

# LAMPIRAN

## Lampiran 1. Hasil Determinasi Tanaman Jahe Merah



KEMENTERIAN PENDIDIKAN KEBUDAYAAN  
RISET DAN TEKNOLOGI  
UNIVERSITAS DIPONEGORO  
FAKULTAS SAINS DAN MATEMATIKA  
**LAB EKOLOGI & BIOSISTEMATIKA JURUSAN BOLOGI**  
Jl. Prof H Soedarto SH Tembalang Semarang, 024 7474754, 024 76480923

### **SURAT KETERANGAN**

Yang bertanda tangan dibawah ini, menyatakan bahwa mahasiswa sbb :

Nama : Rinta Novita Atmanegara  
NIM : 051201038  
Prodi/Fakultas : S1 Farmasi/Kesehatan  
Perguruan Tinggi : Universitas Ngudi Waluyo  
Judul : Pengaruh Waktu Pengendapan Sari Jahe Merah Merah  
(*Zingiber officinale* var. *rubrum*) Terhadap Stabilitas Mutu Fisik dan Aktivitas  
Antioksidan Serbuk Instan Jahe Merah.

Telah melakukan identifikasi sampel tumbuhan (satu jenis) di Laboratorium Ekologi dan Biosistematika Departemen Biologi FSM UNDIP. Hasil determinasi/identifikasi terlampir.

Demikian surat keterangan ini dibuat untuk dapat digunakan seperlunya.

Semarang, 13 November 2023  
Laboratorium Ekologi & Biosistematika  
Kepala,

Rully Rahadian, S.Si, M.Si, PhD  
NIP 197207022000031001



KEMENTERIAN PENDIDIKAN KEBUDAYAAN  
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#### HASIL DETERMINASI

##### Klasifikasi:

|             |   |
|-------------|---|
| Kingdom     | : Plantae   |
| SubKingdom  | : Tracheobionta   |
| Superdivisi | : Spermatophyta (Tumbuhan berbiji)                      |
| Divisi      | : Magnoliophyta (Tumbuhan berbunga)                     |
| Kelas       | : Liliopsida (Monocotyledoneae)                         |
| Ordo        | : Zingiberales  |
| Famili      | : Zingiberaceae   |
| Genus       | : Zingiber  |
| Species     | : <i>Zingiber officinale</i> Roscoe                     |
| Sinonim     | : <i>Zingiber officinale</i> var <i>rubrum</i> Theilade |
| Nama lokal  | : Jahe merah  |

##### Kunci Determinasi:

1b-2b-3b-4b-12b-13b-14b-17b-18b-19b-20b-21b-22b-23b-24b-25b-26b-27a-28b-29b-30b-31a-32a-33b-34b-333a-334b-335a-336a-337b-338a-339b--340a-Fam 207. Zingiberaceae-1a-2b-6a- Genus Zingiber-1a-2b-6a-7b-Species:*Zingiber officinale* var *rubrum*

##### Deskripsi:

Terna berbatang semu, tinggi 30 cm sampai 1 m, rimpang bila dipotong berwarna kuning atau jingga. Daun sempit, panjang 15-23 mm, lebar 8-15 mm ; tangkai daun berbulu, panjang 2-4 mm ; bentuk lidah daun memanjang, panjang 7,5-10 mm, dan tidak berbulu; seludang agak berbulu. Perbungaan berupa malai tersembul dipermukaan tanah, berbentuk tongkat atau bundar telur yang sempit, 2,75-3 kali lebarnya, sangat tajam ; panjang malai 3,5-5 cm, lebar 1,5-1,75 cm ; gagang bunga hampir tidak berbulu, panjang 25 cm, rahis berbulu jarang ; sisik pada gagang terdapat 5-7 buah, berbentuk lanset, letaknya berdekatan atau rapat, hampir tidak berbulu, panjang sisik 3-5 cm; daun pelindung berbentuk bundar telur terbalik, bundar pada ujungnya, tidak berbulu, berwarna hijau cerah, panjang 2,5 cm, lebar 1-1,75 cm ; mahkota bunga berbentuk tabung 2-2,5 cm, helainya agak sempit, berbentuk tajam, berwarna kuning kehijauan, panjang 1,5-2,5 mm, lebar 3-3,5 mm, bibir berwarna ungu, gelap, berbintik-bintik berwarna putih kekuningan, panjang 12-15 mm ; kepala sari berwarna ungu, panjang 9 mm ; tangkai putik 2.

Jahe dibedakan menjadi 3 jenis berdasarkan ukuran, bentuk dan warna rimpangnya. Umumnya dikenal 3 varietas jahe yaitu: jahe putih, jahe emprit dan jahe merah. Jahe merah rimpangnya berwarna merah dan lebih kecil dari pada jahe putih kecil. sama seperti jahe kecil, jahe merah selalu dipanen setelah tua, dan juga memiliki kandungan minyak atsiri yang sama dengan jahe kecil, sehingga cocok untuk ramuan obat-obatan.



Gambar 1: Habitus tanaman Jahe Merah (*Zingiber officinale* var *rubrum* Theilade)

Pustaka:

1. Backer, C.A & Backuizen van den Brink. 1968. Flora of Java. Vol. 1& Vol.II. Noordhof N.V. Gronigen. The Netherland
2. Steenis, 1992. Flora Untuk Sekolah di Indonesia. Penerbit PT. Pradnya Paramita Jakarta
3. The Plant List, 2022. *Zingiber officinale*.  
<http://www.theplantlist.org/tpl1.1/search?q=Zingiber+officinale> (20 Desember 2022)
4. [https://powo.science.kew.org/results?f=accepted\\_names&q=zingiber%20officinale](https://powo.science.kew.org/results?f=accepted_names&q=zingiber%20officinale) (20 Desember 2022)
5. Centra Informasi IPTEK, 2005. TTG-Budidaya Jahe  
[http://www.iptek.net.id/ind/pd\\_tanobat/view.php?id=287](http://www.iptek.net.id/ind/pd_tanobat/view.php?id=287) (5 Maret 2014)

## Lampiran 2. Dokumentasi Pembuatan Serbuk Instan Jahe Merah



Penimbangan jahe 800 g



Penghalusan



Pemisahan filtrat



Hasil sari jahe



Penimbangan gula



Pemasakan



Pengkristalan



Pengayakan



Pengendapan 2 jam









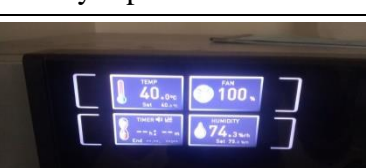





Pengendapan 4 jam











Pengendapan 6 jam

### Lampiran 3. Dokumentasi Pengujian Stabilitas

|                 |  |  |
|-----------------|--|--|
| <b>Siklus 1</b> |  <p>Penyimpanan suhu 40°C</p>   |  <p>Penyimpanan suhu 4°C</p>   |
| <b>Siklus 2</b> |  <p>Penyimpanan suhu 40°C</p>   |  <p>Penyimpanan suhu 4°C</p>   |
| <b>Siklus 3</b> |  <p>Penyimpanan suhu 40°C</p>   |  <p>Penyimpanan suhu 4°C</p>   |
| <b>Siklus 4</b> |  <p>Penyimpanan suhu 40°C</p> |  <p>Penyimpanan suhu 4°C</p> |
| <b>Siklus 5</b> |  <p>Penyimpanan suhu 40°C</p> |  <p>Penyimpanan suhu 4°C</p> |
| <b>Siklus 6</b> |  <p>Penyimpanan suhu 40°C</p> |  <p>Penyimpanan suhu 4°C</p> |

**Lampiran 4. Dokumentasi Uji Organoleptis**

| <b>Perlakuan</b>     | <b>Sebelum Pengujian Stabilitas</b>   | <b>Sesudah Pengujian Stabilitas</b>   |
|----------------------|---|---|
| Pengendapan<br>0 Jam |    |    |
| Pengendapan<br>2 Jam |    |    |
| Pengendapan<br>4 Jam |   |   |
| Pengendapan<br>6 jam |  |  |









Hasil pengujian organoleptis serbuk instan jahe merah

| <b>Pengamatan</b> | <b>R1</b>                      | <b>R2</b>       | <b>R3</b>       |
|-------------------|--------------------------------|-----------------|-----------------|
| <b>0 Jam</b>      |                                |                 |                 |
| <b>Warna</b>      | Coklat muda                    | Coklat muda     | Coklat muda     |
| <b>Bentuk</b>     | Serbuk kristal                 | Serbuk kristal  | Serbuk kristal  |
| <b>Aroma</b>      | Khas jahe                      | Khas jahe       | Khas jahe       |
| <b>Rasa</b>       | Pedas, manis dan pahit diakhir | Pedas dan manis | Pedas dan manis |
| <b>2 Jam</b>      |                                |                 |                 |
| <b>Warna</b>      | Coklat muda                    | Coklat muda     | Coklat muda     |
| <b>Bentuk</b>     | Serbuk kristal                 | Serbuk kristal  | Serbuk kristal  |
| <b>Aroma</b>      | Khas jahe                      | Khas jahe       | Khas jahe       |
| <b>Rasa</b>       | Pedas, manis dan pahit diakhir | Pedas dan manis | Pedas dan manis |
| <b>4 Jam</b>      |                                |                 |                 |
| <b>Warna</b>      | Coklat muda                    | Coklat muda     | Coklat muda     |
| <b>Bentuk</b>     | Serbuk kristal                 | Serbuk kristal  | Serbuk kristal  |
| <b>Aroma</b>      | Khas jahe                      | Khas jahe       | Khas jahe       |
| <b>Rasa</b>       | Pedas, manis dan pahit diakhir | Pedas dan manis | Pedas dan manis |
| <b>6 Jam</b>      |                                |                 |                 |
| <b>Warna</b>      | Coklat muda                    | Coklat muda     | Coklat muda     |
| <b>Bentuk</b>     | Serbuk kristal                 | Serbuk kristal  | Serbuk kristal  |
| <b>Aroma</b>      | Khas jahe                      | Khas jahe       | Khas jahe       |
| <b>Rasa</b>       | Pedas, manis dan pahit diakhir | Pedas dan manis | Pedas dan manis |

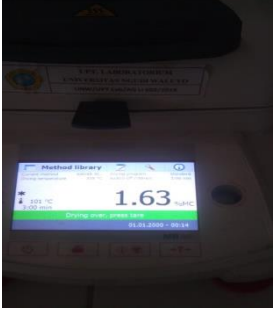









## Lampiran 5. Dokumentasi Pengujian Kadar Air Sebelum Stabilitas Replikasi

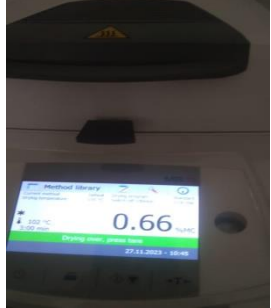
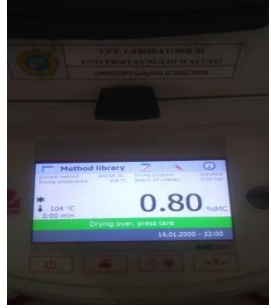






1

| Perlakuan            | Sebelum Pengujian Stabilitas  | Sesudah Pengujian Stabilitas  |
|----------------------|---|---|
| Pengendapan<br>0 Jam |    |    |
| Pengendapan<br>2 Jam |   |   |
| Pengendapan<br>4 Jam |  |  |
| Pengendapan<br>6 jam |  |  |

### Lampiran 6. Dokumentasi Pengujian Kadar Air Replikasi 2

| Perlakuan            | Sebelum Pengujian Stabilitas  | Sesudah Pengujian Stabilitas  |
|----------------------|---|---|
| Pengendapan<br>0 Jam |    |    |
| Pengendapan<br>2 Jam |   |   |
| Pengendapan<br>4 Jam |  |  |
| Pengendapan<br>6 jam |  |  |

















### Lampiran 7. Dokumentasi Pengujian Kadar Air Replikasi 3

| Perlakuan            | Sebelum Pengujian Stabilitas  | Sesudah Pengujian Stabilitas  |
|----------------------|---|---|
| Pengendapan<br>0 Jam |    |    |
| Pengendapan<br>2 Jam |   |   |
| Pengendapan<br>4 Jam |  |  |
| Pengendapan<br>6 jam |  |  |

















Hasil pengujian kadar air serbuk instan jahe merah

| Perlakuan Pengendapan | Hasil Kadar Air (%) |      |      |                  |                    |      |      |                  |
|-----------------------|---------------------|------|------|------------------|--------------------|------|------|------------------|
|                       | Sebelum Stabilitas  |      |      |                  | Sesudah Stabilitas |      |      |                  |
|                       | R1                  | R2   | R3   | $\bar{x} \pm SD$ | R1                 | R2   | R3   | $\bar{x} \pm SD$ |
| <b>0 Jam</b>          | 1,08                | 1,63 | 0,66 | 1,12±0,49        | 1,08               | 1,56 | 0,8  | 1,15±0,38        |
| <b>2 Jam</b>          | 1,26                | 1    | 0,68 | 0,98±0,29        | 1,32               | 1,22 | 0,56 | 1,03±0,41        |
| <b>4 Jam</b>          | 1,16                | 0,74 | 0,46 | 0,79±0,35        | 1,38               | 0,96 | 0,52 | 0,95±0,43        |
| <b>6 Jam</b>          | 0,96                | 0,54 | 0,30 | 0,60±0,33        | 0,94               | 0,8  | 0,66 | 0,80±0,14        |

















**Lampiran 8. Dokumentasi Pengujian Waktu Alir Replikasi 1**

| Perlakuan            | Sebelum Pengujian Stabilitas  |   | Sesudah Pengujian Stabilitas   |   |
|----------------------|---|---|--|---|
| Pengendapan<br>0 Jam |    |    |   |  |
| Pengendapan<br>2 Jam |    |    |   |  |
| Pengendapan<br>4 Jam |   |   | <br>  |   |
| Pengendapan<br>6 jam |  |  | <br> |   |

**Lampiran 9. Dokumentasi Pengujian Waktu Alir Replikasi 2**

| Perlakuan            | Sebelum Pengujian Stabilitas  |   | Sesudah Pengujian Stabilitas   |  |
|----------------------|---|---|--|--|
| Pengendapan<br>0 Jam |    |    |   |   |
| Pengendapan<br>2 Jam |   |   |    |  |
| Pengendapan<br>4 Jam |  |  | <br> |  |
| Pengendapan<br>6 jam |  |  | <br> |  |




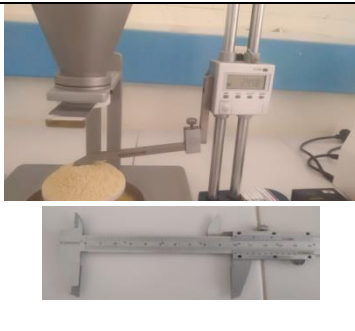
**Lampiran 10. Dokumentasi Pengujian Waktu Alir Replikasi 3**

| Perlakuan            | Sebelum Pengujian Stabilitas  |   | Sesudah Pengujian Stabilitas   |   |
|----------------------|---|---|--|---|
| Pengendapan<br>0 Jam |   |   |    |   |
| Pengendapan<br>2 Jam |  |  |   |  |
| Pengendapan<br>4 Jam |  |  | <br> |   |
| Pengendapan<br>6 jam |  |  | <br> |   |



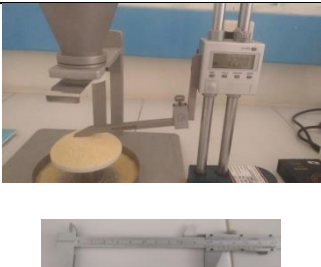
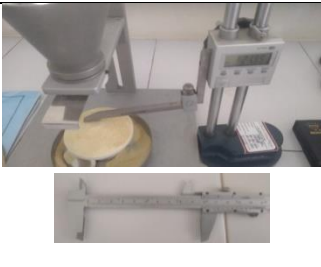
Hasil waktu alir serbuk instan jahe merah

| Perlakuan Pengendapan | Waktu Alir (detik) |      |      |                  |                    |      |      |                  |
|-----------------------|--------------------|------|------|------------------|--------------------|------|------|------------------|
|                       | Sebelum Stabilitas |      |      |                  | Sesudah Stabilitas |      |      |                  |
|                       | R1                 | R2   | R3   | $\bar{x} \pm SD$ | R1                 | R2   | R3   | $\bar{x} \pm SD$ |
| <b>0 Jam</b>          | 1,2                | 1,6  | 1,05 | 1,28±0,28        | 1,25               | 1,38 | 1,40 | 1,34±0,08        |
| <b>2 Jam</b>          | 1,1                | 1,4  | 1,20 | 1,23±0,15        | 1,1                | 1,60 | 1,20 | 1,30±0,26        |
| <b>4 Jam</b>          | 1,25               | 1,2  | 1,1  | 1,15±13          | 1,20               | 1,50 | 1,10 | 1,27±0,21        |
| <b>6 Jam</b>          | 1                  | 1,15 | 1,15 | 1,10±10          | 1,20               | 1,20 | 1    | 1,13±0,12        |




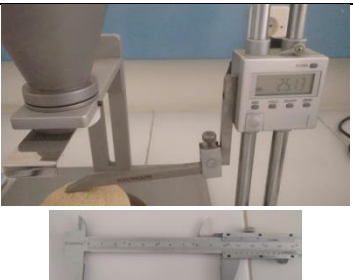
**Lampiran 11. Dokumentasi Hasil Pengujian Sudut Diam Replikasi 1**





| Perlakuan         | Sebelum Pengujian Stabilitas  | Setelah Pengujian Stabilitas  |
|-------------------|---|---|
| Pengendapan 0 Jam |  |   |
| Pengendapan 2 Jam |  |  |





|                              |   |   |
|------------------------------|---|---|
| <p>Pengendapan<br/>4 Jam</p> |  |  |
| <p>Pengendapan<br/>6 jam</p> |  |  |

