


# LAMPIRAN

## LAMPIRAN 1. *Ethical Clearance*

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|---|---|--|
|    | <b>UMY</b> UNIVERSITAS MUHAMMADIYAH YOGYAKARTA<br><small>Unggul &amp; Islami</small>  | FAKULTAS KEDOKTERAN DAN ILMU KESEHATAN   |
| Nomor : 632/EP-FKIK-UMY/I/2019  |   |  |
| <b><u>KETERANGAN LOLOS UJI ETIK</u></b><br><b><u>ETHICAL APPROVAL</u></b>   |   |  |
| Komite Etik Penelitian Fakultas Kedokteran dan Ilmu Kesehatan Universitas Muhammadiyah Yogyakarta dalam upaya melindungi hak asasi dan kesejahteraan responden/subyek penelitian, telah mengkaji dengan teliti protokol berjudul :  |   |  |
| <i>The Ethics Committee of the Faculty of Medicine and Health Sciences, University of Muhammadiyah Yogyakarta, with regards of the protection of human rights and welfare in research, has carefully reviewed the research protocol entitled :</i>  |   |  |
| <b>"Uji Toksisitas Sub Kronik Piperin dalam Lada Putih (<i>Piper nigrum L</i>) terhadap Skor Kerusakan Hati dan Jumlah Polimorfonuklear Ginjal dan Hati pada Mencit Balb/C"</b>   |   |  |
| <b><u>Peneliti Utama</u></b><br><i>Principal Investigator</i>   | :   | Sri Tasminatun<br>Firhan Farras Al-Fajri |
| <b><u>Nama Institusi</u></b><br><i>Name of the Institution</i>  | :   | Program Studi Farmasi FKIK UMY           |
| <b><u>Negara</u></b><br><i>Country</i>  | :   | Indonesia                                |
| Dan telah menyetujui protokol tersebut diatas.<br><i>And approved the above-mentioned protocol.</i>   |   |  |
| Yogyakarta, 04 Januari 2019<br>Ketua<br><br>Dr. dr. Titiek Hidayati, M.Kes.,<br>Sp.PD, FISP.H., FISC.M.  |   |  |
| *Peneliti Berkewajiban :<br>1. Menjaga kerahasiaan identitas subyek penelitian<br>2. Memberitahukan status penelitian apabila :<br>a. Setelah masa berlakunya keterangan lolos uji etik (1 tahun sejak tanggal terbit), penelitian masih belum selesai, dalam hal ini <i>ethical clearance</i> harus diperpanjang<br>b. Penelitian berhenti di tengah jalan<br>3. Melaporkan kejadian serius yang tidak diinginkan ( <i>serious adverse events</i> ).<br>4. Peneliti tidak boleh melakukan tindakan apapun pada responden/subyek sebelum penelitian lolos uji etik. |   |  |
| <b>ADDRESS</b><br>Kampus Terpadu UMY Gd. Siti Walidah LT.3<br>Jl. Brawijaya (Lingkar Selatan)<br>Tamantirto . Kasihan . Bantul<br>D.I.Yogyakarta 55183  | <b>CONTACT</b><br>Phone : (0274) 387656 ext. 213<br>Fax : (0274) 387658<br>Email : <a href="mailto:fkik@umy.ac.id">fkik@umy.ac.id</a><br><a href="http://www.fkik.umy.ac.id">www.fkik.umy.ac.id</a> |  |

**LAMPIRAN 2. Hasil Determinasi Tanaman**

 **LABORATORIUM BIOLOGI**  
**FAKULTAS MIPA**  
**UNIVERSITAS AHMAD DAHLAN**  
Jl. Prof. Dr. Soepomo, Yogyakarta Telp. (0274) 563515

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SURAT KETERANGAN  
Nomor : 002/Lab.Bio/B/1/2019


Yang bertanda tangan di bawah ini Kepala Laboratorium Biologi Universitas Ahmad Dahlan menerangkan bahwa :

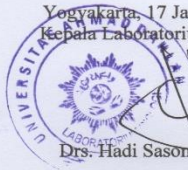
Nama : Yulia Wira Utami  
NIM : 20150350091  
Prodi, PT : Farmasi, Universitas Muhammadiyah Yogyakarta

Telah melakukan determinasi tanaman dengan bimbingan Hery Setiyawan, M.Si di Laboratorium Biologi Universitas Ahmad Dahlan, pada tanggal 17 Januari 2019

Tanaman tersebut adalah :  
*Piper nigrum L.*

Demikian Surat Keterangan ini untuk dapat dipergunakan seperlunya.

Yogyakarta, 17 Januari 2019  
Kepala Laboratorium Biologi  
  
Drs. Hadi Sasongko, M.Si.



**LAMPIRAN 3. Perhitungan Rendemen dan Nilai R<sub>f</sub>**

$$\begin{aligned}\text{Rendemen ekstrak} &= \frac{\text{Bobot kristal piperin yang didapat}}{\text{Bobot serbuk simplisia yang digunakan}} \times 100\% \\ &= \frac{15,12 \text{ gram}}{676,18 \text{ gram}} \times 100\% \\ &= 2,23 \%\end{aligned}$$

$$\begin{aligned}\text{Nilai R}_f \text{ Standar Piperin} &= \frac{\text{Jarak yang ditempuh solut}}{\text{Panjang lintasan fase diam}} \\ &= \frac{3,2 \text{ cm}}{8 \text{ cm}} \\ &= 0,4\end{aligned}$$

$$\begin{aligned}\text{Nilai R}_f \text{ Ekstrak Piperin} &= \frac{\text{Jarak yang ditempuh solut}}{\text{Panjang lintasan fase diam}} \\ &= \frac{2,8 \text{ cm}}{8 \text{ cm}} \\ &= 0,35\end{aligned}$$

#### LAMPIRAN 4. Perhitungan Kesetaraan Dosis

##### 1. Dosis piperin 17,5 mg/kgBB

Dosis piperin pada mencit 20 gram:

$$17,5 \text{ mg/kgBB} \times \frac{20}{1000} \text{ gr} = 0,35 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit 20 gram ke manusia 70 kg:

$$0,35 \text{ mg} \times 387,9 = \frac{135,765}{70 \text{ kgBB manusia}}$$

$$= 1,9395 \text{ mg/kgBB manusia.}$$

$$\text{Biji lada putih} = \frac{\text{Dosis pada manusia}}{\text{Rendemen ekstrak piperin}}$$

$$= \frac{1,9395}{2,23\%}$$

$$= 86,97 \text{ mg biji lada putih}$$

##### 2. Dosis piperin 35 mg/kgBB

Dosis piperin pada mencit 20 gram:

$$35 \text{ mg/kgBB} \times \frac{20}{1000} \text{ gr} = 0,7 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit 20 gram ke manusia 70 kg:

$$0,7 \text{ mg} \times 387,9 = \frac{271,53}{70 \text{ kgBB manusia}}$$

$$= 3,879 \text{ mg/kgBB manusia.}$$

$$\text{Biji lada putih} = \frac{\text{Dosis pada manusia}}{\text{Rendemen ekstrak piperin}}$$

$$= \frac{3,879}{2,23\%}$$

$$= 173,94 \text{ mg biji lada putih}$$

### 3. Dosis 70 mg/kgBB

Dosis piperin pada mencit 20 gram:

$$70 \text{ mg/kgBB} \times \frac{20}{1000} \text{ gr} = 1,4 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit 20 gram ke manusia 70 kg:

$$\begin{aligned} 1,4 \text{ mg} \times 387,9 &= \frac{543,06}{70 \text{ kgBB manusia}} \\ &= 7,758 \text{ mg/kgBB manusia.} \end{aligned}$$

$$\begin{aligned} \text{Biji lada putih} &= \frac{\text{Dosis pada manusia}}{\text{Rendemen ekstrak piperin}} \\ &= \frac{7,758}{2,23\%} \\ &= 347,89 \text{ mg biji lada putih} \end{aligned}$$

