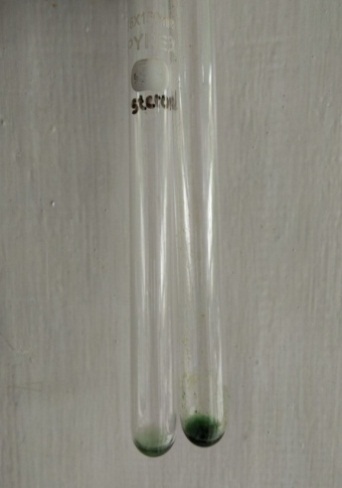
Berat sampel = 2

Berat abu = 0.012 g

Kadar abu tidak larut asam

Kadar a bu tidak larut asam rata-rata

**Lampiran 11 .** Hasil Skrining Fitokimia

Flavonoid ( + ) Steroid (+)

Tanin ( + ) Saponin ( + )



Alkaloid ( - )

**Lampiran 12**. Bagan Alir Pembuatan Hidrogel

HPMC

Nipagin

ditambahkan aquades panas Ditambahkan aquadest panas

diaduk hingga homogen Gerus hingga mengembang dan membentuk gel transparan

Tambahkan gliserin dan propilenglikol

Gerus sampai homgen.

Massa 2

Massa 1

Massaa 3

Tambahkan ekstrak daun sirsak sedikit-demi sedikit lalu gerus sampai homogen

Oleskan pada plester Miocropore yang telah dipotong

Diamkan hingga membentuk konstituen padat

Lalu dilapisi dengan plastik wrapping

Plseter ekstrak daun sirsak

**Lampiran 13.** Bagan Alir Penurunan Suhu Tubuh Pada Mencit

25 ekor mencit

diaklimasi selama 2 minggu

diberi penanda pada setiap ekor mencit

dipuasakan selama 18 jam

dicukur bulu padabagian perut

diukur suhu tubuh normal dengan thermometer

diinduksi dengan vaksi DPT-HB sebanyak 0,2 ml

diukur suhu tubuh demam

plester hidrogel ekstrak daun sirsak 10 g

plester hidrogel ekstrak daun sirsak 5 g

plester hidrogel ekstrak daun sirsak 7,5 g

kontrol plester hidrogel tanpa ekstrak

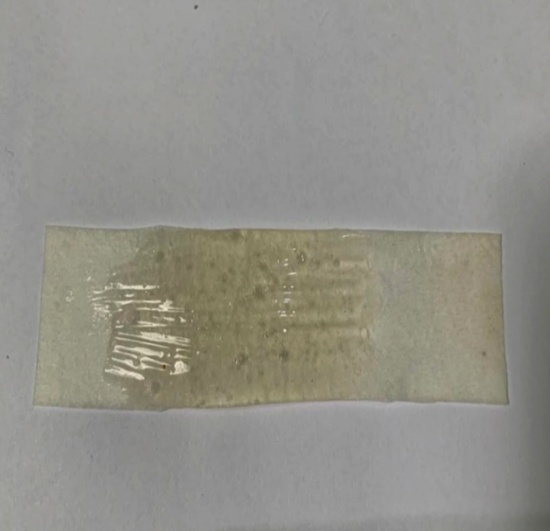
Diamati perubahan suhu tubuh menggunakan thermometer

Dicatat suhu rektal mencit setiap 15 menit selama 60 menit.