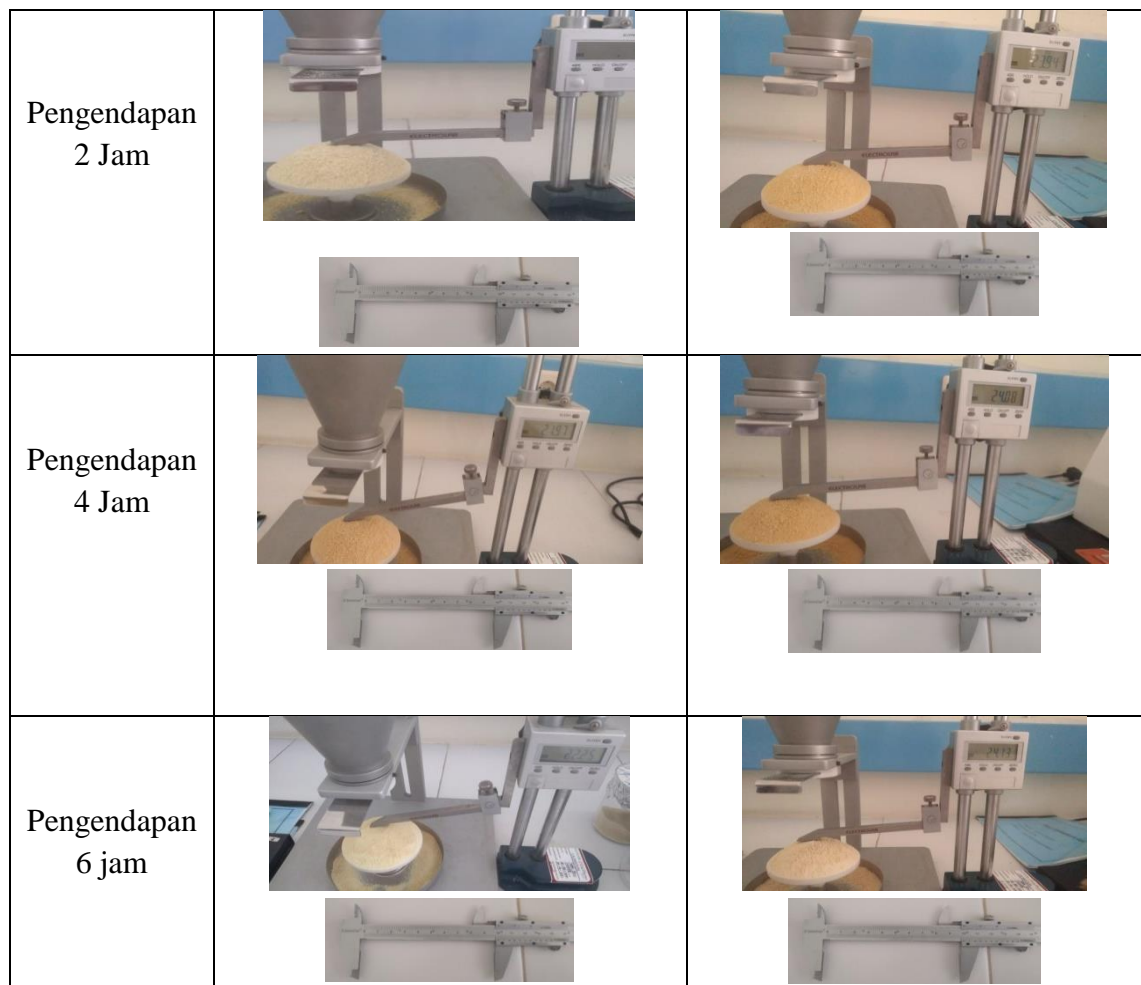
**Lampiran 12. Dokumentasi Pengujian Sudut Diam Replikasi 2**

| <p><b>Perlakuan</b></p>      | <p><b>Sebelum Pengujian Stabilitas</b></p>  | <p><b>Setelah Pengujian Stabilitas</b></p>  |
|------------------------------|---|---|
| <p>Pengendapan<br/>0 Jam</p> |  |  |
| <p>Pengendapan<br/>2 Jam</p> |  |  |

|                              |   |   |
|------------------------------|---|---|
| <p>Pengendapan<br/>4 Jam</p> |  |  |
| <p>Pengendapan<br/>6 jam</p> |  |  |

**Lampiran 13. Dokumentasi Pengujian Sudut Diam Replikasi 3**



| <p><b>Perlakuan</b></p>      | <p><b>Sebelum Pengujian Stabilitas</b></p>  | <p><b>Setelah Pengujian Stabilitas</b></p>  |
|------------------------------|---|---|
| <p>Pengendapan<br/>0 Jam</p> |  |  |

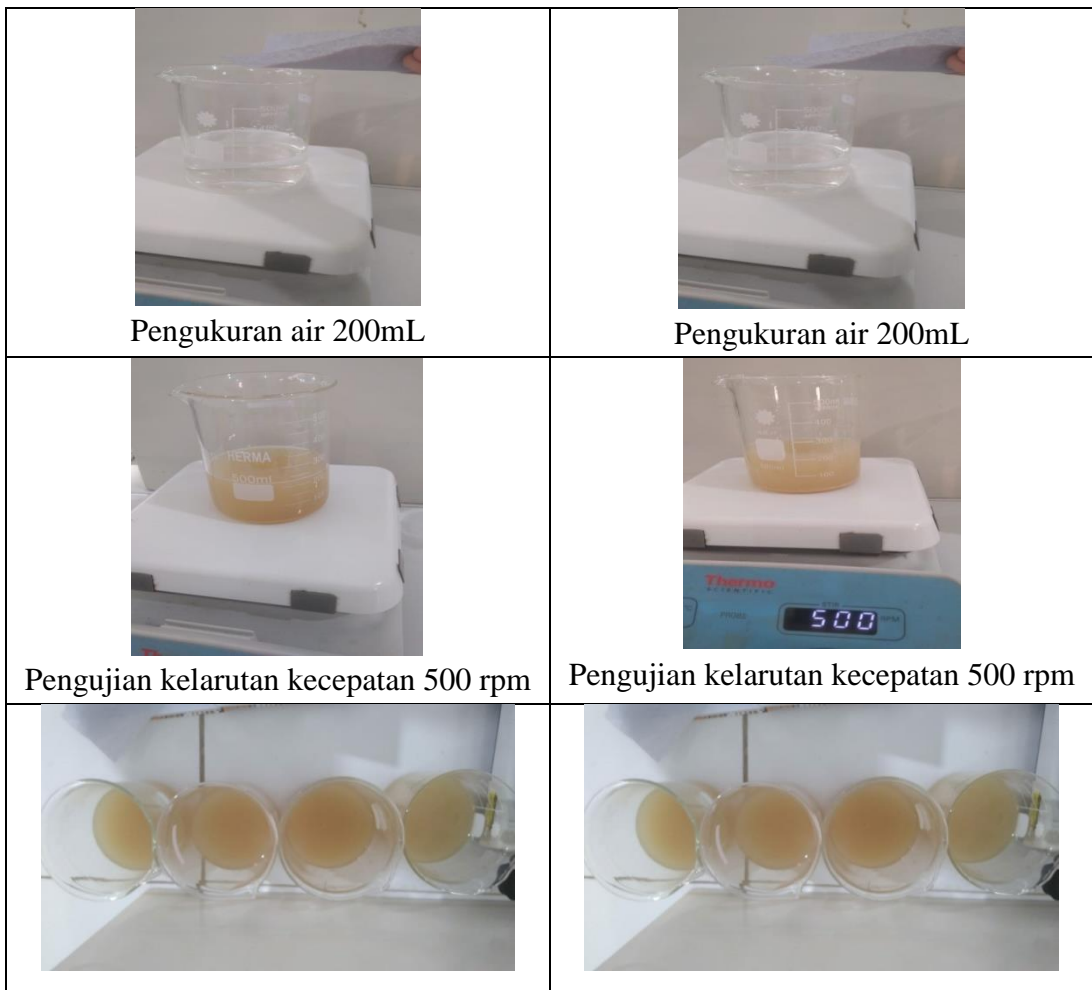


Hasil pengujian sudut diam serbuk instan jahe merah

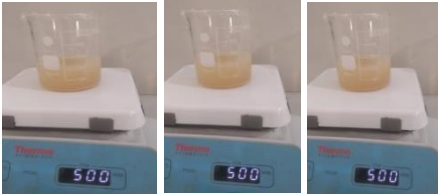

| Perlakuan<br>Pengendapan | Sudut Diam (°)     |       |       |                  |                    |       |       |                  |
|--------------------------|--------------------|-------|-------|------------------|--------------------|-------|-------|------------------|
|                          | Sebelum Stabilitas |       |       |                  | Sesudah Stabilitas |       |       |                  |
|                          | R1                 | R2    | R3    | $\bar{x} \pm SD$ | R1                 | R2    | R3    | $\bar{x} \pm SD$ |
| <b>0 Jam</b>             | 24,88              | 23,99 | 24,77 | 24,55±0,49       | 26,45              | 27,30 | 25,63 | 25,63±0,84       |
| <b>2 Jam</b>             | 24,99              | 23,50 | 25,07 | 24,52±0,88       | 26,09              | 26,68 | 25,59 | 26,12±0,55       |
| <b>4 Jam</b>             | 23,75              | 22,25 | 23,99 | 23,33±0,94       | 24,77              | 25,84 | 25,72 | 25,44±0,59       |
| <b>6 Jam</b>             | 23,66              | 22,36 | 23,72 | 23,25±0,77       | 23,74              | 26,01 | 25,76 | 25,17±1,24       |








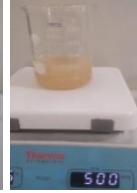


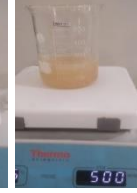
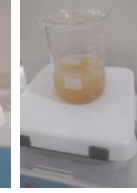






**Lampiran 14. Dokumentasi Proses Pengujian Waktu Larut**

| <b>Sebelum Pengujian Stabilitas</b>   | <b>Setelah Pengujian Stabilitas</b>   |
|---|---|
|  <p data-bbox="368 1966 756 2004">Penimbangan serbuk 20 gram</p> |  <p data-bbox="914 1966 1302 2004">Penimbangan serbuk 20 gram</p> |



**Lampiran 15. Dokumentasi Hasil Pengujian Waktu Larut**

| Perlakuan            | Sebelum Pengujian Stabilitas  | Sesudah Pengujian Stabilitas   |
|----------------------|---|--|
| Pengendapan<br>0 Jam | <br>05:04.49    05:24.33    05:12.55 | <br>05:12.55    03:11.80    02:23.66 |

|                      |  |  |  |   |  |  |
|----------------------|--|--|--|---|--|--|
| Pengendapan<br>2 Jam | <br>04:08.77  | <br>03:06.34  | <br>04:02.61  | <br>04:04.71  | <br>01:55.08  | <br>02:21.78  |
| Pengendapan<br>4 Jam | <br>04:41.21  | <br>03:12.33  | <br>02:08.75  | <br>03:21.49  | <br>01:52.31  | <br>02:08.75  |
| Pengendapan<br>6 jam | <br>04:08.77 | <br>03:06.34 | <br>02:02.37 | <br>02:32.29 | <br>01:14.13 | <br>02:04.44 |

Hasil pengujian waktu larut serbuk instan jahe merah

| Perlakuan<br>Pengendapan | Waktu Larut (Menit) |      |      |                  |                    |      |      |                  |
|--------------------------|---------------------|------|------|------------------|--------------------|------|------|------------------|
|                          | Sebelum Stabilitas  |      |      |                  | Sesudah Stabilitas |      |      |                  |
|                          | R1                  | R2   | R3   | $\bar{x} \pm SD$ | R1                 | R2   | R3   | $\bar{x} \pm SD$ |
| <b>0 Jam</b>             | 5.04                | 5.24 | 5.12 | 5.13±0,10        | 5,12               | 3,11 | 2,23 | 3,49±1,21        |
| <b>2 Jam</b>             | 4.08                | 3.06 | 4.02 | 4.12±0,57        | 4,04               | 1,55 | 2,21 | 2,60±1,05        |
| <b>4 Jam</b>             | 4.41                | 3.12 | 2.08 | 3.20±1,17        | 3,21               | 1,52 | 2,08 | 2,27±0,70        |
| <b>6 Jam</b>             | 4.08                | 3.06 | 2.02 | 3.05±1,03        | 2,32               | 1,14 | 2,04 | 1,83±0,50        |

Lampiran 16. Dokumentasi Pengujian Ukuran Partikel Serbuk

Ukuran Partikel



Hasil pengujian ukuran partikel serbuk instan jahe merah sebelum stabilitas

| Ukuran       | R1 % | R2 % | R3 % | Rata-rata |
|--------------|------|------|------|-----------|
| <b>0 Jam</b> |      |      |      |           |

|                |       |       |       |       |
|----------------|-------|-------|-------|-------|
| <b>250 µm</b>  | 22,44 | 16,42 | 13,52 | 17,46 |
| <b>425 µm</b>  | 31,55 | 26,12 | 26,58 | 28,08 |
| <b>840 µm</b>  | 15,15 | 20,45 | 19,86 | 18,49 |
| <b>1,18 mm</b> | 9,36  | 15,87 | 15,12 | 13,45 |
| <b>2,36 mm</b> | 0,070 | 0,75  | 0,29  | 0,37  |
| <b>2 Jam</b>   |       |       |       |       |
| <b>250 µm</b>  | 26,88 | 22,76 | 14,45 | 21,36 |
| <b>425 µm</b>  | 31,97 | 27,89 | 29,13 | 29,66 |
| <b>840 µm</b>  | 14,17 | 16,35 | 21,97 | 17,50 |
| <b>1,18 mm</b> | 9,60  | 10,15 | 16,07 | 11,94 |
| <b>2,36 mm</b> | 0,10  | 0     | 0     | 0,03  |
| <b>4 Jam</b>   |       |       |       |       |
| <b>250 µm</b>  | 12,90 | 22,76 | 21,21 | 18,96 |
| <b>425 µm</b>  | 24,17 | 27,89 | 27,63 | 26,56 |
| <b>840 µm</b>  | 18,21 | 16,35 | 20,72 | 18,43 |
| <b>1,18 mm</b> | 22,61 | 10,15 | 16,37 | 16,38 |
| <b>2,36 mm</b> | 0,70  | 0     | 0     | 0,23  |
| <b>6 Jam</b>   |       |       |       |       |
| <b>250 µm</b>  | 14,41 | 26,50 | 13,52 | 18,14 |
| <b>425 µm</b>  | 21,77 | 31,15 | 26,58 | 26,50 |
| <b>840 µm</b>  | 18,43 | 13,74 | 19,86 | 17,34 |
| <b>1,18 mm</b> | 25,14 | 8,95  | 15,12 | 11,01 |
| <b>2,36 mm</b> | 0,54  | 0     | 0,29  | 0,28  |

Hasil pengujian ukuran partikel serbuk instan jahe merah sebelum stabilitas

| <b>Ukuran</b> | <b>R1 %</b> | <b>R2 %</b> | <b>R3 %</b> | <b>Rata-rata</b> |
|---------------|-------------|-------------|-------------|------------------|
| <b>0 Jam</b>  |             |             |             |                  |



|                |       |       |       |       |
|----------------|-------|-------|-------|-------|
| <b>250 µm</b>  | 21,95 | 24,37 | 16,40 | 20,91 |
| <b>425 µm</b>  | 30,29 | 28,45 | 30,73 | 29,82 |
| <b>840 µm</b>  | 15,15 | 13,58 | 20,24 | 16,32 |
| <b>1,18 mm</b> | 9,88  | 8,94  | 12,90 | 10,57 |
| <b>2,36 mm</b> | 0,14  | 0     | 0     | 0,05  |
| <b>2 Jam</b>   |       |       |       |       |
| <b>250 µm</b>  | 17,90 | 30,57 | 20,61 | 23,03 |
| <b>425 µm</b>  | 25,54 | 31,55 | 39,74 | 32,28 |
| <b>840 µm</b>  | 17,36 | 10,74 | 17,39 | 15,16 |
| <b>1,18 mm</b> | 21,21 | 5,13  | 9,87  | 12,07 |
| <b>2,36 mm</b> | 0,64  | 0     | 0     | 0,21  |
| <b>4 Jam</b>   |       |       |       |       |
| <b>250 µm</b>  | 28,49 | 30,13 | 24,87 | 27,83 |
| <b>425 µm</b>  | 36,03 | 30,26 | 41,43 | 35,91 |
| <b>840 µm</b>  | 14,49 | 11,67 | 17,12 | 14,43 |
| <b>1,18 mm</b> | 6,86  | 6,48  | 5     | 6,11  |
| <b>2,36 mm</b> | 0     | 0     | 0     | 0,00  |
| <b>6 Jam</b>   |       |       |       |       |
| <b>250 µm</b>  | 28,69 | 36,23 | 17,97 | 27,63 |
| <b>425 µm</b>  | 39,09 | 23,76 | 44,25 | 35,70 |
| <b>840 µm</b>  | 12,44 | 9,23  | 20,80 | 14,16 |
| <b>1,18 mm</b> | 6,90  | 4,64  | 8,64  | 6,11  |
| <b>2,36 mm</b> | 0     | 0     | 0     | 0,00  |

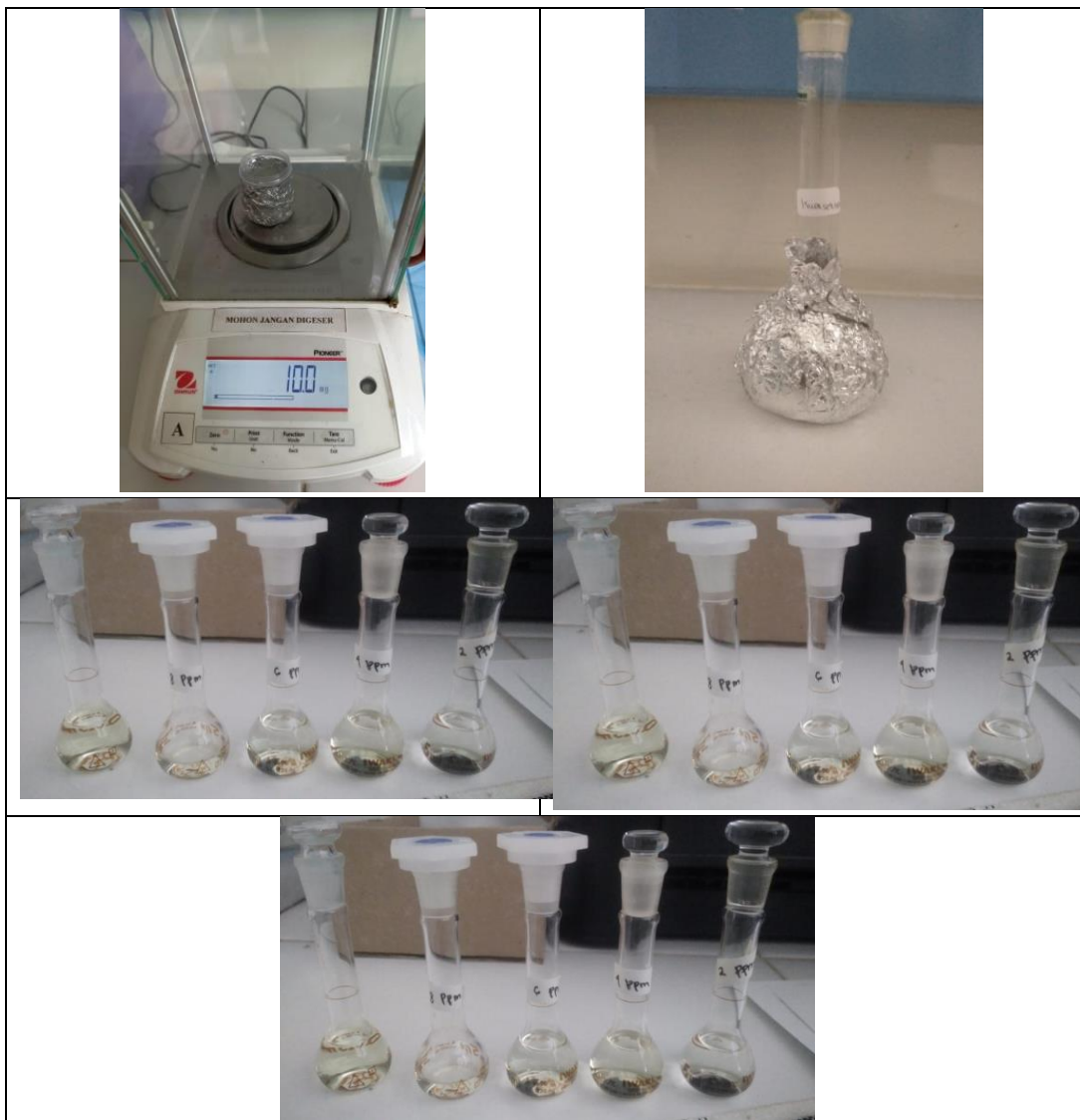
**Lampiran 17. Dokumentasi Preparasi Larutan Induk**