### 4. Dosis 140 mg/kgBB

Dosis piperin pada mencit 20 gram:

$$140 \text{ mg/kgBB} \times \frac{20}{1000} \text{ gr} = 2,8 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit 20 gram ke manusia 70 kg:

$$\begin{aligned} 2,8 \text{ mg} \times 387,9 &= \frac{1086,12}{70 \text{ kgBB manusia}} \\ &= 15,516 \text{ mg/kgBB manusia.} \end{aligned}$$

$$\begin{aligned} \text{Biji lada putih} &= \frac{\text{Dosis pada manusia}}{\text{Rendemen ekstrak piperin}} \\ &= \frac{15,516}{2,23\%} \\ &= 695,78 \text{ mg biji lada putih} \end{aligned}$$

## LAMPIRAN 5. Data Skoring Histologi Hati dan Ginjal

### A. Data Skor Kerusakan Hati

| Kelompok                              | Mencit ke- | Skor           |     |     |     |     |     |     |     |     |     |
|---------------------------------------|------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                       |            | Lapang Pandang |     |     |     |     |     |     |     |     |     |
|                                       |            | 1              | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| Kontrol                               | 1          | 1              | 1,1 | 1,4 | 1,1 | 1   | 1,2 | 1   | 1   | 1,1 | 1,2 |
|                                       | 2          | 1,1            | 1,1 | 1,1 | 1,2 | 1   | 1   | 1,1 | 1,1 | 1   | 1,1 |
|                                       | 3          | 1              | 1   | 1,1 | 1,2 | 1   | 1   | 1,2 | 1,2 | 1   | 1   |
|                                       | 4          | 1,2            | 1,2 | 1   | 1,2 | 1,1 | 1,3 | 1,2 | 1,1 | 1,3 | 1,2 |
|                                       | 5          | 1,3            | 1   | 1,2 | 1,1 | 1,3 | 1,2 | 1   | 1,2 | 1,1 | 1,3 |
|                                       | 6          | 1,2            | 1   | 1   | 1,3 | 1,2 | 1,2 | 1,3 | 1,3 | 1,2 | 1,2 |
| Kelompok A<br>(Dosis 17,5<br>mg/kgBB) | 1          | 1              | 1,1 | 1,2 | 1,1 | 1,2 | 1,3 | 1,4 | 1,3 | 1,2 | 1,3 |
|                                       | 2          | 1,5            | 1,1 | 1,2 | 1,4 | 1,4 | 1,3 | 1,1 | 1,3 | 1,4 | 1,3 |
|                                       | 3          | 1,8            | 1,7 | 1,8 | 1,6 | 1,5 | 1,8 | 1,9 | 1,5 | 1,5 | 1,5 |
|                                       | 4          | 1,4            | 1,2 | 2   | 1,3 | 1,2 | 1,3 | 1,2 | 1,3 | 1,7 | 1,4 |
|                                       | 5          | 2,1            | 2,2 | 2   | 2,1 | 2,3 | 2,5 | 1,9 | 2,1 | 1,9 | 2,5 |
|                                       | 6          | 1,4            | 1,4 | 1,5 | 1,4 | 1,7 | 1,5 | 1,5 | 1,6 | 1,2 | 1,4 |
| Kelompok B<br>(Dosis 35<br>mg/kgBB)   | 1          | 1,9            | 1,7 | 2,3 | 2   | 2   | 1,5 | 1,3 | 1,5 | 2   | 1,9 |
|                                       | 2          | 2,3            | 2   | 2,1 | 1,9 | 2   | 2,2 | 1,6 | 1,6 | 1,8 | 2,6 |
|                                       | 3          | 1,1            | 1,7 | 1,6 | 1,9 | 1,5 | 1,9 | 2,2 | 1,8 | 1,8 | 1,4 |
|                                       | 4          | 1,6            | 1,6 | 1,9 | 2   | 1,7 | 1,9 | 1,8 | 1,6 | 1,8 | 1,5 |
|                                       | 5          | 2,3            | 2,5 | 2,4 | 2,4 | 2,3 | 2   | 2,2 | 2   | 1,9 | 2,2 |
|                                       | 6          | 2,1            | 2,1 | 2   | 1,9 | 1,9 | 1,8 | 2,1 | 2   | 2,3 | 2   |
| Kelompok C<br>(Dosis 70<br>mg/kgBB)   | 1          | 2,3            | 2,6 | 2,2 | 2,1 | 1,9 | 1,7 | 2,1 | 2,4 | 1,9 | 2,1 |
|                                       | 2          | 2,5            | 2,1 | 2,3 | 2,2 | 2,1 | 1,9 | 2,1 | 2   | 2,2 | 1,9 |
|                                       | 3          | 1,9            | 1,8 | 2,4 | 2   | 1,9 | 2   | 2,4 | 1,7 | 2,1 | 2,1 |
|                                       | 4          | 2,3            | 2,6 | 2,5 | 2,6 | 2,6 | 2,4 | 2,1 | 2,7 | 2,2 | 2,7 |
|                                       | 5          | 2,1            | 2   | 1,8 | 1,9 | 2,1 | 2   | 1,9 | 2   | 1,9 | 2,4 |
|                                       | 6          | 1,9            | 2,1 | 2,2 | 1,9 | 1,7 | 1,8 | 1,9 | 1,8 | 1,6 | 1,9 |

|   |   |     |     |     |     |     |     |     |     |     |     |
|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Kelompok D<br/>(Dosis 140<br/>mg/kgBB)</b> | 1 | 2,5 | 2,2 | 2,4 | 2,4 | 2,2 | 2,1 | 2,6 | 2,4 | 2,5 | 2,1 |
|   | 2 | 2,4 | 2,2 | 2,5 | 2,2 | 2,1 | 2,4 | 2,6 | 2,4 | 2,3 | 2,4 |
|   | 3 | 2,9 | 2,7 | 2,5 | 2,7 | 2,6 | 2,3 | 2,3 | 2,5 | 2,5 | 2,3 |
|   | 4 | 2,6 | 2,5 | 2,7 | 2,5 | 2,7 | 2,7 | 2,6 | 2,5 | 2,6 | 2,1 |
|   | 5 | 2,3 | 2,2 | 2,1 | 2,3 | 2   | 2,1 | 2,2 | 2,4 | 2,3 | 2   |
|   | 6 | 2,5 | 2,5 | 2,7 | 2,5 | 2,6 | 2,5 | 2,5 | 2,5 | 2,3 | 2,7 |