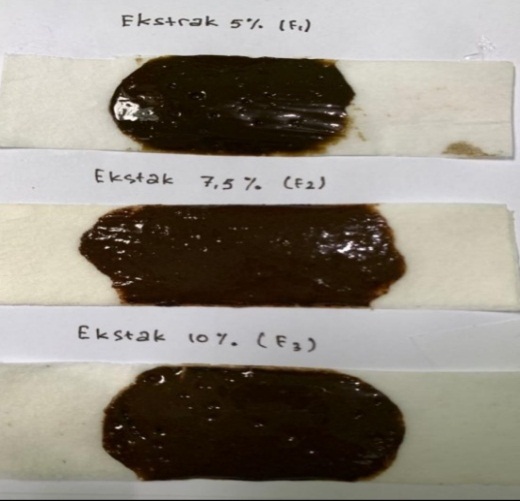
Penurunan suhu demam

**Lampiran 14**. Hewan Uji Mencit (*Mus muscullus*)

**Lampiran 15.** Tahapan Pengujian Plester Ekstrak Etanol Daun Sirsak Terhadap Penurunan Suhu Tubuh Pada Mencit

Sediaan Hidrogel Plester hidrogel tanpa ekstrak

Plester ekstrak daun sirsak Vaksin DPT-HB

Induksi Vaksin DPT-HB secara IM Pengujian Plester

**Lampiran 16**. Data Hasil Uji Penurunan Suhu

Data Hasil Pengukuran Suhu Rektal Mencit Setelah Pemberian Vaksin DPT-HB 0,2 ml/Hewan Secara intramuscular dan Penurunan Suhu Pemberian Plester Hidrogel Ekstrak.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Mencit** | **Suhu awal°C** | **Suhu demam°C** | **Penurunan Suhu Rektal Mencit Setelah Pemberia Plester Hidrogel Tanpa Ekstrak Selama 60 Menit** | | | |
| **15 menit** | **30 menit** | **45 menit** | **60 menit** |
| I | 36,6 | 39,5 | 39,1 | 38,8 | 38,5 | 38,0 |
| II | 37,0 | 39,7 | 39,3 | 39,1 | 38,9 | 38,6 |
| III | 36,9 | 40,0 | 39,9 | 39,2 | 39,1 | 39,0 |
| IV | 37,0 | 39,7 | 39,5 | 39,1 | 38,9 | 38,7 |
| V | 36,4 | 39,9 | 39,7 | 39,5 | 39,1 | 38,5° |
| **Rata-rata** | **36,7** | **39,1** | **39,5** | **39,1** | **38,9** | **38,5** |
| **SD** | **0.26** | **0.19** | **0.31** | **0.25** | **0.24** | **0.36** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Mencit** | **Suhu awal**  **°C** | **Suhu demam °C** | **Penurunan Suhu Rektal Mencit Setelah Pemberian Plester Hidrogel Ekstal Daun Sirsak ( 5g ) Selama 60 menit** | | | |
| **15 menit** | **30 menit** | **45 menit** | **60 menit** |
| I | 36,5 | 39,9 | 38,9 | 38,4 | 37,6 | 37,3 |
| II | 37,1 | 39,4 | 38,7 | 38,3 | 37,6 | 37,5 |
| III | 36,7 | 39,8 | 38,8 | 38,2 | 37,8 | 37,4 |
| IV | 36,3 | 40,1 | 39,2 | 38,7 | 37,5 | 37,1 |
| V | 36,8 | 39,7 | 39,1 | 38,5 | 38,2 | 37,8 |
| **Rata-rata** | **36,6** | **39,7** | **38,9** | **38,4** | **37,7** | **37,4** |
| **SD** | **0.30** | **0.25** | **0.20** | **0.19** | **0.27** | **0.25** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Mencit** | **Suhu awal °C** | **Suhu demam °C** | **Penurunan Suhu Rektal Mencit Setelah Pemberian Plester Hidrogel Ekstal Daun Sirsak ( 7,5g ) Selama 60 menit** | | | |
| **15menit** | **30menit** | **45menit** | **60menit** |
| I | 37,6 | 40,1 | 38,7 | 38,1 | 37,1 | 37,0 |
| II | 36,7 | 39,9 | 38,8 | 38,2 | 37,5 | 36,9 |
| III | 36,9 | 39,8 | 38,7 | 38,4 | 37,7 | 37,1 |
| IV | 36,8 | 39,9 | 38,5 | 38,0 | 37,4 | 36,9 |
| V | 36,4 | 39,5 | 38,4 | 38,1 | 37,6 | 37,0 |
| **Rata-rata** | **36,8** | **39,8** | **38,6** | **38,1** | **37,4** | **36,9** |
| **SD** | **0.443** | **0.21** | **0.16** | **0.15** | **0.23** | **0.08** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Mencit** | **Suhu awal °C** | **Suhu demam °C** | **Penurunan Suhu Rektal Mencit Setelah Pemberian Plester Hidrogel Ekstal Daun Sirsak ( 10g ) Selama 60 menit** | | | |
| **15menit** | **30menit** | **45menit** | **60menit** |
| I | 37,1 | 40,3 | 38,5 | 37,9 | 37,5 | 37,3 |
| II | 36,5 | 39,1 | 38,2 | 37,8 | 37,1 | 36,9 |
| III | 36,5 | 39,6 | 38,4 | 37,2 | 37,0 | 36,7 |
| IV | 36,7 | 39,9 | 38, 7 | 37,7 | 37,3 | 36,9 |
| V | 36,9 | 39,7 | 38,8 | 37,8 | 37,2 | 36,6 |
| **Rata-rata** | **36,7** | **39,7** | **38,5** | **37,6** | **37,2** | **36,8** |
| **SD** | **0.26** | **0.43** | **0.25** | **0.27** | **0.19** | **0.26** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Mencit** | **Suhu awal °C** | **Suhu demam °C** | **Penuruanan Suhu Rektal Mencit Setelah Pemberian plester *Bye-Bye Fever* Selama 60 menit** | | | |
| **15 menit** | **30menit** | **45menit** | **60menit** |
| I | 36,7 | 39,2 | 38,8 | 37,9 | 37,1 | 36,9 |
| II | 36,9 | 39,0 | 38,2 | 37,1 | 36,6 | 36,3 |
| III | 36,1 | 39,1 | 38,5 | 37,5 | 36,9 | 36,5 |
| IV | 36,5 | 39,7 | 38,7 | 37,4 | 36,7 | 36,4 |
| V | 36,8 | 39,3 | 38,7 | 37,7 | 36,5 | 36,4 |
| **Rata-rata** | **36,6** | **39,2** | **38,4** | **37,5** | **36,7** | **36,4** |
| **SD** | **0.31** | **0.27** | **0.23** | **0.30** | **0.24** | **0.23** |