**Preparasi Larutan Induk**



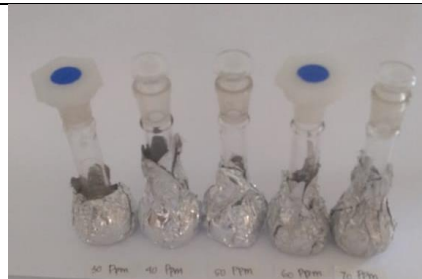
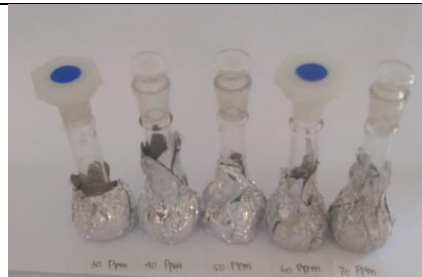
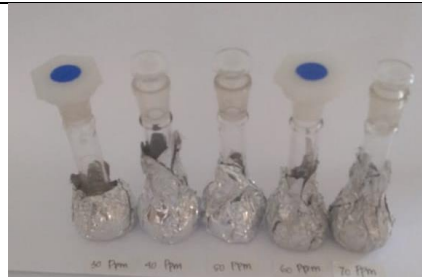
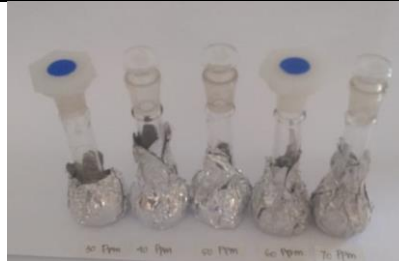
**Lampiran 18. Dokumentasi Preparasi Baku Pembandaing *Quercetin***

**Preparasi Baku Pembandaing *Quercetin***



**Lampiran 19. Dokumentasi Preparasi Sampel Serbuk Instan Jahe Merah**

**Preparasi Sampel Serbuk Instan Jahe Merah**

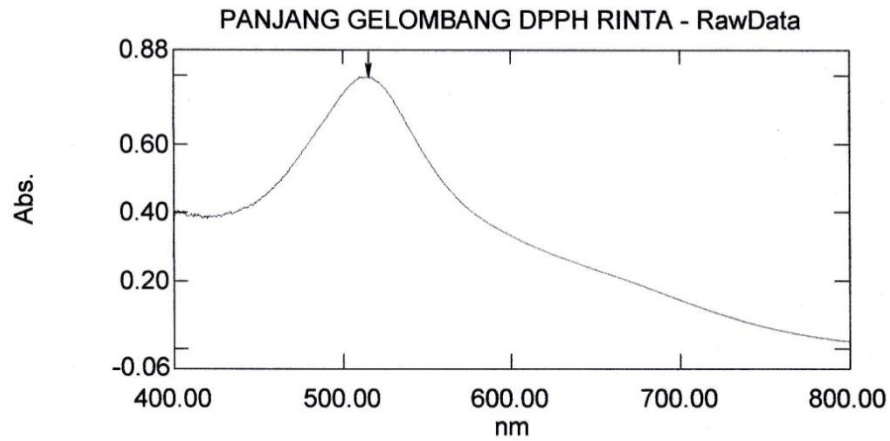


## Lampiran 20. Panjang Gelombang DPPH

### Spectrum Peak Pick

Print Date : 12/04/2023 12:33:24 PM

File Name: PANJANG GELOMBANG DPPH RINTA - RawData



#### [Summary]

##### Data Information

Data is: Measurement Data  
Data Set Name: RawData  
Sample Name: DPPH  
Sample ID:  
Option:  
Analyst:  
Date/Time: 12/04/2023 12:31:15 PM  
Comments:  
Parameter File Name: D:\SKRIPSI 2023\PANJANG  
GELOMBANG DPPH 2.vspm  
Report File Name:

##### Software Information

Software Name: LabSolutions UV-Vis  
Version: 1.12

##### Instrument Information

Instrument Name: Spektro  
Instrument Type: UV-1900 Series  
Model (S/N): 1900 (A12536082097)

#### [Peak Pick Table]

Threshold: 0.001000

Number of Points: 4

| No. | P/V | Wavelength nm. | Abs.  | Description |
|-----|-----|----------------|-------|-------------|
| 1   | ⬆   | 516.0          | 0.799 |             |

## Lampiran 21. *Operating Time*

### Time course Data Print Table

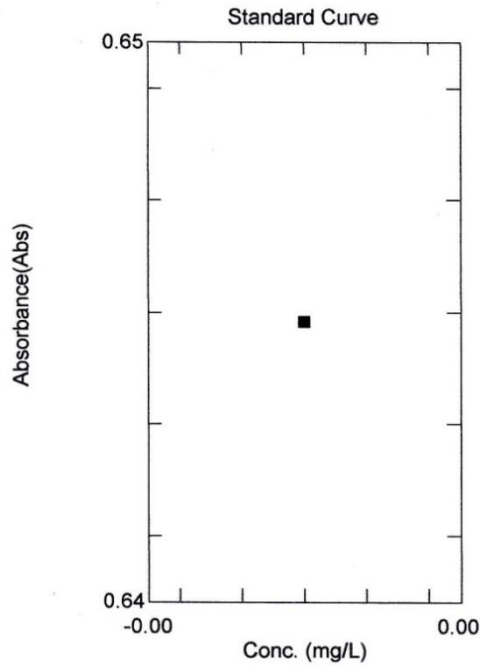
Print Date : 12/05/2023 09:40:25 AM

| Time (min.) | OT DPPH - |
|-------------|-----------|
| 0.0         | 0.801     |
| 1.0         | 0.793     |
| 2.0         | 0.795     |
| 3.0         | 0.792     |
| 4.0         | 0.794     |
| 5.0         | 0.795     |
| 6.0         | 0.797     |
| 7.0         | 0.792     |
| 8.0         | 0.794     |
| 9.0         | 0.796     |
| 10.0        | 0.792     |
| 11.0        | 0.796     |
| 12.0        | 0.791     |
| 13.0        | 0.788     |
| 14.0        | 0.789     |
| 15.0        | 0.794     |
| 16.0        | 0.793     |
| 17.0        | 0.795     |
| 18.0        | 0.795     |
| 19.0        | 0.795     |
| 20.0        | 0.795     |
| 21.0        | 0.792     |
| 22.0        | 0.788     |
| 23.0        | 0.794     |
| 24.0        | 0.789     |
| 25.0        | 0.788     |
| 26.0        | 0.791     |
| 27.0        | 0.790     |
| 28.0        | 0.791     |
| 29.0        | 0.791     |
| 30.0        | 0.793     |

Lampiran 22. Absorbansi Blanko DPPH

Quantitation Standard Table

Print Date : 12/05/2023 01:15:59 PM



[Summary]

File Information  
 Filename: C:\UVVis-Data\DataFile\_231205\_095524.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/05/2023 12:55:03 PM  
 Comments:  
 Report File Name:

[Measurement Parameters]

[Wavelengths] Ac  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)  
 [Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

[Standard]

r2 = \*\*\*\*\*

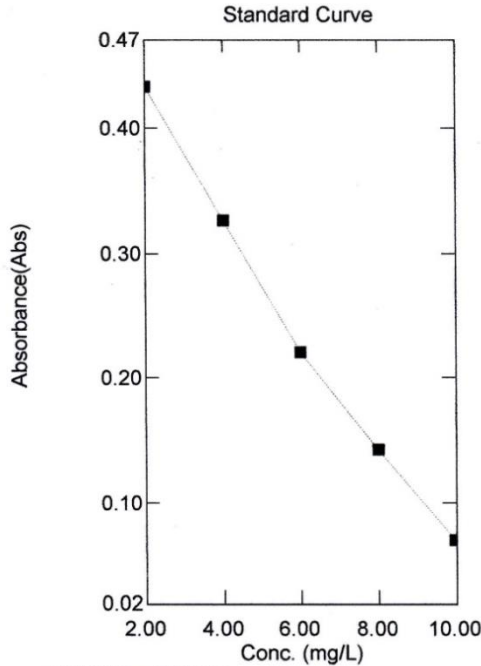
[Standard Table]

|   | Sample Name | Sam | Opt | Type | Ex | Conc  | WL516 | Result | Wgt.Facto | Com |
|---|-------------|-----|-----|------|----|-------|-------|--------|-----------|-----|
| 1 | Blangko     |     |     | STD  |    | 0.000 | 0.648 | 0.648  | 1.00      |     |

## Lampiran 23. Kontrol Positif *Quercetin* Replikasi 1

### Quantitation Standard Table

Print Date : 12/08/2023 11:34:14 AM



#### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\Baku pembanding kuersetin.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/08/2023 11:33:23 AM  
 Comments:  
 Report File Name:

#### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516 Result  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

#### [Standard]

#### [Standard Table]

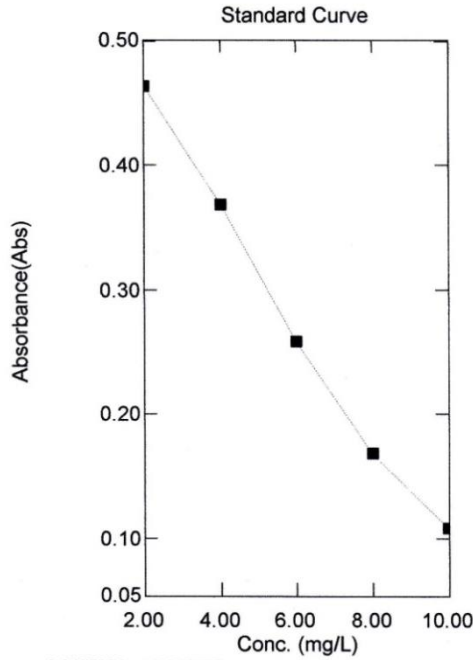
|     | Sample Name      | Sam Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|-----|------------------|---------|------|----|--------|-------|--------|-----------|-----|
| 1   | kuersetin 2 ppm  |         | STD  |    | 2.000  | 0.433 | 0.433  | 1.00      |     |
| 2   | kuersetin 4 ppm  |         | STD  |    | 4.000  | 0.326 | 0.326  | 1.00      |     |
| 3   | kuersetin 6 ppm  |         | STD  |    | 6.000  | 0.221 | 0.221  | 1.00      |     |
| 4   | kuersetin 8 ppm  |         | STD  |    | 8.000  | 0.143 | 0.143  | 1.00      |     |
| 5   | kuersetin 10 ppm |         | STD  |    | 10.000 | 0.070 | 0.070  | 1.00      |     |
| 6 * |                  |         | STD  |    |        |       | *****  | 1.00      |     |



## Lampiran 24. Kontrol Positif *Quercetin* Replikasi 2

### Quantitation Standard Table

Print Date : 12/08/2023 12:30:29 PM



$$y = -0.0455826x + 0.546976$$

$$r^2 = 0.99043$$

#### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\Baku  
 pembanding kuersetin replikasi 2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING  
 KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/08/2023 12:28:59 PM  
 Comments:  
 Report File Name:

#### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample  
 Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value  
 = K1 \*  
 Concentration +  
 K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

#### [Standard]

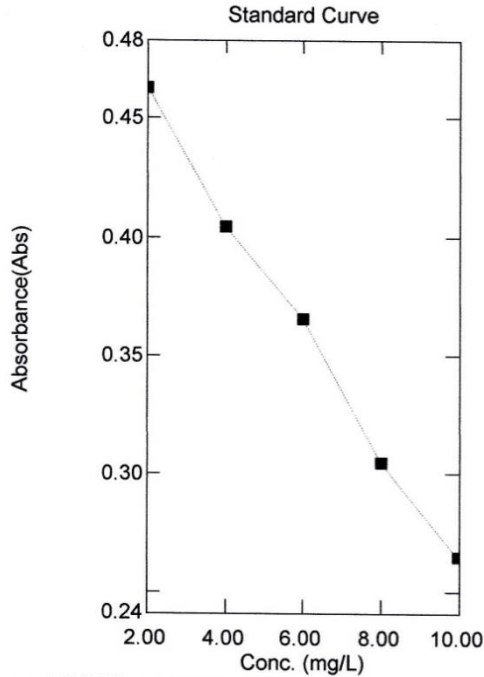
#### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Kuersetin 2 ppm  |     |     | STD  |    | 2.000  | 0.464 | 0.464  | 1.00      |     |
| 2 | Kuersetin 4 ppm  |     |     | STD  |    | 4.000  | 0.369 | 0.369  | 1.00      |     |
| 3 | Kuersetin 6 ppm  |     |     | STD  |    | 6.000  | 0.258 | 0.258  | 1.00      |     |
| 4 | Kuersetin 8 ppm  |     |     | STD  |    | 8.000  | 0.168 | 0.168  | 1.00      |     |
| 5 | Kuersetin 10 ppm |     |     | STD  |    | 10.000 | 0.108 | 0.108  | 1.00      |     |

## Lampiran 25. Kontrol Positif *Quercetin* Replikasi 3

### Quantitation Standard Table

Print Date : 12/21/2023 12:33:47 PM



$$y = -0.0247971x + 0.509119$$

$$r^2 = 0.99546$$

#### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\Kuersetin Replikasi 3..vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/21/2023 12:32:18 PM  
 Comments:  
 Report File Name:

#### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

#### [Standard]

#### [Standard Table]

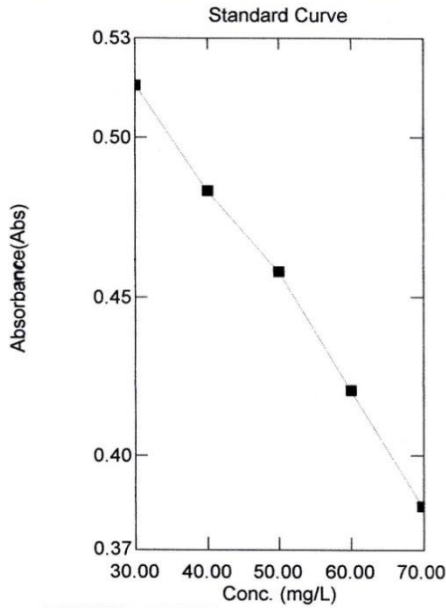
|   | Sample Name         | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|---------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Kuersetin R3 2 ppm  |     |     | STD  |    | 2.000  | 0.463 | 0.463  | 1.00      |     |
| 2 | Kuersetin R3 4 ppm  |     |     | STD  |    | 4.000  | 0.404 | 0.404  | 1.00      |     |
| 3 | Kuersetin R3 6 ppm  |     |     | STD  |    | 6.000  | 0.365 | 0.365  | 1.00      |     |
| 4 | Kuersetin R3 8 ppm  |     |     | STD  |    | 8.000  | 0.305 | 0.305  | 1.00      |     |
| 5 | Kuersetin R3 10 ppm |     |     | STD  |    | 10.000 | 0.264 | 0.264  | 1.00      |     |

## Lampiran 26. Hasil Absorbansi Sampel Serbuk Instan Jahe Merah Sebelum Stabilitas

Sampel pengendapan 0 jam replikasi 1

### Quantitation Standard Table

Print Date : 12/20/2023 01:41:42 PM



#### [Summary]

File Information  
 Filename: C:\UVVis-Data\Data\Sampel 1 Replikasi 1\_231220\_134015.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 11:15:38 AM  
 Comments:  
 Report File Name:

#### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516 Result  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

#### [Standard]

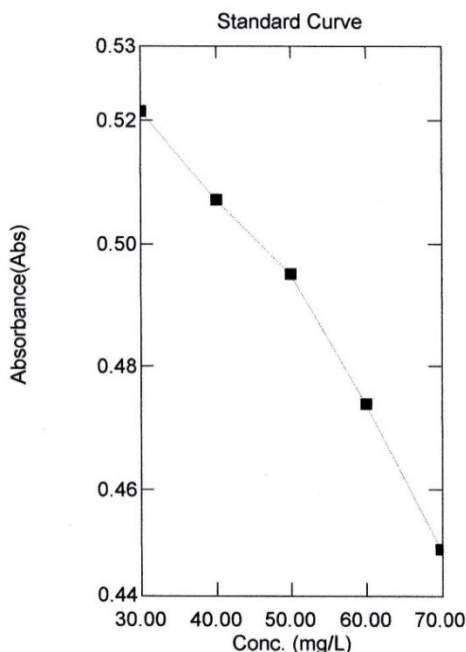
#### [Standard Table]

|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel1 R1 30 ppm |     |     | STD  |    | 30.000 | 0.516 | 0.516  | 1.00      |     |
| 2 | Sampel1 R1 40 ppm |     |     | STD  |    | 40.000 | 0.483 | 0.483  | 1.00      |     |
| 3 | Sampel1 R1 50 ppm |     |     | STD  |    | 50.000 | 0.458 | 0.458  | 1.00      |     |
| 4 | Sampel1 R1 60 ppm |     |     | STD  |    | 60.000 | 0.421 | 0.421  | 1.00      |     |
| 5 | Sampel1 R1 70 ppm |     |     | STD  |    | 70.000 | 0.384 | 0.384  | 1.00      |     |