### B. Data Skor PMN Hati

| <b>Kelompok</b>                                | <b>Mencit<br/>ke-</b> | <b>Skor</b>           |          |          |          |          |          |          |          |          |           |
|--|-----------------------|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
|  |                       | <b>Lapang Pandang</b> |          |          |          |          |          |          |          |          |           |
|  |                       | <b>1</b>              | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Kontrol</b>                                 | 1                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 2                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0         |
|  | 3                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 4                     | 0                     | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 1        | 0         |
|  | 5                     | 0                     | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 0        | 1         |
|  | 6                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0         |
| <b>Kelompok A<br/>(Dosis 17,5<br/>mg/kgBB)</b> | 1                     | 0                     | 0        | 1        | 0        | 0        | 1        | 1        | 0        | 0        | 0         |
|  | 2                     | 0                     | 0        | 1        | 0        | 1        | 1        | 0        | 0        | 0        | 0         |
|  | 3                     | 1                     | 0        | 0        | 1        | 0        | 0        | 1        | 0        | 1        | 0         |
|  | 4                     | 0                     | 0        | 0        | 0        | 1        | 0        | 0        | 1        | 0        | 0         |
|  | 5                     | 0                     | 0        | 1        | 1        | 0        | 0        | 0        | 0        | 0        | 1         |
|  | 6                     | 1                     | 0        | 1        | 1        | 1        | 0        | 0        | 1        | 0        | 0         |
| <b>Kelompok B<br/>(Dosis 35<br/>mg/kgBB)</b>   | 1                     | 1                     | 0        | 1        | 0        | 1        | 1        | 1        | 1        | 0        | 0         |
|  | 2                     | 0                     | 1        | 1        | 0        | 0        | 0        | 1        | 0        | 0        | 1         |
|  | 3                     | 1                     | 0        | 1        | 0        | 0        | 0        | 0        | 1        | 1        | 1         |
|  | 4                     | 0                     | 1        | 0        | 0        | 1        | 1        | 1        | 0        | 1        | 0         |
|  | 5                     | 1                     | 1        | 0        | 1        | 1        | 1        | 0        | 0        | 0        | 1         |
|  | 6                     | 0                     | 0        | 1        | 0        | 1        | 0        | 1        | 0        | 0        | 1         |
| <b>Kelompok C<br/>(Dosis 70<br/>mg/kgBB)</b>   | 1                     | 1                     | 1        | 2        | 0        | 1        | 0        | 1        | 1        | 0        | 0         |
|  | 2                     | 1                     | 0        | 1        | 1        | 0        | 0        | 2        | 0        | 0        | 1         |
|  | 3                     | 1                     | 1        | 1        | 0        | 0        | 1        | 0        | 0        | 1        | 1         |
|  | 4                     | 0                     | 2        | 1        | 1        | 0        | 0        | 1        | 2        | 1        | 1         |
|  | 5                     | 1                     | 1        | 2        | 0        | 0        | 0        | 1        | 1        | 0        | 1         |
|  | 6                     | 1                     | 1        | 1        | 1        | 0        | 0        | 1        | 1        | 0        | 1         |

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>Kelompok D<br/>(Dosis 140<br/>mg/kgBB)</b> | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 1 |
|   | 2 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
|   | 3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
|   | 4 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
|   | 5 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 |
|   | 6 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |

### C. Data Skor PMN Ginjal

| <b>Kelompok</b>                                | <b>Mencit<br/>ke-</b> | <b>Skor</b>           |          |          |          |          |          |          |          |          |           |
|--|-----------------------|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
|  |                       | <b>Lapang Pandang</b> |          |          |          |          |          |          |          |          |           |
|  |                       | <b>1</b>              | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Kontrol</b>                                 | 1                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 2                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0         |
|  | 3                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 4                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 5                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 1         |
|  | 6                     | 0                     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
| <b>Kelompok A<br/>(Dosis 17,5<br/>mg/kgBB)</b> | 1                     | 0                     | 0        | 0        | 0        | 0        | 1        | 1        | 1        | 0        | 0         |
|  | 2                     | 1                     | 0        | 1        | 0        | 0        | 0        | 1        | 0        | 0        | 0         |
|  | 3                     | 0                     | 1        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 4                     | 0                     | 0        | 0        | 0        | 0        | 1        | 0        | 1        | 0        | 1         |
|  | 5                     | 0                     | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 0         |
|  | 6                     | 0                     | 0        | 1        | 0        | 1        | 0        | 0        | 0        | 0        | 0         |
| <b>Kelompok B<br/>(Dosis 35<br/>mg/kgBB)</b>   | 1                     | 1                     | 0        | 0        | 1        | 1        | 0        | 1        | 0        | 0        | 0         |
|  | 2                     | 0                     | 1        | 1        | 0        | 0        | 1        | 0        | 1        | 1        | 1         |
|  | 3                     | 0                     | 1        | 1        | 1        | 0        | 0        | 1        | 1        | 0        | 1         |
|  | 4                     | 1                     | 1        | 0        | 0        | 1        | 1        | 0        | 0        | 0        | 0         |
|  | 5                     | 0                     | 0        | 0        | 1        | 1        | 1        | 0        | 1        | 1        | 1         |
|  | 6                     | 0                     | 0        | 1        | 0        | 0        | 0        | 1        | 1        | 0        | 1         |
| <b>Kelompok C<br/>(Dosis 70<br/>mg/kgBB)</b>   | 1                     | 2                     | 1        | 1        | 1        | 2        | 1        | 1        | 0        | 1        | 2         |
|  | 2                     | 1                     | 1        | 1        | 1        | 1        | 1        | 1        | 1        | 1        | 1         |
|  | 3                     | 0                     | 1        | 2        | 1        | 1        | 1        | 1        | 2        | 1        | 0         |
|  | 4                     | 1                     | 0        | 1        | 1        | 1        | 1        | 1        | 1        | 1        | 1         |
|  | 5                     | 1                     | 1        | 2        | 0        | 1        | 1        | 1        | 1        | 2        | 1         |
|  | 6                     | 1                     | 1        | 1        | 1        | 1        | 1        | 0        | 1        | 1        | 1         |



|  |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|
| <b>Kelompok D</b><br><b>(Dosis 140</b><br><b>mg/kgBB</b> | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |
|  | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 |
|  | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
|  | 4 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 1 |
|  | 5 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
|  | 6 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |

## LAMPIRAN 6. Data SPSS Skoring Histologi Hati dan Ginjal

### A. Data SPSS Skor Kerusakan Hati

#### Descriptives

| Kategori<br>mencit                  |             |                                     | Statistic     | Std. Error |       |
|-------------------------------------|-------------|-------------------------------------|---------------|------------|-------|
| RATA-RATA<br>LP                     | KONTROL     | Mean                                | 1.133         | .0217      |       |
|                                     |             | 95% Confidence Interval for<br>Mean | Lower Bound   | 1.078      |       |
|                                     |             |                                     | Upper Bound   | 1.189      |       |
|                                     |             | 5% Trimmed Mean                     | 1.134         |            |       |
|                                     |             | Median                              | 1.140         |            |       |
|                                     |             | Variance                            | .003          |            |       |
|                                     |             | Std. Deviation                      | .0532         |            |       |
|                                     |             | Minimum                             | 1.1           |            |       |
|                                     |             | Maximum                             | 1.2           |            |       |
|                                     |             | Range                               | .1            |            |       |
|                                     |             | Interquartile Range                 | .1            |            |       |
|                                     |             | Skewness                            | -.171         | .845       |       |
|                                     |             | Kurtosis                            | -2.628        | 1.741      |       |
|                                     |             | DOSIS<br>17.5                       | DOSIS<br>17.5 | Mean       | 1.532 |
| 95% Confidence Interval for<br>Mean | Lower Bound |                                     |               | 1.171      |       |
|                                     | Upper Bound |                                     |               | 1.892      |       |
| 5% Trimmed Mean                     | 1.515       |                                     |               |            |       |
| Median                              | 1.430       |                                     |               |            |       |
| Variance                            | .118        |                                     |               |            |       |
| Std. Deviation                      | .3438       |                                     |               |            |       |
| Minimum                             | 1.2         |                                     |               |            |       |
| Maximum                             | 2.2         |                                     |               |            |       |
| Range                               | 1.0         |                                     |               |            |       |
| Interquartile Range                 | .5          |                                     |               |            |       |
| Skewness                            | 1.490       |                                     |               | .845       |       |
| Kurtosis                            | 2.274       |                                     |               | 1.741      |       |
| DOSIS 35                            | DOSIS 35    |                                     |               | Mean       | 1.915 |
|                                     |             | 95% Confidence Interval for<br>Mean | Lower Bound   | 1.702      |       |
|                                     |             |                                     | Upper Bound   | 2.128      |       |
|                                     |             | 5% Trimmed Mean                     | 1.911         |            |       |

|          |                                  |             |        |       |
|----------|----------------------------------|-------------|--------|-------|
|          | Median                           |             | 1.910  |       |
|          | Variance                         |             | .041   |       |
|          | Std. Deviation                   |             | .2027  |       |
|          | Minimum                          |             | 1.7    |       |
|          | Maximum                          |             | 2.2    |       |
|          | Range                            |             | .5     |       |
|          | Interquartile Range              |             | .3     |       |
|          | Skewness                         |             | .450   | .845  |
|          | Kurtosis                         |             | -1.071 | 1.741 |
| DOSIS 70 | Mean                             |             | 2.108  | .0816 |
|          | 95% Confidence Interval for Mean | Lower Bound | 1.899  |       |
|          |                                  | Upper Bound | 2.318  |       |
|          | 5% Trimmed Mean                  |             | 2.101  |       |
|          | Median                           |             | 2.080  |       |
|          | Variance                         |             | .040   |       |
|          | Std. Deviation                   |             | .1998  |       |
|          | Minimum                          |             | 1.9    |       |
|          | Maximum                          |             | 2.5    |       |
|          | Range                            |             | .6     |       |
|          | Interquartile Range              |             | .2     |       |
|          | Skewness                         |             | 1.278  | .845  |
|          | Kurtosis                         |             | 2.510  | 1.741 |
| DOSIS140 | Mean                             |             | 2.415  | .0592 |
|          | 95% Confidence Interval for Mean | Lower Bound | 2.263  |       |
|          |                                  | Upper Bound | 2.567  |       |
|          | 5% Trimmed Mean                  |             | 2.420  |       |
|          | Median                           |             | 2.440  |       |
|          | Variance                         |             | .021   |       |
|          | Std. Deviation                   |             | .1450  |       |
|          | Minimum                          |             | 2.2    |       |
|          | Maximum                          |             | 2.6    |       |
|          | Range                            |             | .4     |       |
|          | Interquartile Range              |             | .2     |       |
|          | Skewness                         |             | -.648  | .845  |
|          | Kurtosis                         |             | -1.036 | 1.741 |

## 1. HASIL UJI NORMALITAS

### Tests of Normality

|              | Kolmogorov-Smirnov(a) |    |      | Shapiro-Wilk |    |      |
|--------------|-----------------------|----|------|--------------|----|------|
|              | Statistic             | Df | Sig. | Statistic    | df | Sig. |
| RATA-RATA LP | .149                  | 30 | .088 | .919         | 30 | .026 |

a Lilliefors Significance Correction

## 2. HASIL UJI KRUSKAL-WALLIS

### Ranks

|              | Kategori mencit | N  | Mean Rank |
|--------------|-----------------|----|-----------|
| RATA-RATA LP | KONTROL         | 6  | 3.50      |
|              | DOSIS 17.5      | 6  | 11.17     |
|              | DOSIS 35        | 6  | 16.25     |
|              | DOSIS 70        | 6  | 19.75     |
|              | DOSIS140        | 6  | 26.83     |
|              | Total           | 30 |           |

### Test Statistics(a,b)

|             | RATA-RATA LP |
|-------------|--------------|
| Chi-Square  | 24.004       |
| df          | 4            |
| Asymp. Sig. | .000         |

a Kruskal Wallis Test

b Grouping Variable: Kategori mencit

## 3. HASIL UJI MANN WHITNEY

### a) Kelompok kontrol dengan dosis 17,5 mg/kgBB

### Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | KONTROL         | 6  | 3.50      | 21.00        |
|              | DOSIS 17.5      | 6  | 9.50      | 57.00        |
|              | Total           | 12 |           |              |

### Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | .000         |
| Wilcoxon W                     | 21.000       |
| Z                              | -2.882       |
| Asymp. Sig. (2-tailed)         | .004         |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a)      |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

**b) Kelompok kontrol dengan dosis 35 mg/kgBB**

Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | KONTROL         | 6  | 3.50      | 21.00        |
|              | DOSIS 35        | 6  | 9.50      | 57.00        |
|              | Total           | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | .000         |
| Wilcoxon W                     | 21.000       |
| Z                              | -2.882       |
| Asymp. Sig. (2-tailed)         | .004         |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a)      |

**c) Kelompok kontrol dengan dosis 70 mg/kgBB**

Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | KONTROL         | 6  | 3.50      | 21.00        |
|              | DOSIS 70        | 6  | 9.50      | 57.00        |
|              | Total           | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | .000         |
| Wilcoxon W                     | 21.000       |
| Z                              | -2.887       |
| Asymp. Sig. (2-tailed)         | .004         |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a)      |

**d) Kelompok kontrol dengan dosis 140 mg/kgBB**

Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | KONTROL         | 6  | 3.50      | 21.00        |
|              | DOSIS140        | 6  | 9.50      | 57.00        |
|              | Total           | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | .000         |
| Wilcoxon W                     | 21.000       |
| Z                              | -2.887       |
| Asymp. Sig. (2-tailed)         | .004         |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a)      |

**e) Dosis 17,5 mg/kgBB dengan dosis 35 mg/kgBB**

Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | DOSIS 17.5      | 6  | 4.33      | 26.00        |
|              | DOSIS 35        | 6  | 8.67      | 52.00        |
|              | Total           | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | 5.000        |
| Wilcoxon W                     | 26.000       |
| Z                              | -2.082       |
| Asymp. Sig. (2-tailed)         | .037         |
| Exact Sig. [2*(1-tailed Sig.)] | .041(a)      |