**Lampiran 17.** Hasil UJI ANNOVA

1. Hasil Uji Annova

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** | | | | | | |
|  | | Sum of Squares | df | Mean Square | F | Sig. |
| Suhu awal | Between Groups | .222 | 4 | .055 | .524 | .720 |
| Within Groups | 2.116 | 20 | .106 |  |  |
| Total | 2.338 | 24 |  |  |  |
| Suhu demam | Between Groups | 1.098 | 4 | .275 | 3.285 | .032 |
| Within Groups | 1.672 | 20 | .084 |  |  |
| Total | 2.770 | 24 |  |  |  |
| 15 m | Between Groups | 4.244 | 4 | 1.061 | 17.451 | .000 |
| Within Groups | 1.216 | 20 | .061 |  |  |
| Total | 5.460 | 24 |  |  |  |
| 30 m | Between Groups | 8.326 | 4 | 2.081 | 35.640 | .000 |
| Within Groups | 1.168 | 20 | .058 |  |  |
| Total | 9.494 | 24 |  |  |  |
| 45 m | Between Groups | 12.890 | 4 | 3.222 | 56.336 | .000 |
| Within Groups | 1.144 | 20 | .057 |  |  |
| Total | 14.034 | 24 |  |  |  |
| 60 m | Between Groups | 12.414 | 4 | 3.103 | 44.082 | .000 |
| Within Groups | 1.408 | 20 | .070 |  |  |
| Total | 13.822 | 24 |  |  |  |

1. Hasil Uji Homogen

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Suhu awal | .173 | 4 | 20 | .949 |
| Suhu demam | .627 | 4 | 20 | .648 |
| 15 m | .646 | 4 | 20 | .636 |
| 30 m | .436 | 4 | 20 | .781 |
| 45 m | .176 | 4 | 20 | .948 |
| 60 m | 1.496 | 4 | 20 | .241 |

**Lampiran 17.** ( lanjutan )

1. Hasil Uji Normalitas

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Perlakuan | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
|  | Statistic | Df | Sig. | Statistic | df | Sig. |
| Suhu awal | F0 | .273 | 5 | .200\* | .852 | 5 | .201 |
| F1 | .146 | 5 | .200\* | .992 | 5 | .985 |
| F2 | .282 | 5 | .200\* | .908 | 5 | .455 |
| F3 | .221 | 5 | .200\* | .902 | 5 | .421 |
| Pembanding | .224 | 5 | .200\* | .912 | 5 | .482 |
| Suhu demam | F0 | .221 | 5 | .200\* | .953 | 5 | .758 |
| F1 | .179 | 5 | .200\* | .984 | 5 | .955 |
| F2 | .228 | 5 | .200\* | .932 | 5 | .607 |
| F3 | .192 | 5 | .200\* | .985 | 5 | .962 |
| Pembanding | .241 | 5 | .200\* | .903 | 5 | .427 |
| 15 m | F0 | .136 | 5 | .200\* | .987 | 5 | .967 |
| F1 | .180 | 5 | .200\* | .952 | 5 | .754 |
| F2 | .287 | 5 | .200\* | .914 | 5 | .490 |
| F3 | .175 | 5 | .200\* | .974 | 5 | .899 |
| Pembanding | .267 | 5 | .200\* | .939 | 5 | .656 |
| 30 m | F0 | .237 | 5 | .200\* | .950 | 5 | .740 |
| F1 | .141 | 5 | .200\* | .979 | 5 | .928 |
| F2 | .254 | 5 | .200\* | .914 | 5 | .492 |
| F3 | .329 | 5 | .082 | .778 | 5 | .053 |
| Pembanding | .146 | 5 | .200\* | .992 | 5 | .985 |
| 45 m | F0 | .300 | 5 | .161 | .833 | 5 | .146 |
| F1 | .292 | 5 | .190 | .845 | 5 | .180 |
| F2 | .197 | 5 | .200\* | .943 | 5 | .685 |
| F3 | .141 | 5 | .200\* | .979 | 5 | .928 |
| Pembanding | .198 | 5 | .200\* | .957 | 5 | .787 |
| 60 m | F0 | .183 | 5 | .200\* | .985 | 5 | .961 |
| F1 | .197 | 5 | .200\* | .943 | 5 | .685 |
| F2 | .231 | 5 | .200\* | .881 | 5 | .314 |
| F3 | .270 | 5 | .200\* | .916 | 5 | .502 |
| Pembanding | .241 | 5 | .200\* | .903 | 5 | .427 |
| \*. This is a lower bound of the true significance. | | | | | | | |
| a. Lilliefors Significance Correction | | | | | | | |