Sampel pengendapan 0 jam replikasi 2

## Quantitation Standard Table

Print Date : 12/20/2023 01:42:41 PM



$y = -0.00175003x + 0.577025$   
 $r^2 = 0.98063$

### [Standard Table]

|   | Sample Name       | Sam Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|---------|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel1 R2 30 ppm |         | STD  |    | 30.000 | 0.521 | 0.521  | 1.00      |     |
| 2 | Sampel1 R2 40 ppm |         | STD  |    | 40.000 | 0.507 | 0.507  | 1.00      |     |
| 3 | Sampe1 R2 50 ppm  |         | STD  |    | 50.000 | 0.495 | 0.495  | 1.00      |     |
| 4 | Sampel1 R2 60 ppm |         | STD  |    | 60.000 | 0.474 | 0.474  | 1.00      |     |
| 5 | Sampel1 R2 70 ppm |         | STD  |    | 70.000 | 0.450 | 0.450  | 1.00      |     |

### [Summary]

**File Information**  
 Filename: D:\SKRIPSI 2023\RINTAIRINTA SAMPEL\Sampel 1\Sampel1 R2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 11:55:14 AM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

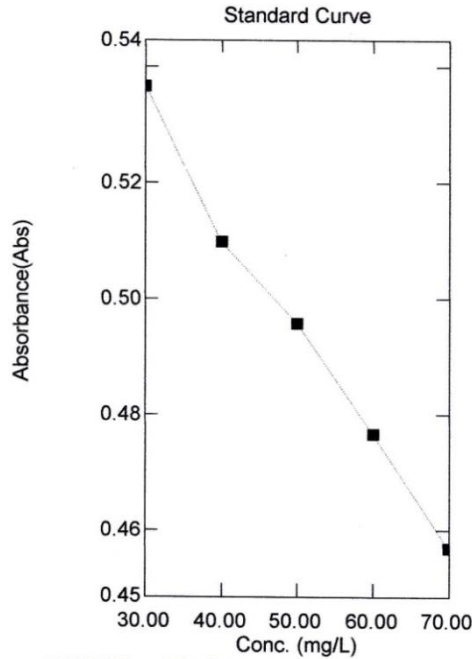
**[Wavelengths]**  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

**[Calibration Curve]**  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

## Quantitation Standard Table

Print Date : 12/20/2023 01:43:13 PM



### [Summary]

File Information  
 Filename: C:\UVVis-Data\Data\Sampel 1  
 Replikasi 3\_231220\_134301.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING  
 KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 12:09:38 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm) Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample  
 Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value  
 = K1 \*  
 Concentration +  
 K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

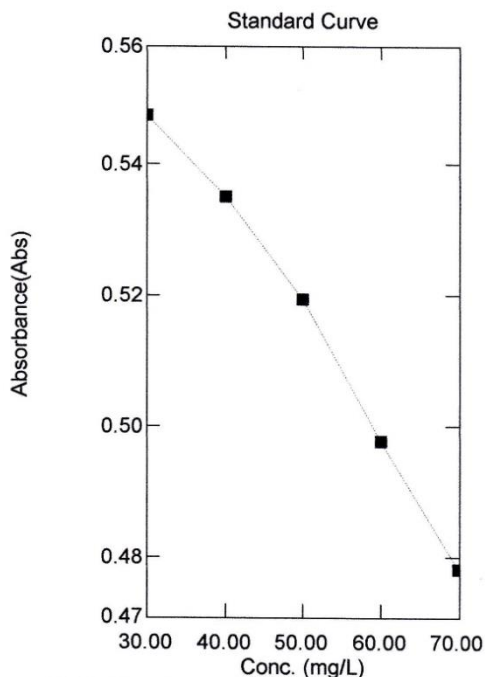
### [Standard Table]

|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel1 R3 30 ppm |     |     | STD  |    | 30.000 | 0.537 | 0.537  | 1.00      |     |
| 2 | Sampel1 R3 40 ppm |     |     | STD  |    | 40.000 | 0.510 | 0.510  | 1.00      |     |
| 3 | Sampel1 R3 50 ppm |     |     | STD  |    | 50.000 | 0.496 | 0.496  | 1.00      |     |
| 4 | Sampel1 R3 60 ppm |     |     | STD  |    | 60.000 | 0.477 | 0.477  | 1.00      |     |
| 5 | Sampel1 R3 70 ppm |     |     | STD  |    | 70.000 | 0.457 | 0.457  | 1.00      |     |

Sampel Pengendapan 2 Jam Replikasi 1

## Quantitation Standard Table

Print Date : 12/20/2023 01:43:46 PM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\RINTA SAMPEL\Sampel 2\Sampel2 Replikasi 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 12:22:28 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

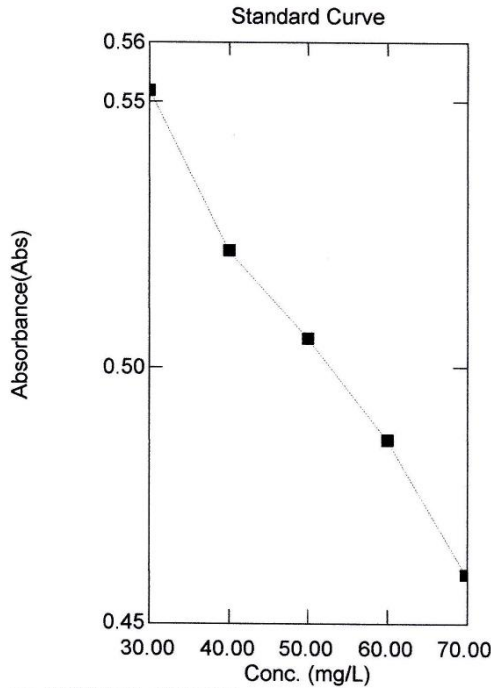
### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel2 R1 30ppm |     |     | STD  |    | 30.000 | 0.547 | 0.547  | 1.00      |     |
| 2 | Sampel2 R1 40ppm |     |     | STD  |    | 40.000 | 0.535 | 0.535  | 1.00      |     |
| 3 | Sampel2 R1 50ppm |     |     | STD  |    | 50.000 | 0.519 | 0.519  | 1.00      |     |
| 4 | Sampel2 R1 60ppm |     |     | STD  |    | 60.000 | 0.498 | 0.498  | 1.00      |     |
| 5 | Sampel2 R1 70ppm |     |     | STD  |    | 70.000 | 0.478 | 0.478  | 1.00      |     |

Sampel Pengendapan 2 Jam Replikasi 2

## Quantitation Standard Table

Print Date : 12/22/2023 12:07:45 PM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 2\Sampel 2 Replikasi 2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 12:07:24 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value =  $K1 * \text{Concentration} + K0$

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

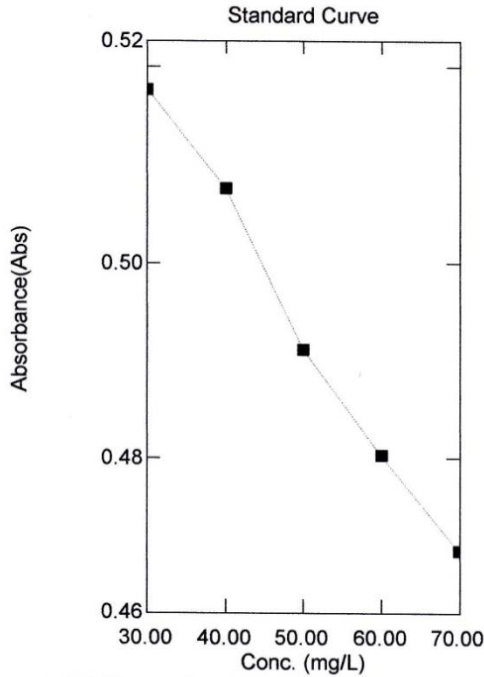
### [Standard Table]

|   | Sample Name      | Sam Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|---------|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel2 R2 30ppm |         | STD  |    | 30.000 | 0.552 | 0.552  | 1.00      |     |
| 2 | Sampel2 R2 40ppm |         | STD  |    | 40.000 | 0.522 | 0.522  | 1.00      |     |
| 3 | Sampel2 R2 50ppm |         | STD  |    | 50.000 | 0.505 | 0.505  | 1.00      |     |
| 4 | Sampel2 R2 60ppm |         | STD  |    | 60.000 | 0.486 | 0.486  | 1.00      |     |
| 5 | Sampel2 R2 70ppm |         | STD  |    | 70.000 | 0.461 | 0.461  | 1.00      |     |

Sampel Pengendapan 2 Jam Replikasi 3

## Quantitation Standard Table

Print Date : 12/20/2023 01:44:37 PM



$y = -0.00121826x + 0.554364$   
 $r^2 = 0.99186$

[Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel2 R3 30ppm |     |     | STD  |    | 30.000 | 0.518 | 0.518  | 1.00      |     |
| 2 | Sampel2 R3 40ppm |     |     | STD  |    | 40.000 | 0.508 | 0.508  | 1.00      |     |
| 3 | Sampel2 R3 50ppm |     |     | STD  |    | 50.000 | 0.491 | 0.491  | 1.00      |     |
| 4 | Sampel2 R3 60ppm |     |     | STD  |    | 60.000 | 0.480 | 0.480  | 1.00      |     |
| 6 | Sampel2 R3 70ppm |     |     | STD  |    | 70.000 | 0.470 | 0.470  | 1.00      |     |

[Summary]

**File Information**  
 Filename: D:\SKRIPSI 2023\IRINTA\IRINTA SAMPEL\Sampel 2\Sampel 2 Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 01:11:05 PM  
 Comments:  
 Report File Name:

[Measurement Parameters]

**[Wavelengths]**  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

**[Calibration Curve]**  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

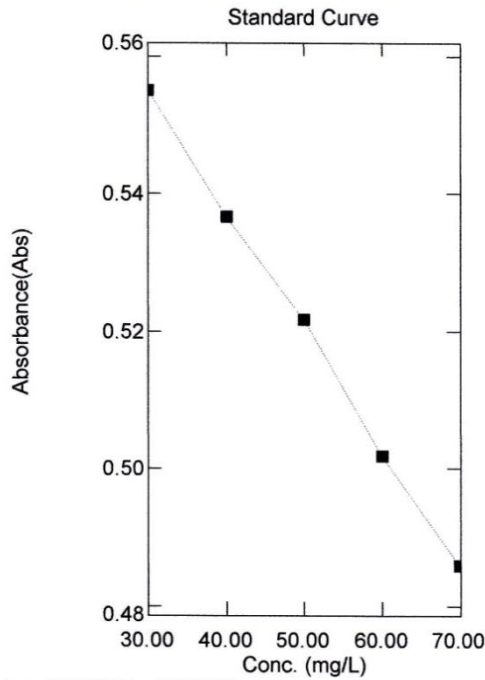
[Standard]



Sampel Pengendapan 4 Jam Replikasi 1

## Quantitation Standard Table

Print Date : 12/20/2023 01:45:12 PM



$y = -0.00173141x + 0.606789$   
 $r^2 = 0.99863$

### [Summary]

**File Information**  
 Filename: D:\SKRIPSI 2023\RINTA\RINTA SAMPEL\Sampel 3\Sampel 3 Replikasi 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 01:32:41 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

**[Wavelengths]**  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

**[Calibration Curve]**  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method:  $1.0000 * WL516$   
 Column Name: Result  
 Calibration Curve Formula: Calculated Value =  $K1 * Concentration + K0$

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

[Standard]

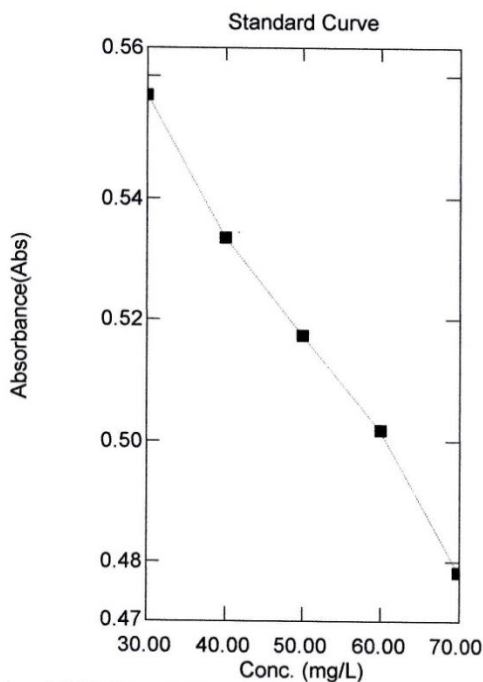
### [Standard Table]

|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel3 R1 30 ppm |     |     | STD  |    | 30.000 | 0.555 | 0.555  | 1.00      |     |
| 2 | Sampel3 R1 40 ppm |     |     | STD  |    | 40.000 | 0.537 | 0.537  | 1.00      |     |
| 3 | Sampel3 R1 50 ppm |     |     | STD  |    | 50.000 | 0.522 | 0.522  | 1.00      |     |
| 4 | Sampel3 R1 60 ppm |     |     | STD  |    | 60.000 | 0.502 | 0.502  | 1.00      |     |
| 5 | Sampel3 R1 70 ppm |     |     | STD  |    | 70.000 | 0.486 | 0.486  | 1.00      |     |

Sampel Pengendapan 4 Jam Replikasi 2

## Quantitation Standard Table

Print Date : 12/20/2023 01:46:09 PM



$y = -0.00188919x + 0.612025$   
 $r^2 = 0.99385$

[Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel3 R2 30ppm |     |     | STD  |    | 30.000 | 0.557 | 0.557  | 1.00      |     |
| 2 | Sampel3 R2 40ppm |     |     | STD  |    | 40.000 | 0.534 | 0.534  | 1.00      |     |
| 3 | Sampel3 R2 50ppm |     |     | STD  |    | 50.000 | 0.517 | 0.517  | 1.00      |     |
| 4 | Sampel3 R2 60ppm |     |     | STD  |    | 60.000 | 0.502 | 0.502  | 1.00      |     |
| 5 | Sampel3 R2 70ppm |     |     | STD  |    | 70.000 | 0.478 | 0.478  | 1.00      |     |

[Summary]

File Information  
 Filename: D:\SKRIPSI 2023\IRINTAIRINTA SAMPEL\Sampel 3\Sampel 3 Replikasi 2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 01:41:12 PM  
 Comments:  
 Report File Name:

[Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

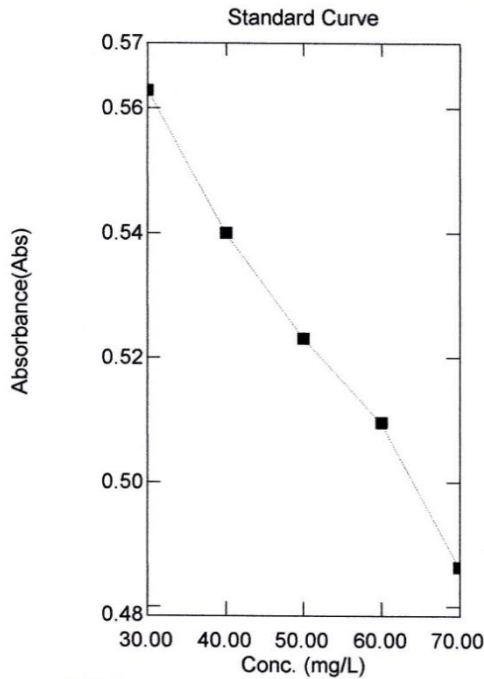
Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

[Standard]

Sampel Pengendapan 4 Jam Replikasi 3

## Quantitation Standard Table

Print Date : 12/20/2023 01:46:41 PM



$y = -0.00183731x + 0.616188$   
 $r^2 = 0.99239$

### [Summary]

**File Information**  
 Filename: D:\SKRIPSI 2023\RIINTA\RIINTA SAMPEL\Sampel 3\Sampel 3 Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 01:47:15 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

**[Wavelengths]**  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

**[Calibration Curve]**  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method:  $1.0000 * WL516$   
 Column Name: Result  
 Calibration Curve Formula: Calculated Value =  $K1 * Concentration + K0$

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

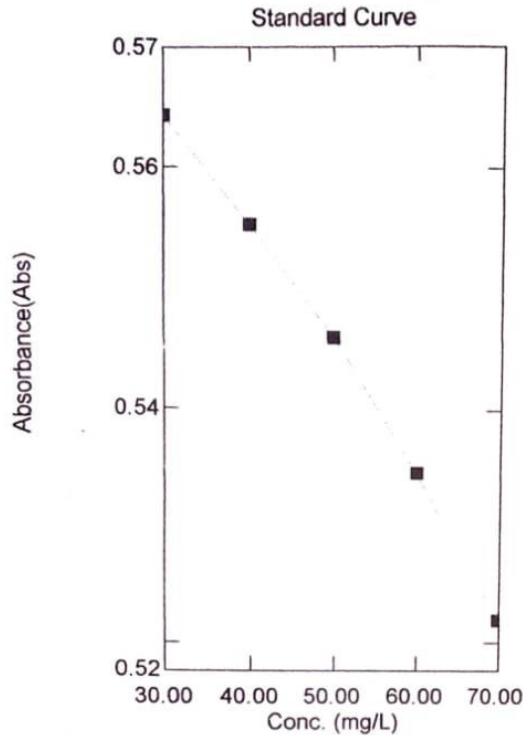
### [Standard Table]

|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel3 R3 30 ppm |     |     | STD  |    | 30.000 | 0.563 | 0.563  | 1.00      |     |
| 2 | Sampel3 R3 40 ppm |     |     | STD  |    | 40.000 | 0.540 | 0.540  | 1.00      |     |
| 3 | Sampel3 R3 50 ppm |     |     | STD  |    | 50.000 | 0.523 | 0.523  | 1.00      |     |
| 4 | Sampel3 R3 60 ppm |     |     | STD  |    | 60.000 | 0.509 | 0.509  | 1.00      |     |
| 5 | Sampel3 R3 70 ppm |     |     | STD  |    | 70.000 | 0.486 | 0.486  | 1.00      |     |

Sampel Pengendapan 6 Jam Replikasi 1

# Quantitation Standard Table

Print Date: 12/20/2023 01:50:30 F



$y = -0.00104675x + 0.596741$   
 $r^2 = 0.99369$

### [Summary]

**File Information**  
 Filename: D:\SKRIPSI 2023\RIINTA\RIINTA SAMPEL\Sampel 4\Sampel4 Replik 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBAINDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 02:02:53 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

**[Wavelengths]**  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

**[Calibration Curve]**  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516 Result  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