**f) Dosis 17,5 mg/kgBB dengan dosis 70 mg/kgBB**

Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | DOSIS 17.5      | 6  | 4.33      | 26.00        |
|              | DOSIS 70        | 6  | 8.67      | 52.00        |
|              | Total           | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | 5.000        |
| Wilcoxon W                     | 26.000       |
| Z                              | -2.085       |
| Asymp. Sig. (2-tailed)         | .037         |
| Exact Sig. [2*(1-tailed Sig.)] | .041(a)      |

**g) Dosis 17,5 mg/kgBB dengan dosis 140 mg/kgBB**

Ranks

|              | Kategori mencit | N  | Mean Rank | Sum of Ranks |
|--------------|-----------------|----|-----------|--------------|
| RATA-RATA LP | DOSIS 17.5      | 6  | 3.50      | 21.00        |
|              | DOSIS 140       | 6  | 9.50      | 57.00        |
|              | Total           | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | .000         |
| Wilcoxon W                     | 21.000       |
| Z                              | -2.887       |
| Asymp. Sig. (2-tailed)         | .004         |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a)      |

### h) Dosis 35 mg/kgBB dengan dosis 70 mg/kgBB

Ranks

| Kategori mencit       | N  | Mean Rank | Sum of Ranks |
|-----------------------|----|-----------|--------------|
| RATA-RATA LP DOSIS 35 | 6  | 4.92      | 29.50        |
| DOSIS 70              | 6  | 8.08      | 48.50        |
| Total                 | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | 8.500        |
| Wilcoxon W                     | 29.500       |
| Z                              | -1.527       |
| Asymp. Sig. (2-tailed)         | .127         |
| Exact Sig. [2*(1-tailed Sig.)] | .132(a)      |

### i) Dosis 35 mg/kgBB dengan dosis 140 mg/kgBB

Ranks

| Kategori mencit       | N  | Mean Rank | Sum of Ranks |
|-----------------------|----|-----------|--------------|
| RATA-RATA LP DOSIS 35 | 6  | 3.67      | 22.00        |
| DOSIS140              | 6  | 9.33      | 56.00        |
| Total                 | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | 1.000        |
| Wilcoxon W                     | 22.000       |
| Z                              | -2.727       |
| Asymp. Sig. (2-tailed)         | .006         |
| Exact Sig. [2*(1-tailed Sig.)] | .004(a)      |

### j) Dosis 70 mg/kgBB dengan dosis 140 mg/kgBB

Ranks

| Kategori mencit       | N  | Mean Rank | Sum of Ranks |
|-----------------------|----|-----------|--------------|
| RATA-RATA LP DOSIS 70 | 6  | 4.00      | 24.00        |
| DOSIS140              | 6  | 9.00      | 54.00        |
| Total                 | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: Kategori mencit

Test Statistics(b)

|                                | RATA-RATA LP |
|--------------------------------|--------------|
| Mann-Whitney U                 | 3.000        |
| Wilcoxon W                     | 24.000       |
| Z                              | -2.410       |
| Asymp. Sig. (2-tailed)         | .016         |
| Exact Sig. [2*(1-tailed Sig.)] | .015(a)      |

## B. Data SPSS Skor PMN Hati

### Descriptives

| KELOMPOK                         |          | Statistic                        | Std. Error |        |       |
|----------------------------------|----------|----------------------------------|------------|--------|-------|
| SKORING                          | KONTROL  | Mean                             | .1000      | .03651 |       |
|                                  |          | 95% Confidence Interval for Mean |            |        |       |
|                                  |          | Lower Bound                      | .0061      |        |       |
|                                  |          | Upper Bound                      | .1939      |        |       |
|                                  |          | 5% Trimmed Mean                  | .1000      |        |       |
|                                  |          | Median                           | .1000      |        |       |
|                                  |          | Variance                         | .008       |        |       |
|                                  |          | Std. Deviation                   | .08944     |        |       |
|                                  |          | Minimum                          | .00        |        |       |
|                                  |          | Maximum                          | .20        |        |       |
|                                  |          | Range                            | .20        |        |       |
|                                  |          | Interquartile Range              | .20        |        |       |
|                                  |          | Skewness                         | .000       |        | .845  |
|                                  |          | Kurtosis                         | -1.875     |        | 1.741 |
|                                  |          | DOSIS 17.5                       | DOSIS 17.5 |        | Mean  |
| 95% Confidence Interval for Mean |          |                                  |            |        |       |
| Lower Bound                      | .2249    |                                  |            |        |       |
| Upper Bound                      | .4417    |                                  |            |        |       |
| 5% Trimmed Mean                  | .3315    |                                  |            |        |       |
| Median                           | .3000    |                                  |            |        |       |
| Variance                         | .011     |                                  |            |        |       |
| Std. Deviation                   | .10328   |                                  |            |        |       |
| Minimum                          | .20      |                                  |            |        |       |
| Maximum                          | .50      |                                  |            |        |       |
| Range                            | .30      |                                  |            |        |       |
| Interquartile Range              | .15      |                                  |            |        |       |
| Skewness                         | .666     |                                  |            | .845   |       |
| Kurtosis                         | .586     |                                  |            | 1.741  |       |
| DOSIS 35                         | DOSIS 35 |                                  |            | Mean   | .5000 |
|                                  |          | 95% Confidence Interval for Mean |            |        |       |
|                                  |          | Lower Bound                      | .4061      |        |       |
|                                  |          | Upper Bound                      | .5939      |        |       |
|                                  |          | 5% Trimmed Mean                  | .5000      |        |       |
|                                  |          | Median                           | .5000      |        |       |
|                                  |          | Variance                         | .008       |        |       |
|                                  |          | Std. Deviation                   | .08944     |        |       |
|                                  |          | Minimum                          | .40        |        |       |
|                                  |          | Maximum                          | .60        |        |       |
|                                  |          | Range                            | .20        |        |       |



|  |           |                                  |             |        |        |
|--|-----------|----------------------------------|-------------|--------|--------|
|  |           | Interquartile Range              |             | .20    |        |
|  |           | Skewness                         |             | .000   | .845   |
|  |           | Kurtosis                         |             | -1.875 | 1.741  |
|  | DOSIS 70  | Mean                             |             | .7000  | .04472 |
|  |           | 95% Confidence Interval for Mean | Lower Bound | .5850  |        |
|  |           |                                  | Upper Bound | .8150  |        |
|  |           | 5% Trimmed Mean                  |             | .6944  |        |
|  |           | Median                           |             | .7000  |        |
|  |           | Variance                         |             | .012   |        |
|  |           | Std. Deviation                   |             | .10954 |        |
|  |           | Minimum                          |             | .60    |        |
|  |           | Maximum                          |             | .90    |        |
|  |           | Range                            |             | .30    |        |
|  |           | Interquartile Range              |             | .15    |        |
|  |           | Skewness                         |             | 1.369  | .845   |
|  |           | Kurtosis                         |             | 2.500  | 1.741  |
|  | DOSIS 140 | Mean                             |             | .8833  | .05426 |
|  |           | 95% Confidence Interval for Mean | Lower Bound | .7438  |        |
|  |           |                                  | Upper Bound | 1.0228 |        |
|  |           | 5% Trimmed Mean                  |             | .8815  |        |
|  |           | Median                           |             | .9000  |        |
|  |           | Variance                         |             | .018   |        |
|  |           | Std. Deviation                   |             | .13292 |        |
|  |           | Minimum                          |             | .70    |        |
|  |           | Maximum                          |             | 1.10   |        |
|  |           | Range                            |             | .40    |        |
|  |           | Interquartile Range              |             | .18    |        |
|  |           | Skewness                         |             | .440   | .845   |
|  |           | Kurtosis                         |             | 1.335  | 1.741  |