**Lampiran 17.**  (lanjutan)

1. Hasil Uji Tukey

|  |  |  |
| --- | --- | --- |
| **Suhu awal** | | |
| Tukey HSDa | | |
| Perlakuan | N | Subset for alpha = 0.05 |
| 1 |
| Pembanding | 5 | 36.600 |
| F1 | 5 | 36.680 |
| F3 | 5 | 36.740 |
| F0 | 5 | 36.780 |
| F2 | 5 | 36.880 |
| Sig. |  | .658 |
| Means for groups in homogeneous subsets are displayed. | | |
| a. Uses Harmonic Mean Sample Size = 5.000. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Suhu demam** | | | |
| Tukey HSDa | | | |
| Perlakuan | N | Subset for alpha = 0.05 | |
| 1 | 2 |
| Pembanding | 5 | 39.260 |  |
| F3 | 5 | 39.720 | 39.720 |
| F0 | 5 | 39.760 | 39.760 |
| F1 | 5 | 39.780 | 39.780 |
| F2 | 5 |  | 39.840 |
| Sig. |  | .068 | .963 |
| Means for groups in homogeneous subsets are displayed. | | | |
| a. Uses Harmonic Mean Sample Size = 5.000. | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **15 m** | | | | |
| Tukey HSDa | | | | |
| Perlakuan | N | Subset for alpha = 0.05 | | |
| 1 | 2 | 3 |
| Pembanding | 5 | 38.320 |  |  |
| F3 | 5 | 38.520 | 38.520 |  |
| F2 | 5 | 38.620 | 38.620 |  |
| F1 | 5 |  | 38.940 |  |
| F0 | 5 |  |  | 39.500 |
| Sig. |  | .337 | .091 | 1.000 |
| Means for groups in homogeneous subsets are displayed. | | | | |
| a. Uses Harmonic Mean Sample Size = 5.000. | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **30 m** | | | | |
| Tukey HSDa | | | | |
| Perlakuan | N | Subset for alpha = 0.05 | | |
| 1 | 2 | 3 |
| Pembanding | 5 | 37.520 |  |  |
| F3 | 5 | 37.680 |  |  |
| F2 | 5 |  | 38.160 |  |
| F1 | 5 |  | 38.420 |  |
| F0 | 5 |  |  | 39.140 |
| Sig. |  | .831 | .455 | 1.000 |
| Means for groups in homogeneous subsets are displayed. | | | | |
| a. Uses Harmonic Mean Sample Size = 5.000. | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **45 m** | | | | | |
| Tukey HSDa | | | | | |
| Perlakuan | N | Subset for alpha = 0.05 | | | |
| 1 | 2 | 3 | 4 |
| Pembanding | 5 | 36.760 |  |  |  |
| F3 | 5 |  | 37.220 |  |  |
| F2 | 5 |  | 37.460 | 37.460 |  |
| F1 | 5 |  |  | 37.740 |  |
| F0 | 5 |  |  |  | 38.900 |
| Sig. |  | 1.000 | .522 | .374 | 1.000 |
| Means for groups in homogeneous subsets are displayed. | | | | | |
| a. Uses Harmonic Mean Sample Size = 5.000. | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **60 m** | | | | | |
| Tukey HSDa | | | | | |
| Perlakuan | N | Subset for alpha = 0.05 | | | |
| 1 | 2 | 3 | 4 |
| Pembanding | 5 | 36.460 |  |  |  |
| F3 | 5 | 36.880 | 36.880 |  |  |
| F2 | 5 |  | 36.980 | 36.980 |  |
| F1 | 5 |  |  | 37.440 |  |
| F0 | 5 |  |  |  | 38.520 |
| Sig. |  | .130 | .974 | .083 | 1.000 |
| Means for groups in homogeneous subsets are displayed. | | | | | |
| a. Uses Harmonic Mean Sample Size = 5.000. | | | | | |