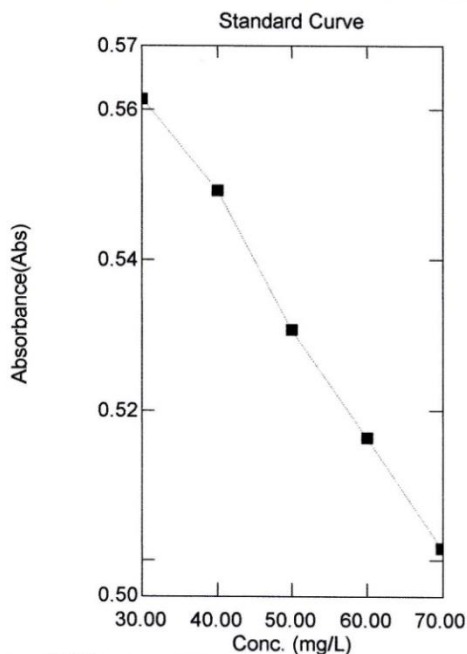
### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel4 R1 30ppm |     |     | STD  |    | 30.000 | 0.564 | 0.564  | 1.00      |     |
| 2 | Sampel4 R1 40ppm |     |     | STD  |    | 40.000 | 0.555 | 0.555  | 1.00      |     |
| 3 | Sampel4 R1 50ppm |     |     | STD  |    | 50.000 | 0.546 | 0.546  | 1.00      |     |
| 4 | Sampel4 R1 60ppm |     |     | STD  |    | 60.000 | 0.535 | 0.535  | 1.00      |     |
| 5 | Sampel4 R1 70ppm |     |     | STD  |    | 70.000 | 0.522 | 0.522  | 1.00      |     |

Sampel Pengendapan 6 Jam Replikasi 2

## Quantitation Standard Table

Print Date : 12/20/2023 01:51:08 PM



$y = -0.00152512x + 0.608122$   
 $r^2 = 0.99688$

### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA RINTA  
 SAMPEL\Sampel 4\Sampel4 Replikasi  
 2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING  
 KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 02:11:11 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)  
 [Calibration Curve]  
 Calibration Curve Creation: Sample  
 Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value  
 = K1 \*  
 Concentration +  
 K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

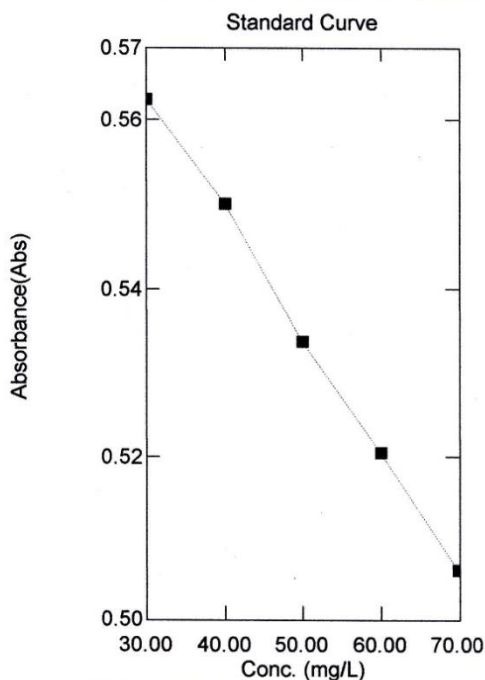
### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel4 R2 30ppm |     |     | STD  |    | 30.000 | 0.561 | 0.561  | 1.00      |     |
| 2 | Sampel4 R2 40ppm |     |     | STD  |    | 40.000 | 0.549 | 0.549  | 1.00      |     |
| 3 | Sampel4 R2 50ppm |     |     | STD  |    | 50.000 | 0.531 | 0.531  | 1.00      |     |
| 4 | Sampel4 R2 60ppm |     |     | STD  |    | 60.000 | 0.516 | 0.516  | 1.00      |     |
| 5 | Sampel4 R2 70ppm |     |     | STD  |    | 70.000 | 0.502 | 0.502  | 1.00      |     |

Sampel Pengendapan 6 Jam Replikasi 3

## Quantitation Standard Table

Print Date : 12/20/2023 01:51:54 PM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTAIRINTA SAMPEL\Sampel 4\Sampel4 Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/19/2023 02:17:48 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

### [Standard Table]

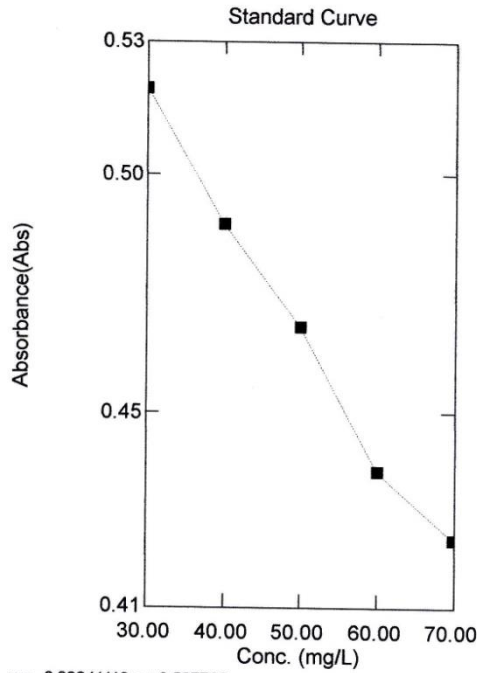
|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel4 R3 30 ppm |     |     | STD  |    | 30.000 | 0.562 | 0.562  | 1.00      |     |
| 2 | Sampel4 R3 40 ppm |     |     | STD  |    | 40.000 | 0.550 | 0.550  | 1.00      |     |
| 3 | Sampel4 R3 50 ppm |     |     | STD  |    | 50.000 | 0.534 | 0.534  | 1.00      |     |
| 4 | Sampel4 R3 60 ppm |     |     | STD  |    | 60.000 | 0.521 | 0.521  | 1.00      |     |
| 5 | Sampel4 R3 70 ppm |     |     | STD  |    | 70.000 | 0.507 | 0.507  | 1.00      |     |

## Lampiran 27. Hasil Absorbansi Sampel Serbuk Instan Jahe Merah Sesudah Stabilitas

Sampel Pengendapan 0 Jam Replikasi 1

### Quantitation Standard Table

Print Date : 12/21/2023 09:46:30 AM



#### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\IRINTA\SAMPEL Setelah Stabilitas\Sampel 1\Sampel 1 Replikasi 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum

Analyst:  
 Date/Time: 12/20/2023 11:20:32 AM  
 Comments:  
 Report File Name:

#### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm) Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method:  $1.0000 * WL516$   
 Column Name: Result  
 Calibration Curve Formula: Calculated Value =  $K1 * Concentration + K0$   
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

#### [Standard]

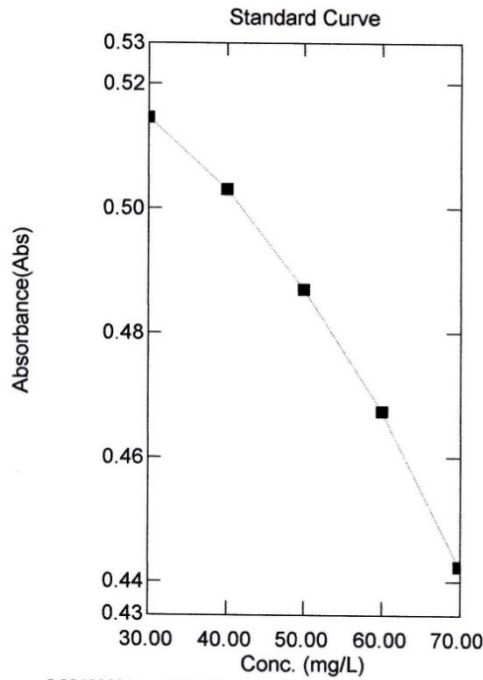
#### [Standard Table]

|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel 1 R1 30ppm |     |     | STD  |    | 30.000 | 0.518 | 0.518  | 1.00      |     |
| 2 | Sampel 1 R1 40ppm |     |     | STD  |    | 40.000 | 0.489 | 0.489  | 1.00      |     |
| 3 | Sampel 1 R1 50ppm |     |     | STD  |    | 50.000 | 0.468 | 0.468  | 1.00      |     |
| 4 | Sampel 1 R1 60ppm |     |     | STD  |    | 60.000 | 0.438 | 0.438  | 1.00      |     |
| 5 | Sampel 1 R1 70ppm |     |     | STD  |    | 70.000 | 0.423 | 0.423  | 1.00      |     |

Sampel Pengendapan 0 Jam Replikasi 2

## Quantitation Standard Table

Print Date : 12/22/2023 12:58:31 PM



$y = -0.00180038x + 0.572954$   
 $r^2 = 0.97964$

### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\IRINTA\SAMPEL Setelah Stabilitas\Sampel 1\Sampel 1 Replikasi 2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 12:58:08 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516 Result  
 Column Name:  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

### [Standard Table]

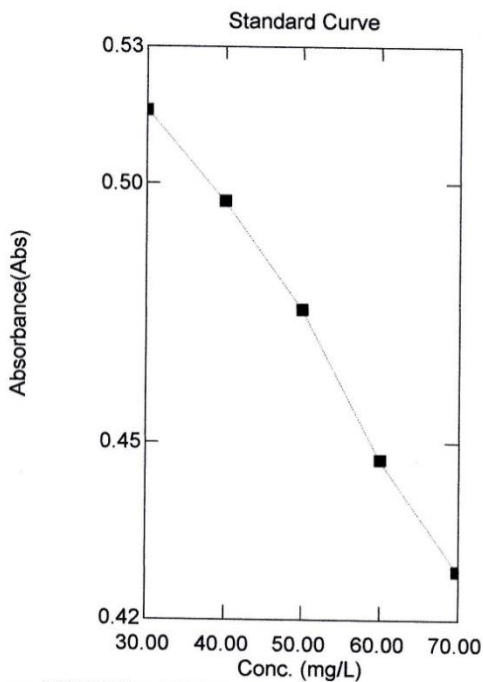
|   | Sample Name        | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|--------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel 1 R2 30 ppm |     |     | STD  |    | 30.000 | 0.515 | 0.515  | 1.00      |     |
| 2 | Sampel 1 R2 40 ppm |     |     | STD  |    | 40.000 | 0.503 | 0.503  | 1.00      |     |
| 3 | Sampel 1 R2 50 ppm |     |     | STD  |    | 50.000 | 0.487 | 0.487  | 1.00      |     |
| 4 | Sampel 1 R2 60 ppm |     |     | STD  |    | 60.000 | 0.467 | 0.467  | 1.00      |     |
| 5 | Sampel 1 R2 70 ppm |     |     | STD  |    | 70.000 | 0.442 | 0.442  | 1.00      |     |



Sampel pengendapan 0 jam replikasi 3

## Quantitation Standard Table

Print Date : 12/22/2023 10:42:43 AM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 1\Sampel 1 Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUJERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 10:38:05 AM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

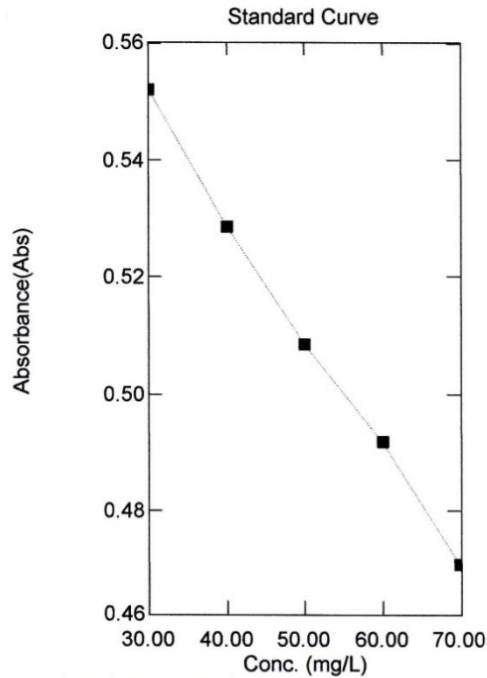
### [Standard Table]

|   | Sample Name       | Sam Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|---------|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel 1 R3 30ppm |         | STD  |    | 30.000 | 0.514 | 0.514  | 1.00      |     |
| 2 | Sampel 1 R3 40ppm |         | STD  |    | 40.000 | 0.497 | 0.497  | 1.00      |     |
| 3 | Sampel 1 R3 50ppm |         | STD  |    | 50.000 | 0.476 | 0.476  | 1.00      |     |
| 4 | Sampel 1 R3 60ppm |         | STD  |    | 60.000 | 0.447 | 0.447  | 1.00      |     |
| 5 | Sampel 1 R3 70ppm |         | STD  |    | 70.000 | 0.425 | 0.425  | 1.00      |     |

Sampel pengendapan 2 jam replikasi 1

## Quantitation Standard Table

Print Date : 12/22/2023 12:26:43 PM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 2\Sampel 2 Replikasi 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 12:24:26 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

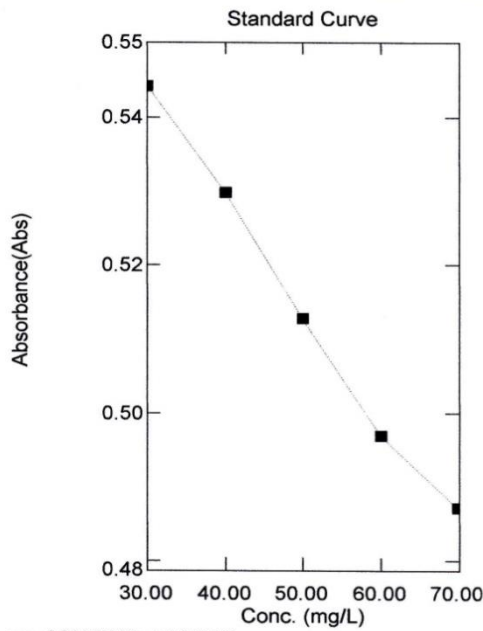
### [Standard Table]

|   | Sample Name        | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|--------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel 2 R1 30 ppm |     |     | STD  |    | 30.000 | 0.552 | 0.552  | 1.00      |     |
| 2 | Sampel 2 R1 40 ppm |     |     | STD  |    | 40.000 | 0.529 | 0.529  | 1.00      |     |
| 3 | Sampel 2 R1 50 ppm |     |     | STD  |    | 50.000 | 0.509 | 0.509  | 1.00      |     |
| 4 | Sampel 2 R1 60 ppm |     |     | STD  |    | 60.000 | 0.492 | 0.492  | 1.00      |     |
| 5 | Sampel 2 R1 70 ppm |     |     | STD  |    | 70.000 | 0.471 | 0.471  | 1.00      |     |

Sampel pengendapan 2 jam replikasi 2

## Quantitation Standard Table

Print Date : 12/21/2023 12:09:53 PM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\RINTA SAMPEL\Sampel 2\Sampel 2 Replikasi2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/21/2023 12:08:54 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

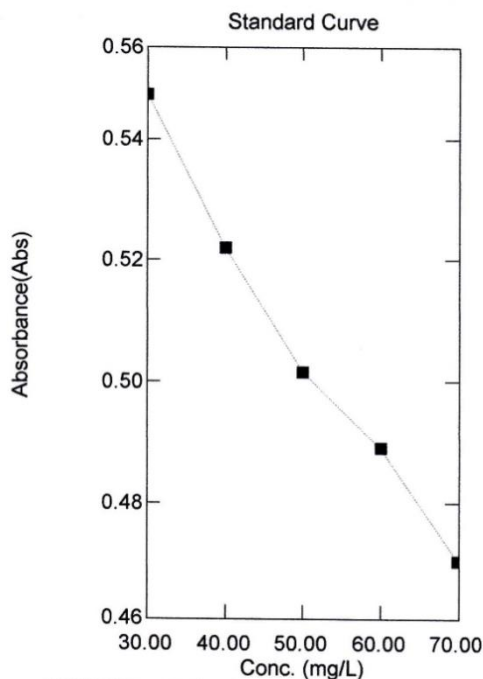
### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel2 R2 30ppm |     |     | STD  |    | 30.000 | 0.544 | 0.544  | 1.00      |     |
| 2 | Sampel2 R2 40ppm |     |     | STD  |    | 40.000 | 0.530 | 0.530  | 1.00      |     |
| 3 | Sampel2 R2 50ppm |     |     | STD  |    | 50.000 | 0.513 | 0.513  | 1.00      |     |
| 4 | Sampel2 R2 60ppm |     |     | STD  |    | 60.000 | 0.497 | 0.497  | 1.00      |     |
| 5 | Sampel2 R2 70ppm |     |     | STD  |    | 70.000 | 0.487 | 0.487  | 1.00      |     |

Sampel pengendapan 2 jam replikasi 3

## Quantitation Standard Table

Print Date : 12/21/2023 09:48:49 AM



$$y = -0.00186630x + 0.599437$$

$$r^2 = 0.98663$$

### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 2\Sampel 2 Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/20/2023 12:27:06 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

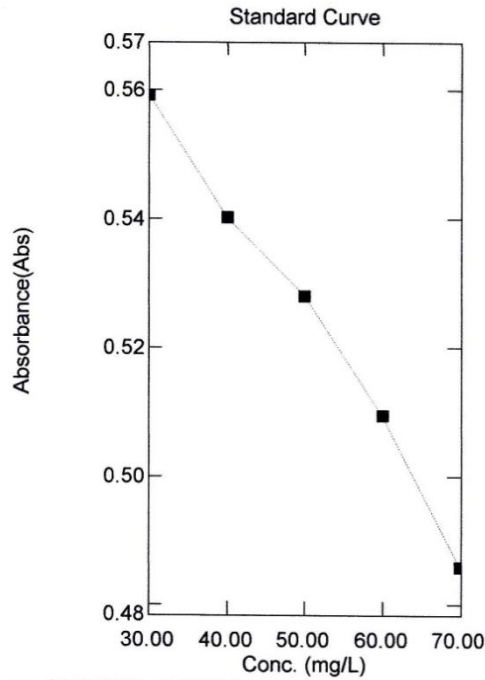
### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel2 R3 30ppm |     |     | STD  |    | 30.000 | 0.547 | 0.547  | 1.00      |     |
| 2 | Sampel2 R3 40ppm |     |     | STD  |    | 40.000 | 0.522 | 0.522  | 1.00      |     |
| 3 | Sampel2 R3 50ppm |     |     | STD  |    | 50.000 | 0.502 | 0.502  | 1.00      |     |
| 4 | Sampel2 R3 60ppm |     |     | STD  |    | 60.000 | 0.489 | 0.489  | 1.00      |     |
| 5 | Sampel2 R3 70ppm |     |     | STD  |    | 70.000 | 0.470 | 0.470  | 1.00      |     |

Sampel pengendapan 4 jam replikasi 1

## Quantitation Standard Table

Print Date : 12/22/2023 11:20:39 AM



$$y = -0.00177292x + 0.613127$$

$$r^2 = 0.98924$$

### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel3 R1 30ppm |     |     | STD  |    | 30.000 | 0.559 | 0.559  | 1.00      |     |
| 2 | Sampel3 R1 40ppm |     |     | STD  |    | 40.000 | 0.540 | 0.540  | 1.00      |     |
| 3 | Sampel3 R1 50ppm |     |     | STD  |    | 50.000 | 0.528 | 0.528  | 1.00      |     |
| 4 | Sampel3 R1 60ppm |     |     | STD  |    | 60.000 | 0.509 | 0.509  | 1.00      |     |
| 5 | Sampel3 R1 70ppm |     |     | STD  |    | 70.000 | 0.486 | 0.486  | 1.00      |     |

### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTASAMPEL Setelah Stabilitas\Sampel 3\Sampel 3 Replikasi 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 11:20:04 AM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

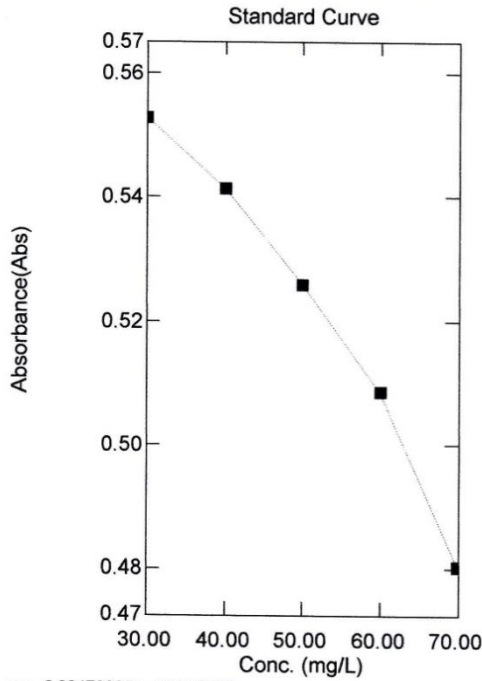
[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)  
 [Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

Sampel pengendapan 4 jam replikasi 2

## Quantitation Standard Table

Print Date : 12/22/2023 11:40:23 AM



$$y = -0.00178009x + 0.610767$$

$$r^2 = 0.97043$$

### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 3\Sampel 3 Replikasi 2.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 11:39:35 AM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)  
 [Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

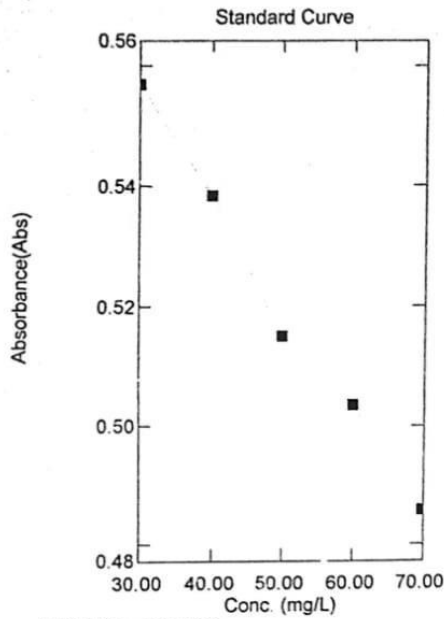
### [Standard Table]

|   | Sample Name        | Sam Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|--------------------|---------|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel 3 R2 30 ppm |         | STD  |    | 30.000 | 0.553 | 0.553  | 1.00      |     |
| 2 | Sampel 3 R2 40 ppm |         | STD  |    | 40.000 | 0.541 | 0.541  | 1.00      |     |
| 3 | Sampel 3 R2 50 ppm |         | STD  |    | 50.000 | 0.526 | 0.526  | 1.00      |     |
| 4 | Sampel 3 R2 60 ppm |         | STD  |    | 60.000 | 0.508 | 0.508  | 1.00      |     |
| 5 | Sampel 3 R2 70 ppm |         | STD  |    | 70.000 | 0.480 | 0.480  | 1.00      |     |

Sampel pengendapan 4 jam replikasi 3

## Quantitation Standard Table

Print Date: 12/22/2023 11:56:23 AM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RIINTAISA MPPEL Setelah Stabilitas\Sampel 3\Sampel Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/22/2023 11:56:17 AM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method:  $1.0000 * WL516$   
 Column Name: Result  
 Calibration Curve Formula: Calculated Value =  $K1 * Concentration + K0$

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

[Standard]

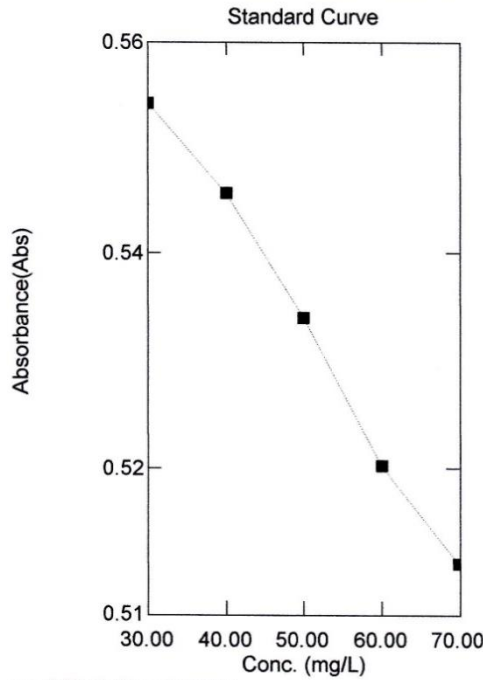
### [Standard Table]

|   | Sample Name       | Sam Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|---------|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel3 R3 30 ppm |         | STD  |    | 30.000 | 0.557 | 0.557  | 1.00      |     |
| 2 | Sampel3 R3 40 ppm |         | STD  |    | 40.000 | 0.538 | 0.538  | 1.00      |     |
| 3 | Sampel3 R3 50 ppm |         | STD  |    | 50.000 | 0.515 | 0.515  | 1.00      |     |
| 4 | Sampel3 R3 60 ppm |         | STD  |    | 60.000 | 0.503 | 0.503  | 1.00      |     |
| 5 | Sampel3 R3 70 ppm |         | STD  |    | 70.000 | 0.486 | 0.486  | 1.00      |     |

Sampel pengendapan 6 jam replikasi 1

## Quantitation Standard Table

Print Date : 12/21/2023 09:50:35 AM



$$y = -0.00110748x + 0.588324$$

$$r^2 = 0.99382$$

### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel4 R1 30ppm |     |     | STD  |    | 30.000 | 0.554 | 0.554  | 1.00      |     |
| 2 | Sampel4 R1 40ppm |     |     | STD  |    | 40.000 | 0.546 | 0.546  | 1.00      |     |
| 3 | Sampel4 R1 50ppm |     |     | STD  |    | 50.000 | 0.534 | 0.534  | 1.00      |     |
| 4 | Sampel4 R1 60ppm |     |     | STD  |    | 60.000 | 0.520 | 0.520  | 1.00      |     |
| 5 | Sampel4 R1 70ppm |     |     | STD  |    | 70.000 | 0.511 | 0.511  | 1.00      |     |

### [Summary]

#### File Information

Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 4\Sampel 4 Replikasi 1.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum

#### Analyst:

Date/Time: 12/20/2023 01:19:02 PM

#### Comments:

Report File Name:

### [Measurement Parameters]

#### [Wavelengths]

Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

#### [Calibration Curve]

Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

#### Pass Origin:

Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

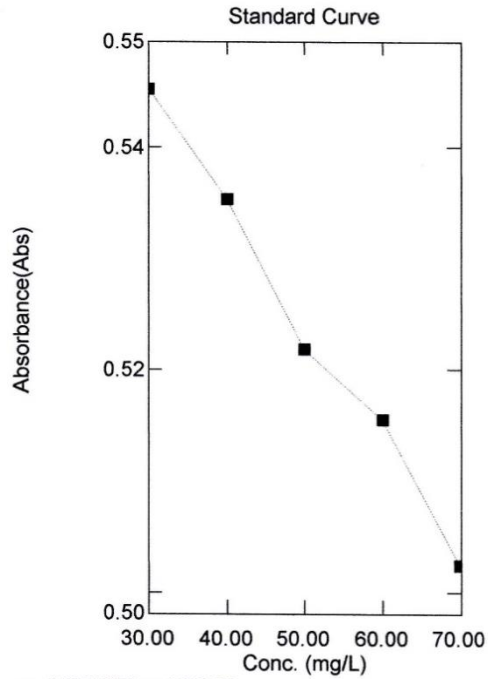
#### [Standard]



Sampel pengendapan 6 jam replikasi 2

## Quantitation Standard Table

Print Date : 12/21/2023 12:43:41 PM



### [Summary]

File Information  
 Filename: C:\UVVis-Data\Data\Sampel 4 Replikasi2\_231221\_124325.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/21/2023 12:43:05 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

Ac

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0  
 Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

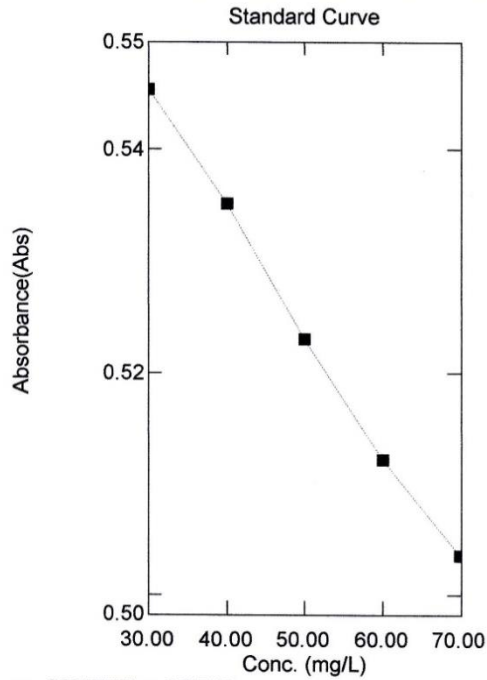
### [Standard Table]

|   | Sample Name       | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|-------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel4 R2 30 ppm |     |     | STD  |    | 30.000 | 0.545 | 0.545  | 1.00      |     |
| 2 | Sampel4 R2 40 ppm |     |     | STD  |    | 40.000 | 0.535 | 0.535  | 1.00      |     |
| 3 | Sampel4 R2 50 ppm |     |     | STD  |    | 50.000 | 0.522 | 0.522  | 1.00      |     |
| 4 | Sampel4 R2 60 ppm |     |     | STD  |    | 60.000 | 0.516 | 0.516  | 1.00      |     |
| 5 | Sampel4 R2 70 ppm |     |     | STD  |    | 70.000 | 0.502 | 0.502  | 1.00      |     |

Sampel pengendapan 6 jam replikasi 3

## Quantitation Standard Table

Print Date : 12/21/2023 09:51:09 AM



### [Summary]

File Information  
 Filename: D:\SKRIPSI 2023\RINTA\SAMPEL Setelah Stabilitas\Sampel 4\Sampel 4 Replikasi 3.vqud  
 Parameter File Name: D:\SKRIPSI 2023\PEMBANDING KUERSETIN.vqum  
 Analyst:  
 Date/Time: 12/20/2023 01:37:21 PM  
 Comments:  
 Report File Name:

### [Measurement Parameters]

[Wavelengths]  
 Type of Measuring Mode: Absorbance  
 rounded: OFF  
 Column Name: WL516  
 Measuring Method: Point (516.00nm)

[Calibration Curve]  
 Calibration Curve Creation: Sample Measurement  
 Calculation Method: 1.0000 \* WL516  
 Column Name: Result  
 Calibration Curve Formula: Calculated Value = K1 \* Concentration + K0

Pass Origin: OFF  
 Unit of Concentration: mg/L  
 Pass/Fail Judgment: OFF

### [Standard]

### [Standard Table]

|   | Sample Name      | Sam | Opt | Type | Ex | Conc   | WL516 | Result | Wgt.Facto | Com |
|---|------------------|-----|-----|------|----|--------|-------|--------|-----------|-----|
| 1 | Sampel4 R3 30ppm |     |     | STD  |    | 30.000 | 0.545 | 0.545  | 1.00      |     |
| 2 | Sampel4 R3 40ppm |     |     | STD  |    | 40.000 | 0.535 | 0.535  | 1.00      |     |
| 3 | Sampel4 R3 50ppm |     |     | STD  |    | 50.000 | 0.523 | 0.523  | 1.00      |     |
| 4 | Sampel4 R3 60ppm |     |     | STD  |    | 60.000 | 0.512 | 0.512  | 1.00      |     |
| 5 | Sampel4 R3 70ppm |     |     | STD  |    | 70.000 | 0.504 | 0.504  | 1.00      |     |

## Lampiran 28. Perhitungan Waktu Alir

Perhitungan waktu alir :  $\frac{\text{Massa granul}}{\text{Waktu alir}}$

a. Sebelum Stabilitas

|                      |   |   |   |
|----------------------|---|---|---|
| Pengendapan<br>0 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$ | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,60 \text{ detik}}$<br>$= 62,5 \text{ g/detik}$  | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,05 \text{ detik}}$<br>$= 95,23 \text{ g/detik}$ |
| Pengendapan<br>2 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,1 \text{ detik}}$<br>$= 90,91 \text{ g/detik}$  | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,40 \text{ detik}}$<br>$= 71,42 \text{ g/detik}$ | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$ |
| Pengendapan<br>4 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,25 \text{ detik}}$<br>$= 80 \text{ g/detik}$    | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$   | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,15 \text{ detik}}$<br>$= 86,96 \text{ g/detik}$ |
| Pengendapan<br>6 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1 \text{ detik}}$<br>$= 100 \text{ g/detik}$      | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,15 \text{ detik}}$<br>$= 86,96 \text{ g/detik}$ | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,15 \text{ detik}}$<br>$= 86,96 \text{ g/detik}$ |

b. Sesudah Stabilitas

|                      |   |   |   |
|----------------------|---|---|---|
| Pengendapan<br>0 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,25 \text{ detik}}$<br>$= 80 \text{ g/detik}$    | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,38 \text{ detik}}$<br>$= 72,46 \text{ g/detik}$ | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,40 \text{ detik}}$<br>$= 71,43 \text{ g/detik}$ |
| Pengendapan<br>2 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,1 \text{ detik}}$<br>$= 90,91 \text{ g/detik}$  | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,60 \text{ detik}}$<br>$= 62,5 \text{ g/detik}$  | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$ |
| Pengendapan<br>4 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$ | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,50 \text{ detik}}$<br>$= 66,67 \text{ g/detik}$ | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,10 \text{ detik}}$<br>$= 90,91 \text{ g/detik}$ |
| Pengendapan<br>6 Jam | $R1 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$ | $R2 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1,20 \text{ detik}}$<br>$= 83,33 \text{ g/detik}$ | $R3 = \frac{\text{Massa granul}}{\text{Waktu alir}}$<br>$= \frac{100 \text{ g}}{1 \text{ detik}}$<br>$= 100 \text{ g/detik}$      |

## Lampiran 29. Hasil Perhitungan Sudut Diam

Perhitungan sudut diam =  $\text{Tan } \alpha = \frac{h}{r}$

c. Sebelum stabilitas

|                      |  |  |   |
|----------------------|--|--|---|
| Pengendapan<br>0 Jam | $\begin{aligned} R1 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,319 \text{ cm}}{5 \text{ cm}} \\ &= 24,88^\circ \end{aligned}$ | $\begin{aligned} R2 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,225 \text{ cm}}{5 \text{ cm}} \\ &= 23,99^\circ \end{aligned}$ | $\begin{aligned} R3 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,307 \text{ cm}}{5 \text{ cm}} \\ &= 24,77^\circ \end{aligned}$  |
| Pengendapan<br>2 Jam | $\begin{aligned} R1 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,331 \text{ cm}}{5 \text{ cm}} \\ &= 24,99^\circ \end{aligned}$ | $\begin{aligned} R2 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,174 \text{ cm}}{5 \text{ cm}} \\ &= 23,50^\circ \end{aligned}$ | $\begin{aligned} R3 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,339 \text{ cm}}{5 \text{ cm}} \\ &= 25,070^\circ \end{aligned}$ |
| Pengendapan<br>4 Jam | $\begin{aligned} R1 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,191 \text{ cm}}{5 \text{ cm}} \\ &= 23,66^\circ \end{aligned}$ | $\begin{aligned} R2 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,057 \text{ cm}}{5 \text{ cm}} \\ &= 22,36^\circ \end{aligned}$ | $\begin{aligned} R3 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,197 \text{ cm}}{5 \text{ cm}} \\ &= 23,72^\circ \end{aligned}$  |
| Pengendapan<br>6 Jam | $\begin{aligned} R1 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,200 \text{ cm}}{5 \text{ cm}} \\ &= 23,75^\circ \end{aligned}$ | $\begin{aligned} R2 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,076 \text{ cm}}{5 \text{ cm}} \\ &= 22,25^\circ \end{aligned}$ | $\begin{aligned} R3 = \text{Tan } \alpha &= \frac{h}{r} \\ &= \frac{2,225 \text{ cm}}{5 \text{ cm}} \\ &= 23,99^\circ \end{aligned}$  |

d. Sesudah stabilitas

|                      |  |  |  |
|----------------------|--|--|--|
| Pengendapan<br>0 Jam | $R1 = \tan \alpha = \frac{h}{r}$ $= \frac{2,488 \text{ cm}}{5 \text{ cm}}$ $= 26,45^\circ$ | $R2 = \tan \alpha = \frac{h}{r}$ $= \frac{2,581 \text{ cm}}{5 \text{ cm}}$ $= 27,30^\circ$ | $R3 = \tan \alpha = \frac{h}{r}$ $= \frac{2,399 \text{ cm}}{5 \text{ cm}}$ $= 25,63^\circ$ |
| Pengendapan<br>2 Jam | $R1 = \tan \alpha = \frac{h}{r}$ $= \frac{2,448 \text{ cm}}{5 \text{ cm}}$ $= 26,09^\circ$ | $R2 = \tan \alpha = \frac{h}{r}$ $= \frac{2,513 \text{ cm}}{5 \text{ cm}}$ $= 26,68^\circ$ | $R3 = \tan \alpha = \frac{h}{r}$ $= \frac{2,394 \text{ cm}}{5 \text{ cm}}$ $= 25,59^\circ$ |
| Pengendapan<br>4 Jam | $R1 = \tan \alpha = \frac{h}{r}$ $= \frac{2,307 \text{ cm}}{5 \text{ cm}}$ $= 24,77^\circ$ | $R2 = \tan \alpha = \frac{h}{r}$ $= \frac{2,421 \text{ cm}}{5 \text{ cm}}$ $= 25,84^\circ$ | $R3 = \tan \alpha = \frac{h}{r}$ $= \frac{2,408 \text{ cm}}{5 \text{ cm}}$ $= 25,72^\circ$ |
| Pengendapan<br>6 Jam | $R1 = \tan \alpha = \frac{h}{r}$ $= \frac{2,199 \text{ cm}}{5 \text{ cm}}$ $= 23,74^\circ$ | $R2 = \tan \alpha = \frac{h}{r}$ $= \frac{2,440 \text{ cm}}{5 \text{ cm}}$ $= 26,01^\circ$ | $R3 = \tan \alpha = \frac{h}{r}$ $= \frac{2,413 \text{ cm}}{5 \text{ cm}}$ $= 25,76^\circ$ |