## 1. HASIL UJI NORMALITAS

### Tests of Normality

|         | Kolmogorov-Smirnov(a) |    |         | Shapiro-Wilk |    |      |
|---------|-----------------------|----|---------|--------------|----|------|
|         | Statistic             | df | Sig.    | Statistic    | df | Sig. |
| SKORING | .095                  | 30 | .200(*) | .968         | 30 | .491 |

\* This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## 2. HASIL UJI KRUSKALL-WALLIS

| Ranks    |            |    |           | Test Statistics(a,b) |        |
|----------|------------|----|-----------|----------------------|--------|
| KELOMPOK |            | N  | Mean Rank | SKORING              |        |
| SKORING  | KONTROL    | 6  | 3.67      | Chi-Square           | 26.398 |
|          | DOSIS 17.5 | 6  | 10.00     | Df                   | 4      |
|          | DOSIS 35   | 6  | 15.17     | Asymp. Sig.          | .000   |
|          | DOSIS 70   | 6  | 22.00     |                      |        |
|          | DOSIS 140  | 6  | 26.67     |                      |        |
|          | Total      | 30 |           |                      |        |

a Kruskal Wallis Test

b Grouping Variable: KELOMPOK

## 3. HASIL UJI MANN-WHITNEY

### a) Kelompok kontrol dengan dosis 17,5 mg/kgBB

| Ranks    |            |    |           |              | Test Statistics(b)             |         |
|----------|------------|----|-----------|--------------|--------------------------------|---------|
| KELOMPOK |            | N  | Mean Rank | Sum of Ranks | SKORING                        |         |
| SKORING  | KONTROL    | 6  | 3.67      | 22.00        | Mann-Whitney U                 | 1.000   |
|          | DOSIS 17.5 | 6  | 9.33      | 56.00        | Wilcoxon W                     | 22.000  |
|          | Total      | 12 |           |              | Z                              | -2.771  |
|          |            |    |           |              | Asymp. Sig. (2-tailed)         | .006    |
|          |            |    |           |              | Exact Sig. [2*(1-tailed Sig.)] | .004(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

### b) Kelompok kontrol dengan dosis 35 mg/kgBB

| Ranks    |          |    |           |              | Test Statistics(b)             |         |
|----------|----------|----|-----------|--------------|--------------------------------|---------|
| KELOMPOK |          | N  | Mean Rank | Sum of Ranks | SKORING                        |         |
| SKORING  | KONTROL  | 6  | 3.50      | 21.00        | Mann-Whitney U                 | .000    |
|          | DOSIS 35 | 6  | 9.50      | 57.00        | Wilcoxon W                     | 21.000  |
|          | Total    | 12 |           |              | Z                              | -2.913  |
|          |          |    |           |              | Asymp. Sig. (2-tailed)         | .004    |
|          |          |    |           |              | Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**c) Kelompok kontrol dengan dosis 70 mg/kgBB**

| Ranks           |    |           |              | Test Statistics(b)             |         |
|-----------------|----|-----------|--------------|--------------------------------|---------|
| KELOMPOK        | N  | Mean Rank | Sum of Ranks |                                | SKORING |
| SKORING KONTROL | 6  | 3.50      | 21.00        | Mann-Whitney U                 | .000    |
| DOSIS 70        | 6  | 9.50      | 57.00        | Wilcoxon W                     | 21.000  |
| Total           | 12 |           |              | Z                              | -2.923  |
|                 |    |           |              | Asymp. Sig. (2-tailed)         | .003    |
|                 |    |           |              | Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.  
b Grouping Variable: KELOMPOK

**d) Kelompok kontrol dengan dosis 140 mg/kgBB**

| Ranks           |    |           |              | Test Statistics(b)             |         |
|-----------------|----|-----------|--------------|--------------------------------|---------|
| KELOMPOK        | N  | Mean Rank | Sum of Ranks |                                | SKORING |
| SKORING KONTROL | 6  | 3.50      | 21.00        | Mann-Whitney U                 | .000    |
| DOSIS 140       | 6  | 9.50      | 57.00        | Wilcoxon W                     | 21.000  |
| Total           | 12 |           |              | Z                              | -2.918  |
|                 |    |           |              | Asymp. Sig. (2-tailed)         | .004    |
|                 |    |           |              | Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.  
b Grouping Variable: KELOMPOK

**e) Dosis 17,5 mg/kgBB dengan dosis 35 mg/kgBB**

| Ranks              |    |           |              | Test Statistics(b)             |         |
|--------------------|----|-----------|--------------|--------------------------------|---------|
| KELOMPOK           | N  | Mean Rank | Sum of Ranks |                                | SKORING |
| SKORING DOSIS 17.5 | 6  | 4.17      | 25.00        | Mann-Whitney U                 | 4.000   |
| DOSIS 35           | 6  | 8.83      | 53.00        | Wilcoxon W                     | 25.000  |
| Total              | 12 |           |              | Z                              | -2.295  |
|                    |    |           |              | Asymp. Sig. (2-tailed)         | .022    |
|                    |    |           |              | Exact Sig. [2*(1-tailed Sig.)] | .026(a) |

a Not corrected for ties.  
b Grouping Variable: KELOMPOK

**f) Dosis 17,5 mg/kgBB dengan dosis 70 mg/kgBB**

Ranks

| KELOMPOK |            | N  | Mean Rank | Sum of Ranks |
|----------|------------|----|-----------|--------------|
| SKORING  | DOSIS 17.5 | 6  | 3.50      | 21.00        |
|          | DOSIS 70   | 6  | 9.50      | 57.00        |
|          | Total      | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.929  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**g) Dosis 17,5 mg/kgBB dengan dosis 140 mg/kgBB**

Ranks

| KELOMPOK |            | N  | Mean Rank | Sum of Ranks |
|----------|------------|----|-----------|--------------|
| SKORING  | DOSIS 17.5 | 6  | 3.50      | 21.00        |
|          | DOSIS 140  | 6  | 9.50      | 57.00        |
|          | Total      | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.923  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**h) Dosis 35 mg/kgBB dengan dosis 70 mg/kgBB**

Ranks

| KELOMPOK |          | N  | Mean Rank | Sum of Ranks |
|----------|----------|----|-----------|--------------|
| SKORING  | DOSIS 35 | 6  | 3.83      | 23.00        |
|          | DOSIS 70 | 6  | 9.17      | 55.00        |
|          | Total    | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | 2.000   |
| Wilcoxon W                     | 23.000  |
| Z                              | -2.637  |
| Asymp. Sig. (2-tailed)         | .008    |
| Exact Sig. [2*(1-tailed Sig.)] | .009(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**i) Dosis 35 mg/kgBB dengan dosis 140 mg/kgBB**