### Lampiran 30. Perhitungan Antioksidan Baku Pemanding *Quercetin*

Absorbansi blanko : 0,648

| Konsentrasi<br>ppm | Absorbansi | %Inhibisi | IC <sub>50</sub><br>(ppm) | Regresi<br>Linier | Rata-Rata<br>IC <sub>50</sub> ± SD |
|--------------------|------------|-----------|---------------------------|-------------------|------------------------------------|
|--------------------|------------|-----------|---------------------------|-------------------|------------------------------------|

| Replikasi 1 |       |       |       |  |
|-------------|-------|-------|-------|--|
| 2           | 0,433 | 32,87 | 4,154 | a = 20,728<br>b = 7,0465<br>r = 0,9919 |
| 4           | 0,326 | 49,46 |       |  |
| 6           | 0,221 | 65,74 |       |  |
| 8           | 0,143 | 77,83 |       |  |
| 10          | 0,070 | 89,15 |       |  |
| Replikasi 2 |       |       |       |  |
| 2           | 0,464 | 39,66 | 4,30  | a = 24,548<br>b = 5,9187<br>r = 0,9707 |
| 4           | 0,369 | 43,06 |       |  |
| 6           | 0,258 | 60,19 |       |  |
| 8           | 0,168 | 74,07 |       |  |
| 10          | 0,108 | 83,33 |       |  |
| Replikasi 3 |       |       |       |  |
| 2           | 0,463 | 28,55 | 7,46  | a = 21,404<br>b = 3,8349<br>r = 0,9956 |
| 4           | 0,404 | 37,65 |       |  |
| 6           | 0,365 | 43,67 |       |  |
| 8           | 0,305 | 52,93 |       |  |
| 10          | 0,264 | 59,26 |       |  |

5,30 ± 1,87

### Perhitungan Pengenceran Seri Konsentrasi Baku Pembanding *Quercetin*

2 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.2 \text{ ppm}$$

$$V1 = \frac{10}{100}$$

$$V1 = 0,1 \text{ mL}$$

4 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.4 \text{ ppm}$$

$$V1 = \frac{20}{100}$$

$$V1 = 0,2 \text{ mL}$$

6 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.6 \text{ ppm}$$

$$V1 = \frac{30}{100}$$

$$V1 = 0,3 \text{ mL}$$

8 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.8 \text{ ppm}$$

$$V1 = \frac{40}{100}$$

$$V1 = 0,4 \text{ mL}$$

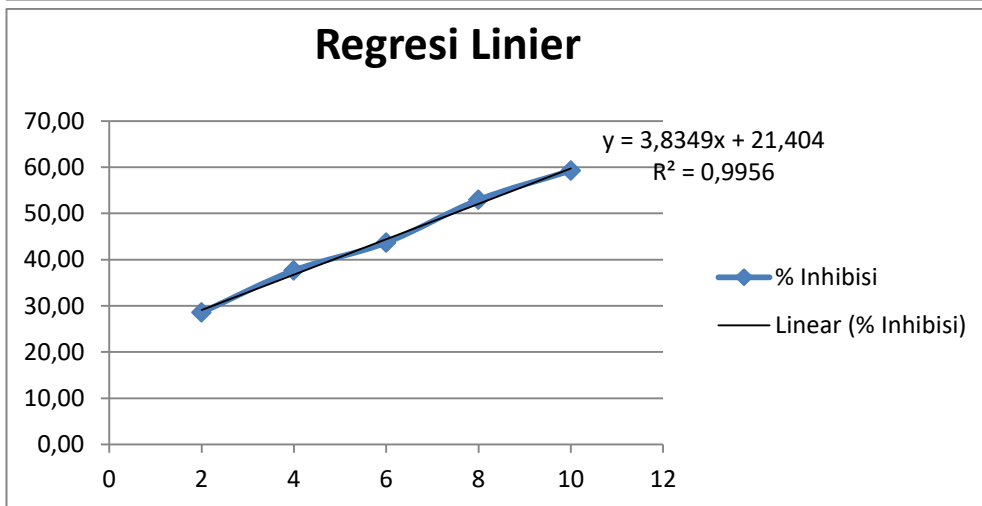
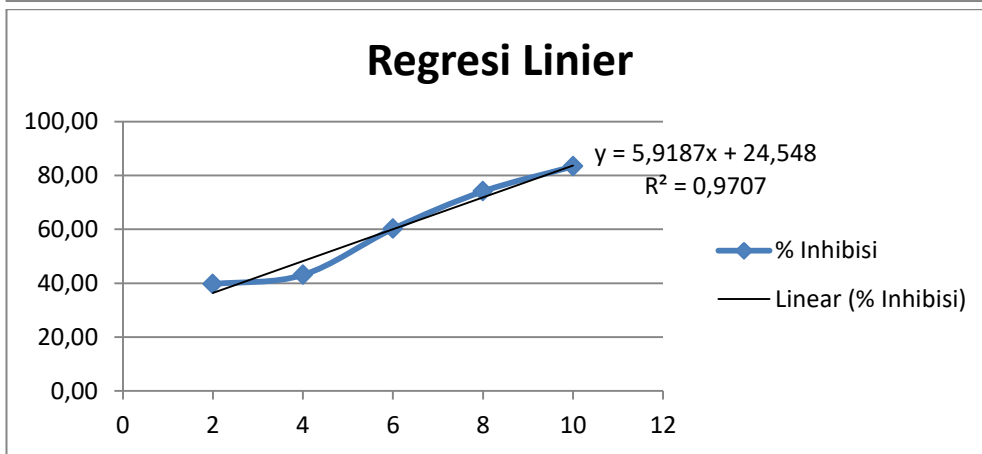
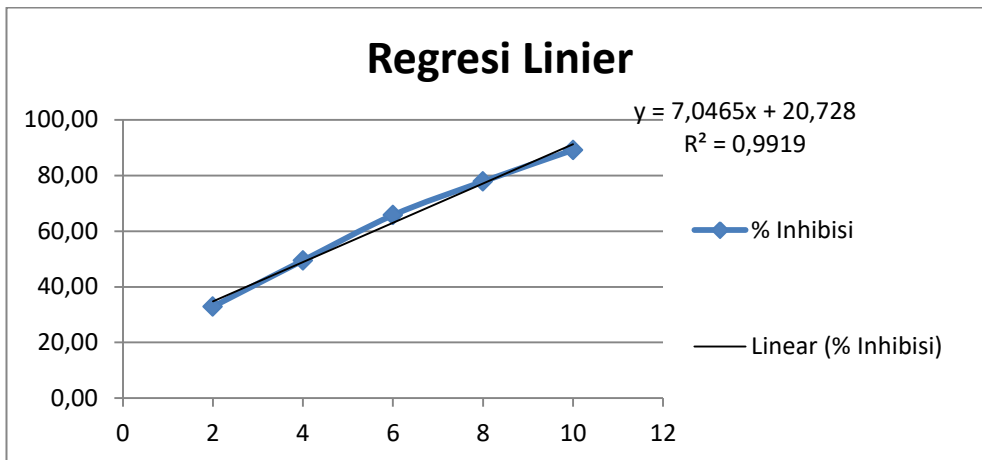
10 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.10 \text{ ppm}$$

$$V1 = \frac{50}{100}$$

$$V1 = 0,5 \text{ mL}$$



**Lampiran 31. Perhitungan Aktivitas Antioksidan Sampel Sebelum Stabilitas**

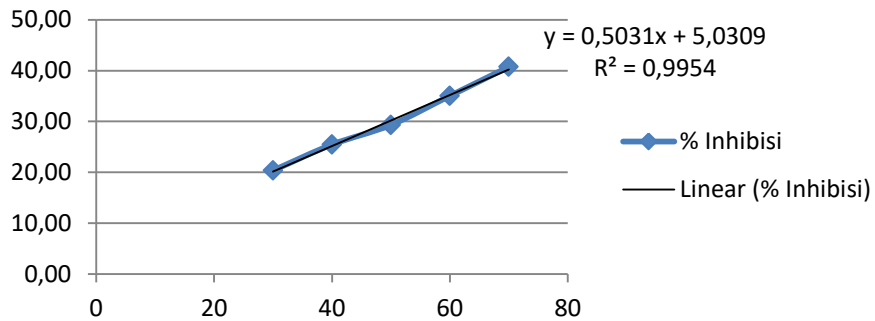
Absorbansi blanko : 0,648

Perlakuan Pengendapan 0 Jam

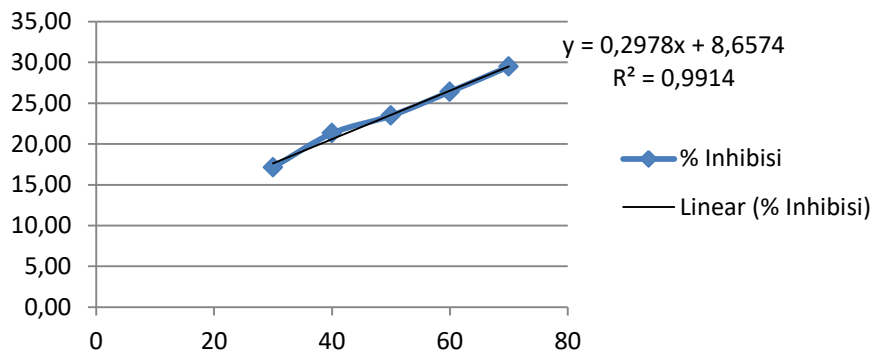
| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|--|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                                 |  |
| 30                 | 0,516      | 20,37     | 89,36                | a = 5,0309<br>b = 0,5031<br>r = 0,9954 | 124,24 ± 30,31                  |  |
| 40                 | 0,483      | 25,46     |                      |  |                                 |  |
| 50                 | 0,458      | 29,32     |                      |  |                                 |  |
| 60                 | 0,421      | 35,03     |                      |  |                                 |  |
| 70                 | 0,384      | 40,74     |                      |  |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |  |                                 |  |
| 30                 | 0,537      | 17,13     | 138,83               | a = 8,6574<br>b = 0,2978<br>r = 0,9914 |                                 |  |
| 40                 | 0,510      | 21,30     |                      |  |                                 |  |
| 50                 | 0,496      | 23,46     |                      |  |                                 |  |
| 60                 | 0,477      | 26,39     |                      |  |                                 |  |
| 70                 | 0,457      | 29,48     |                      |  |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |  |                                 |  |
| 30                 | 0,521      | 19,60     | 144,49               | a = 10,972<br>b = 0,2701<br>r = 0,9787 |                                 |  |
| 40                 | 0,507      | 21,76     |                      |  |                                 |  |
| 50                 | 0,495      | 23,61     |                      |  |                                 |  |
| 60                 | 0,474      | 26,85     |                      |  |                                 |  |
| 70                 | 0,450      | 30,56     |                      |  |                                 |  |



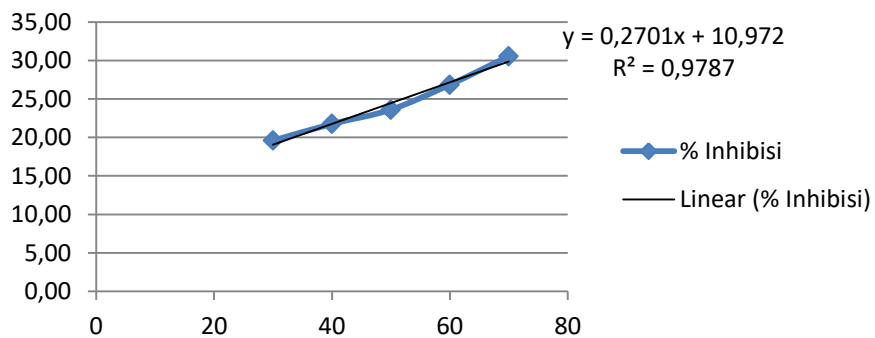
### Regresi Linier



### Regresi Linier



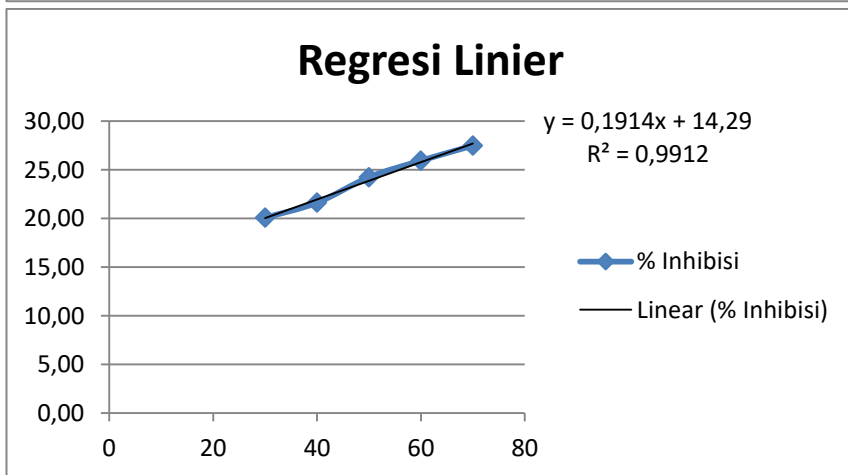
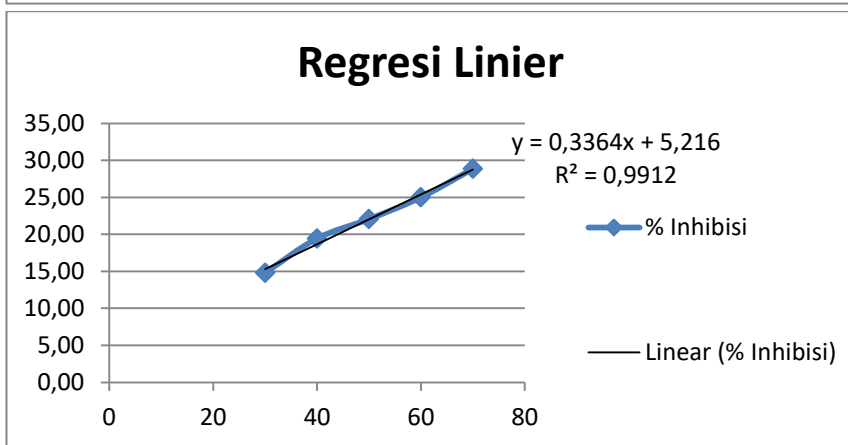
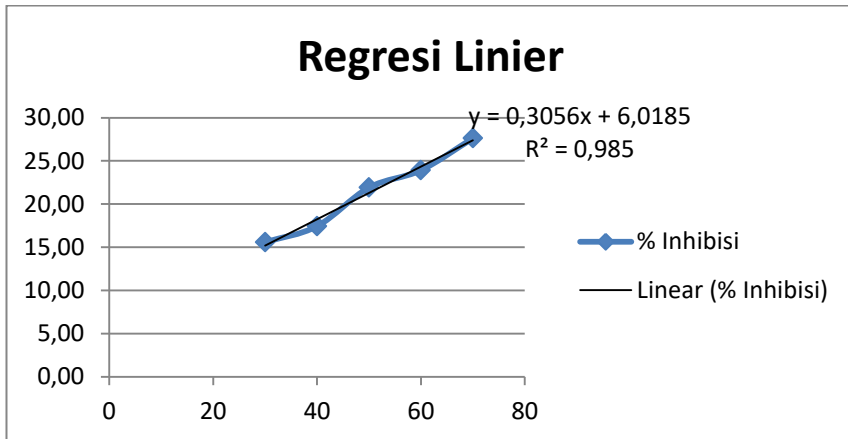
### Regresi Linier



Perlakuan Pengendapan 2 Jam

Absorbansi blanko : 0,648

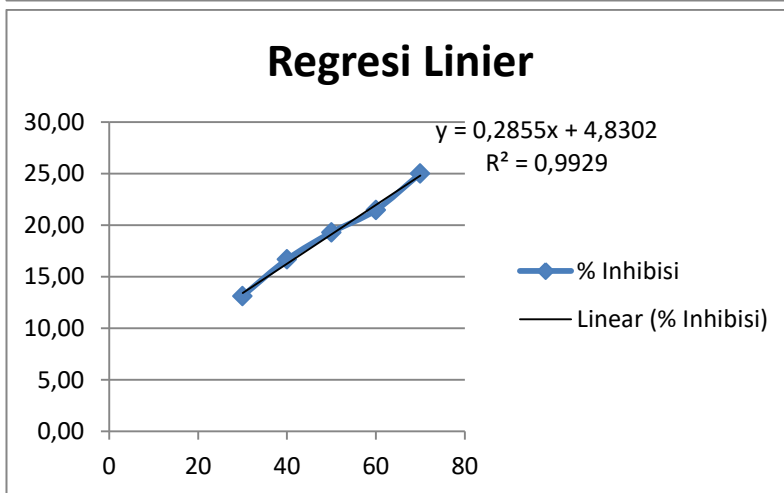
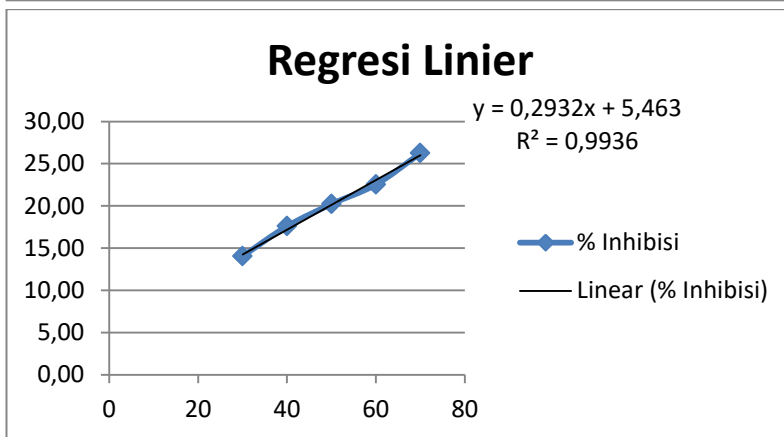
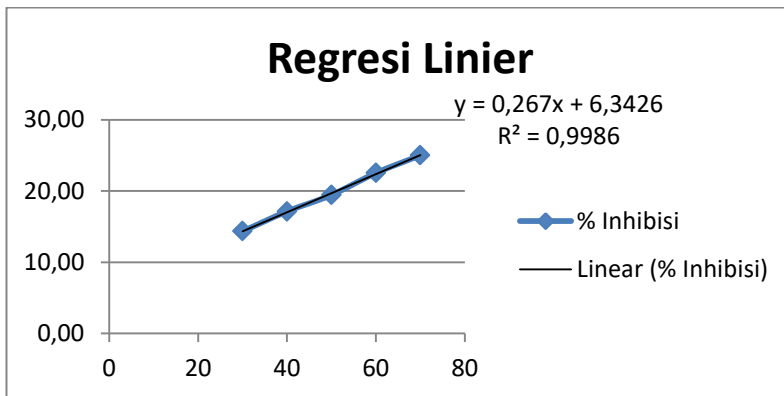
| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                        | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|---------------------------------------|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |                                       |                                 |  |
| 30                 | 0,547      | 15,59     | 143,92               | a = 6,0185<br>b = 0,3056<br>r = 0,985 | 154,54 ± 28,26                  |  |
| 40                 | 0,535      | 17,44     |                      |                                       |                                 |  |
| 50                 | 0,506      | 21,91     |                      |                                       |                                 |  |
| 60                 | 0,493      | 23,92     |                      |                                       |                                 |  |
| 70                 | 0,469      | 27,62     |                      |                                       |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |                                       |                                 |  |
| 30                 | 0,552      | 14,81     | 133,13               | a = 5,216<br>b = 0,3364<br>r = 0,9912 |                                 |  |
| 40                 | 0,522      | 19,44     |                      |                                       |                                 |  |
| 50                 | 0,505      | 22,07     |                      |                                       |                                 |  |
| 60                 | 0,486      | 25,00     |                      |                                       |                                 |  |
| 70                 | 0,461      | 28,86     |                      |                                       |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |                                       |                                 |  |
| 30                 | 0,518      | 20,06     | 186,57               | a = 14,29<br>b = 0,1914<br>r = 0,9912 |                                 |  |
| 40                 | 0,508      | 21,60     |                      |                                       |                                 |  |
| 50                 | 0,491      | 24,23     |                      |                                       |                                 |  |
| 60                 | 0,480      | 25,93     |                      |                                       |                                 |  |
| 70                 | 0,470      | 27,47     |                      |                                       |                                 |  |