**Ranks**

| KELOMPOK         | N  | Mean Rank | Sum of Ranks |
|------------------|----|-----------|--------------|
| SKORING DOSIS 35 | 6  | 3.50      | 21.00        |
| DOSIS 140        | 6  | 9.50      | 57.00        |
| Total            | 12 |           |              |

**Test Statistics(b)**

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.918  |
| Asymp. Sig. (2-tailed)         | .004    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**j) Dosis 70 mg/kgBB dengan dosis 140 mg/kgBB**

**Ranks**

| KELOMPOK         | N  | Mean Rank | Sum of Ranks |
|------------------|----|-----------|--------------|
| SKORING DOSIS 70 | 6  | 4.33      | 26.00        |
| DOSIS 140        | 6  | 8.67      | 52.00        |
| Total            | 12 |           |              |

**Test Statistics(b)**

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | 5.000   |
| Wilcoxon W                     | 26.000  |
| Z                              | -2.163  |
| Asymp. Sig. (2-tailed)         | .031    |
| Exact Sig. [2*(1-tailed Sig.)] | .041(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

### C. Data SPSS Skor PMN Ginjal

#### Descriptives

| KELOMPOK                         |          | Statistic                        | Std. Error |        |       |
|----------------------------------|----------|----------------------------------|------------|--------|-------|
| SKORING                          | KONTROL  | Mean                             | .0333      | .02108 |       |
|                                  |          | 95% Confidence Interval for Mean |            |        |       |
|                                  |          | Lower Bound                      | -.0209     |        |       |
|                                  |          | Upper Bound                      | .0875      |        |       |
|                                  |          | 5% Trimmed Mean                  | .0315      |        |       |
|                                  |          | Median                           | .0000      |        |       |
|                                  |          | Variance                         | .003       |        |       |
|                                  |          | Std. Deviation                   | .05164     |        |       |
|                                  |          | Minimum                          | .00        |        |       |
|                                  |          | Maximum                          | .10        |        |       |
|                                  |          | Range                            | .10        |        |       |
|                                  |          | Interquartile Range              | .10        |        |       |
|                                  |          | Skewness                         | .968       |        | .845  |
|                                  |          | Kurtosis                         | -1.875     |        | 1.741 |
|                                  |          | DOSIS 17.5                       | DOSIS 17.5 |        | Mean  |
| 95% Confidence Interval for Mean |          |                                  |            |        |       |
| Lower Bound                      | .1135    |                                  |            |        |       |
| Upper Bound                      | .3198    |                                  |            |        |       |
| 5% Trimmed Mean                  | .2185    |                                  |            |        |       |
| Median                           | .2500    |                                  |            |        |       |
| Variance                         | .010     |                                  |            |        |       |
| Std. Deviation                   | .09832   |                                  |            |        |       |
| Minimum                          | .10      |                                  |            |        |       |
| Maximum                          | .30      |                                  |            |        |       |
| Range                            | .20      |                                  |            |        |       |
| Interquartile Range              | .20      |                                  |            |        |       |
| Skewness                         | -.456    |                                  |            | .845   |       |
| Kurtosis                         | -2.390   |                                  |            | 1.741  |       |
| DOSIS 35                         | DOSIS 35 |                                  |            | Mean   | .5000 |
|                                  |          | 95% Confidence Interval for Mean |            |        |       |
|                                  |          | Lower Bound                      | .3850      |        |       |
|                                  |          | Upper Bound                      | .6150      |        |       |
|                                  |          | 5% Trimmed Mean                  | .5000      |        |       |
|                                  |          | Median                           | .5000      |        |       |
|                                  |          | Variance                         | .012       |        |       |
|                                  |          | Std. Deviation                   | .10954     |        |       |
|                                  |          | Minimum                          | .40        |        |       |
|                                  |          | Maximum                          | .60        |        |       |

|  |           |                                  |             |        |        |
|--|-----------|----------------------------------|-------------|--------|--------|
|  |           | Range                            |             | .20    |        |
|  |           | Interquartile Range              |             | .20    |        |
|  |           | Skewness                         |             | .000   | .845   |
|  |           | Kurtosis                         |             | -3.333 | 1.741  |
|  | DOSIS 70  | Mean                             |             | 1.0167 | .04773 |
|  |           | 95% Confidence Interval for Mean | Lower Bound | .8940  |        |
|  |           |                                  | Upper Bound | 1.1394 |        |
|  |           | 5% Trimmed Mean                  |             | 1.0130 |        |
|  |           | Median                           |             | 1.0000 |        |
|  |           | Variance                         |             | .014   |        |
|  |           | Std. Deviation                   |             | .11690 |        |
|  |           | Minimum                          |             | .90    |        |
|  |           | Maximum                          |             | 1.20   |        |
|  |           | Range                            |             | .30    |        |
|  |           | Interquartile Range              |             | .23    |        |
|  |           | Skewness                         |             | .668   | .845   |
|  |           | Kurtosis                         |             | -.446  | 1.741  |
|  | DOSIS 140 | Mean                             |             | 1.1167 | .05426 |
|  |           | 95% Confidence Interval for Mean | Lower Bound | .9772  |        |
|  |           |                                  | Upper Bound | 1.2562 |        |
|  |           | 5% Trimmed Mean                  |             | 1.1185 |        |
|  |           | Median                           |             | 1.1000 |        |
|  |           | Variance                         |             | .018   |        |
|  |           | Std. Deviation                   |             | .13292 |        |
|  |           | Minimum                          |             | .90    |        |
|  |           | Maximum                          |             | 1.30   |        |
|  |           | Range                            |             | .40    |        |
|  |           | Interquartile Range              |             | .18    |        |
|  |           | Skewness                         |             | -.440  | .845   |
|  |           | Kurtosis                         |             | 1.335  | 1.741  |

## 1. HASIL UJI NORMALITAS

### Tests of Normality

|         | Kolmogorov-Smirnov(a) |    |      | Shapiro-Wilk |    |      |
|---------|-----------------------|----|------|--------------|----|------|
|         | Statistic             | df | Sig. | Statistic    | df | Sig. |
| SKORING | .166                  | 30 | .035 | .894         | 30 | .006 |

a. Lilliefors Significance Correction

## 2. HASIL UJI KRUSKALL-WALLIS

| Ranks   |            |    |           | Test Statistics(a,b) |         |
|---------|------------|----|-----------|----------------------|---------|
|         | KELOMPOK   | N  | Mean Rank |                      | SKORING |
| SKORING | KONTROL    | 6  | 3.83      | Chi-Square           | 26.746  |
|         | DOSIS 17.5 | 6  | 9.17      | Df                   | 4       |
|         | DOSIS 35   | 6  | 15.50     | Asymp. Sig.          | .000    |
|         | DOSIS 70   | 6  | 23.17     |                      |         |
|         | DOSIS 140  | 6  | 25.83     |                      |         |
|         | Total      | 30 |           |                      |         |

- a Kruskal Wallis Test  
b Grouping Variable: KELOMPOK

## 3. HASIL UJI MANN-WHITNEY

### a) Kelompok kontrol dengan dosis 17,5 mg/kgBB

| Ranks   |            |    |           |              | Test Statistics(b)             |         |
|---------|------------|----|-----------|--------------|--------------------------------|---------|
|         | KELOMPOK   | N  | Mean Rank | Sum of Ranks |                                | SKORING |
| SKORING | KONTROL    | 6  | 3.83      | 23.00        | Mann-Whitney U                 | 2.000   |
|         | DOSIS 17.5 | 6  | 9.17      | 55.00        | Wilcoxon W                     | 23.000  |
|         | Total      | 12 |           |              | Z                              | -2.677  |
|         |            |    |           |              | Asymp. Sig. (2-tailed)         | .007    |
|         |            |    |           |              | Exact Sig. [2*(1-tailed Sig.)] | .009(a) |

- a Not corrected for ties.  
b Grouping Variable: KELOMPOK



**b) Kelompok kontrol dengan dosis 35 mg/kgBB**

Ranks

|         | KELOMPOK | N  | Mean Rank | Sum of Ranks |
|---------|----------|----|-----------|--------------|
| SKORING | KONTROL  | 6  | 3.50      | 21.00        |
|         | DOSIS 35 | 6  | 9.50      | 57.00        |
|         | Total    | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.983  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

**c) Kelompok kontrol dengan dosis 70 mg/kgBB**

Ranks

|         | KELOMPOK | N  | Mean Rank | Sum of Ranks |
|---------|----------|----|-----------|--------------|
| SKORING | KONTROL  | 6  | 3.50      | 21.00        |
|         | DOSIS 70 | 6  | 9.50      | 57.00        |
|         | Total    | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.950  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

**d) Kelompok kontrol dengan dosis 140 mg/kgBB**

Ranks

|         | KELOMPOK  | N  | Mean Rank | Sum of Ranks |
|---------|-----------|----|-----------|--------------|
| SKORING | KONTROL   | 6  | 3.50      | 21.00        |
|         | DOSIS 140 | 6  | 9.50      | 57.00        |
|         | Total     | 12 |           |              |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.961  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

**e) Dosis 17,5 mg/kgBB dengan dosis 35 mg/kgBB**

Ranks

|         | KELOMPOK   | N  | Mean Rank | Sum of Ranks |
|---------|------------|----|-----------|--------------|
| SKORING | DOSIS 17.5 | 6  | 3.50      | 21.00        |
|         | DOSIS 35   | 6  | 9.50      | 57.00        |
|         | Total      | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.950  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**f) Dosis 17,5 mg/kgBB dengan dosis 70 mg/kgBB**

Ranks

|         | KELOMPOK   | N  | Mean Rank | Sum of Ranks |
|---------|------------|----|-----------|--------------|
| SKORING | DOSIS 17.5 | 6  | 3.50      | 21.00        |
|         | DOSIS 70   | 6  | 9.50      | 57.00        |
|         | Total      | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.918  |
| Asymp. Sig. (2-tailed)         | .004    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

**g) Dosis 17,5 mg/kgBB dengan dosis 140 mg/kgBB**

Ranks

|         | KELOMPOK   | N  | Mean Rank | Sum of Ranks |
|---------|------------|----|-----------|--------------|
| SKORING | DOSIS 17.5 | 6  | 3.50      | 21.00        |
|         | DOSIS 140  | 6  | 9.50      | 57.00        |
|         | Total      | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.929  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

### h) Dosis 35 mg/kgBB dengan dosis 70 mg/kgBB

Ranks

|         | KELOMPOK | N  | Mean Rank | Sum of Ranks |
|---------|----------|----|-----------|--------------|
| SKORING | DOSIS 35 | 6  | 3.50      | 21.00        |
|         | DOSIS 70 | 6  | 9.50      | 57.00        |
|         | Total    | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.934  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

### i) Dosis 35 mg/kgBB dengan dosis 140 mg/kgBB

Ranks

|         | KELOMPOK  | N  | Mean Rank | Sum of Ranks |
|---------|-----------|----|-----------|--------------|
| SKORING | DOSIS 35  | 6  | 3.50      | 21.00        |
|         | DOSIS 140 | 6  | 9.50      | 57.00        |
|         | Total     | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | .000    |
| Wilcoxon W                     | 21.000  |
| Z                              | -2.945  |
| Asymp. Sig. (2-tailed)         | .003    |
| Exact Sig. [2*(1-tailed Sig.)] | .002(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

### j) Dosis 70 mg/kgBB dengan dosis 140 mg/kgBB

Ranks

|         | KELOMPOK  | N  | Mean Rank | Sum of Ranks |
|---------|-----------|----|-----------|--------------|
| SKORING | DOSIS 70  | 6  | 5.17      | 31.00        |
|         | DOSIS 140 | 6  | 7.83      | 47.00        |
|         | Total     | 12 |           |              |

Test Statistics(b)

|                                | SKORING |
|--------------------------------|---------|
| Mann-Whitney U                 | 10.000  |
| Wilcoxon W                     | 31.000  |
| Z                              | -1.318  |
| Asymp. Sig. (2-tailed)         | .187    |
| Exact Sig. [2*(1-tailed Sig.)] | .240(a) |

a Not corrected for ties.

b Grouping Variable: KELOMPOK

## LAMPIRAN 7. Dokumentasi



Biji lada putih (*Piper nigrum* L) yang digunakan dalam penelitian.



Proses pembuatan serbuk biji lada putih (*Piper nigrum* L)



Proses ekstraksi piperin dengan sokhletasi



Hasil ekstraksi piperin setelah proses sokhletasi



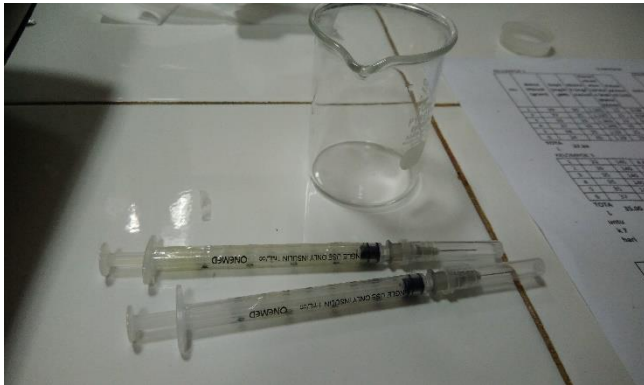
Proses evaporasi ekstrak piperin



Kristal piperin yang didapat setelah proses pencucian



Persiapan alat dan bahan untuk identifikasi piperin dengan KLT



Persiapan alat yang digunakan untuk memberi perlakuan pada mencit



Mencit dikorbkan dengan menggunakan kloroform secara inhalasi



Persiapan alat yang digunakan untuk membedah mencit



Proses pembedahan dan pengambilan organ pada mencit



Pengamatan histologi organ di Laboratorium Patologi Histologi FKIK UMY

## LAMPIRAN 8. Hasil Uji Plagiarisme

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