Perlakuan Pengendapan 4 Jam

Absorbansi blanko : 0,648

| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± |  |
|--------------------|------------|-----------|----------------------|--|------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                              |  |
| 30                 | 0,555      | 14,35     | 163,51               | a = 6,3426<br>b = 0,267<br>r = 0,9986  | 157,87 ± 5,81                |  |
| 40                 | 0,537      | 17,13     |                      |  |                              |  |
| 50                 | 0,522      | 19,44     |                      |  |                              |  |
| 60                 | 0,502      | 22,53     |                      |  |                              |  |
| 70                 | 0,486      | 25        |                      |  |                              |  |
| <b>Replikasi 2</b> |            |           |                      |  |                              |  |
| 30                 | 0,557      | 14,04     | 151,90               | a = 5,463<br>b = 0,2932<br>r = 0,9936  |                              |  |
| 40                 | 0,534      | 17,59     |                      |  |                              |  |
| 50                 | 0,517      | 20,22     |                      |  |                              |  |
| 60                 | 0,502      | 22,53     |                      |  |                              |  |
| 70                 | 0,478      | 26,23     |                      |  |                              |  |
| <b>Replikasi 3</b> |            |           |                      |  |                              |  |
| 30                 | 0,563      | 13,12     | 158,21               | a = 4,8302<br>b = 0,2855<br>r = 0,9929 |                              |  |
| 40                 | 0,540      | 16,67     |                      |  |                              |  |
| 50                 | 0,523      | 19,29     |                      |  |                              |  |
| 60                 | 0,509      | 21,45     |                      |  |                              |  |
| 70                 | 0,486      | 25        |                      |  |                              |  |

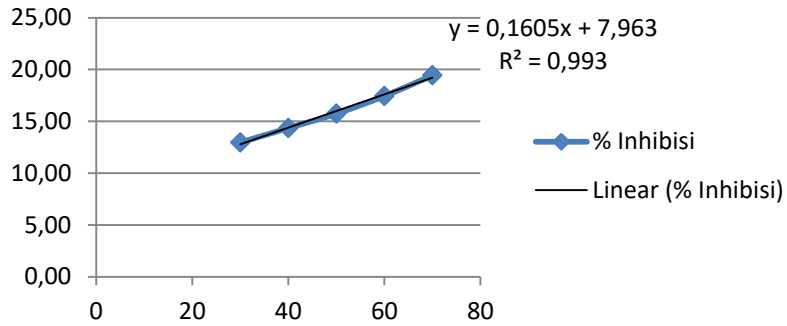


Perlakuan Pengendapan 6 Jam

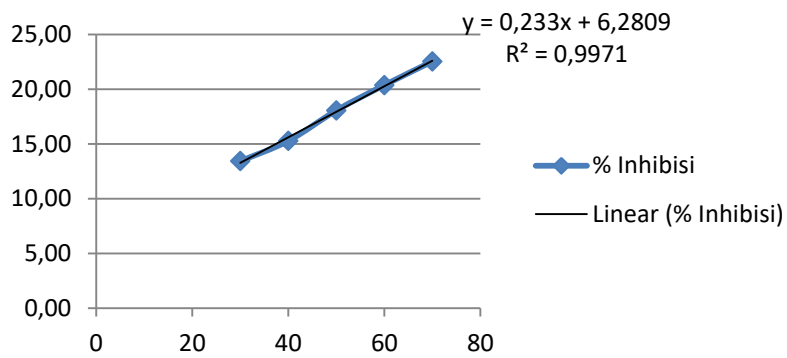
Absorbansi blanko : 0,648

| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|--|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                                 |  |
| 30                 | 0,564      | 12,96     | 261,91               | a = 7,963<br>b = 0,1605<br>r = 0,993   | 217,07 ±<br>39,46               |  |
| 40                 | 0,555      | 14,35     |                      |  |                                 |  |
| 50                 | 0,546      | 15,74     |                      |  |                                 |  |
| 60                 | 0,535      | 17,44     |                      |  |                                 |  |
| 70                 | 0,522      | 19,44     |                      |  |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |  |                                 |  |
| 30                 | 0,561      | 13,43     | 187,64               | a = 6,2809<br>b = 0,233<br>r = 0,9971  |                                 |  |
| 40                 | 0,549      | 15,28     |                      |  |                                 |  |
| 50                 | 0,531      | 18,06     |                      |  |                                 |  |
| 60                 | 0,516      | 20,37     |                      |  |                                 |  |
| 70                 | 0,502      | 22,53     |                      |  |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |  |                                 |  |
| 30                 | 0,562      | 13,27     | 201,66               | a = 6,7438<br>b = 0,2145<br>r = 0,9986 |                                 |  |
| 40                 | 0,55       | 15,12     |                      |  |                                 |  |
| 50                 | 0,534      | 17,59     |                      |  |                                 |  |
| 60                 | 0,521      | 19,60     |                      |  |                                 |  |
| 70                 | 0,507      | 21,76     |                      |  |                                 |  |

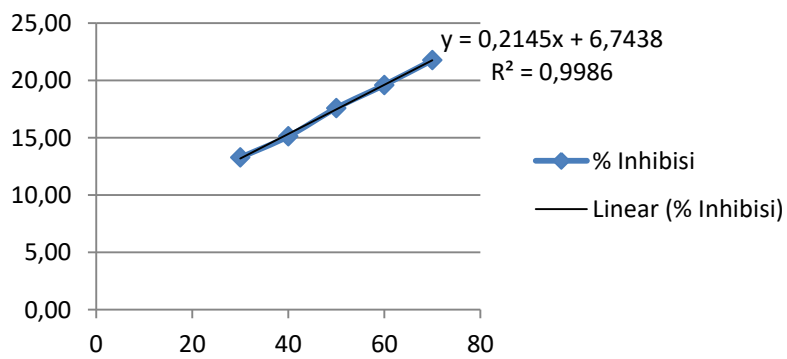
### Regresi Linier



### Regresi Linier



### Regresi Linier

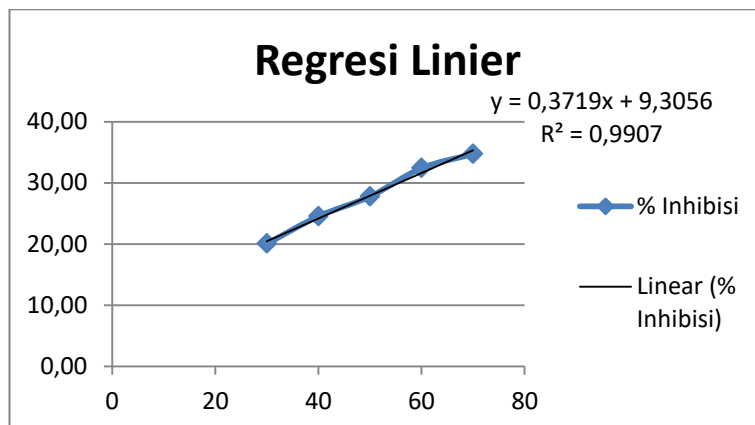


### Lampiran 32. Perhitungan Aktivitas Antioksidan Sampel Sesudah Stabilitas

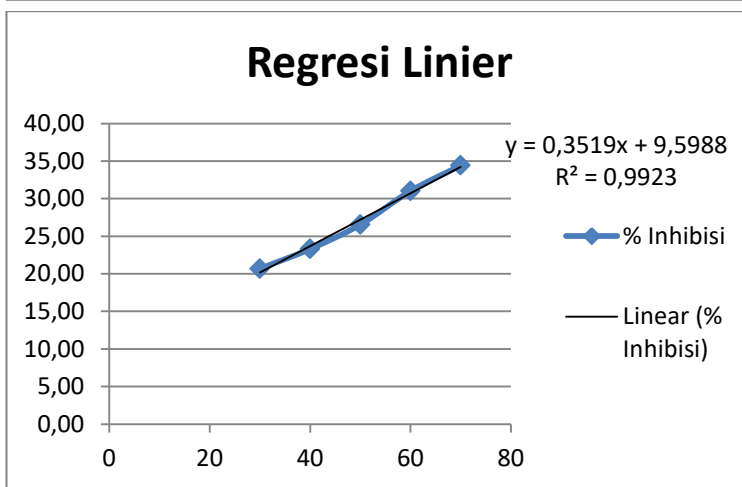
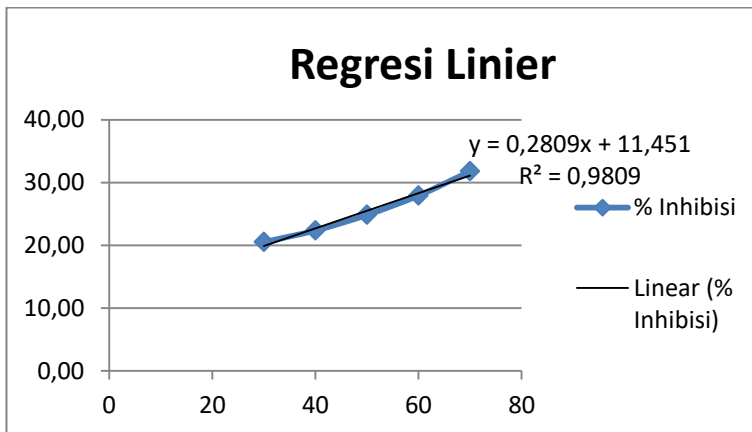
Absorbansi blanko : 0,648

Perlakuan Pengendapan 0 Jam

| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|--|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                                 |  |
| 30                 | 0,518      | 20,06     | 109,42               | a = 9,3056<br>b = 0,3719<br>r = 0,9907 | 120,49 ± 14,75                  |  |
| 40                 | 0,489      | 24,54     |                      |  |                                 |  |
| 50                 | 0,468      | 27,78     |                      |  |                                 |  |
| 60                 | 0,438      | 32,41     |                      |  |                                 |  |
| 70                 | 0,423      | 34,72     |                      |  |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |  |                                 |  |
| 30                 | 0,515      | 20,52     | 137,23               | a = 11,451<br>b = 0,2809<br>r = 0,9809 |                                 |  |
| 40                 | 0,503      | 22,38     |                      |  |                                 |  |
| 50                 | 0,487      | 24,85     |                      |  |                                 |  |
| 60                 | 0,467      | 27,93     |                      |  |                                 |  |
| 70                 | 0,442      | 31,79     |                      |  |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |  |                                 |  |
| 30                 | 0,514      | 20,68     | 114,81               | a = 9,5988<br>b = 0,3519<br>r = 0,9923 |                                 |  |
| 40                 | 0,497      | 23,30     |                      |  |                                 |  |
| 50                 | 0,476      | 26,54     |                      |  |                                 |  |
| 60                 | 0,447      | 31,02     |                      |  |                                 |  |
| 70                 | 0,425      | 34,41     |                      |  |                                 |  |

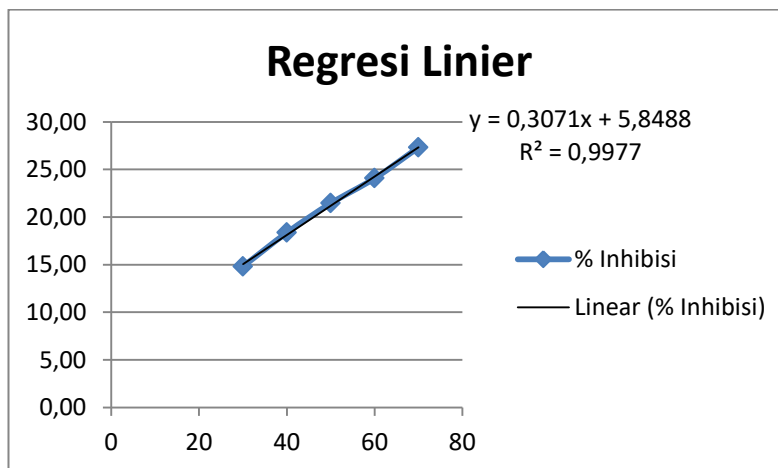




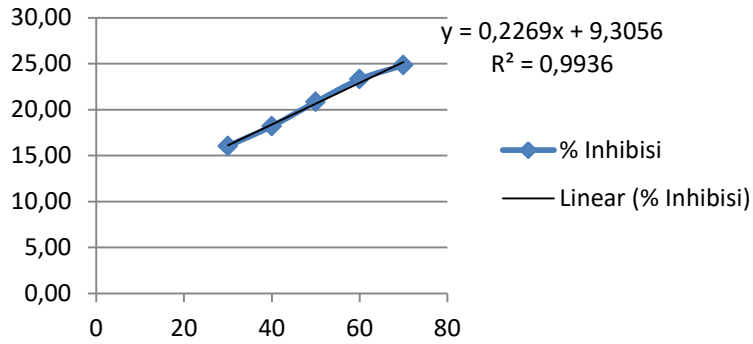


Absorbansi blanko : 0,648  
 Perlakuan Pengendapan 2 Jam

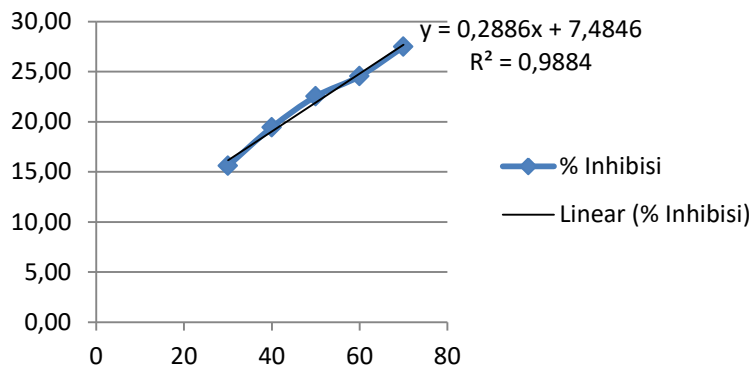
| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|--|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                                 |  |
| 30                 | 0,552      | 14,81     | 143,77               | a = 5,8488<br>b = 0,3071<br>r = 0,9977 | 156,81 ±<br>19,60               |  |
| 40                 | 0,529      | 18,36     |                      |  |                                 |  |
| 50                 | 0,509      | 21,45     |                      |  |                                 |  |
| 60                 | 0,492      | 24,07     |                      |  |                                 |  |
| 70                 | 0,471      | 27,31     |                      |  |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |  |                                 |  |
| 30                 | 0,544      | 16,05     | 179,35               | a = 9,3056<br>b = 0,2269<br>r = 0,9936 |                                 |  |
| 40                 | 0,53       | 18,21     |                      |  |                                 |  |
| 50                 | 0,513      | 20,83     |                      |  |                                 |  |
| 60                 | 0,497      | 23,30     |                      |  |                                 |  |
| 70                 | 0,487      | 24,85     |                      |  |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |  |                                 |  |
| 30                 | 0,547      | 15,59     | 147,32               | a = 7,4846<br>b = 0,2886<br>r = 0,9884 |                                 |  |
| 40                 | 0,522      | 19,44     |                      |  |                                 |  |
| 50                 | 0,502      | 22,53     |                      |  |                                 |  |
| 60                 | 0,489      | 24,54     |                      |  |                                 |  |
| 70                 | 0,47       | 27,47     |                      |  |                                 |  |



### Regresi Linier



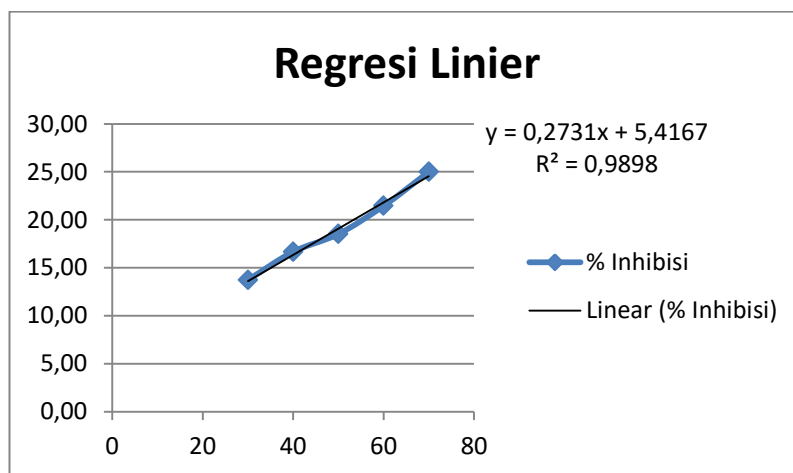
### Regresi Linier



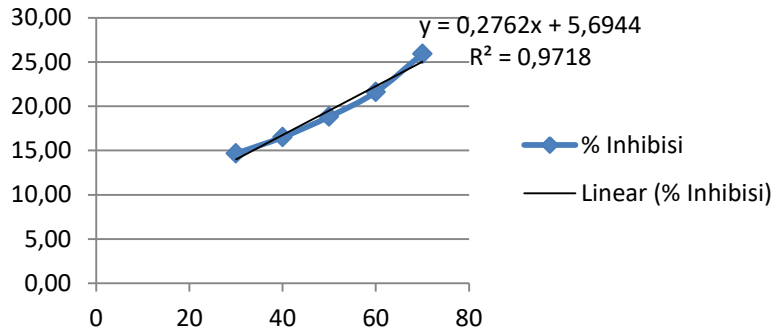
Absorbansi blanko : 0,648

Perlakuan Pengendapan 4 Jam

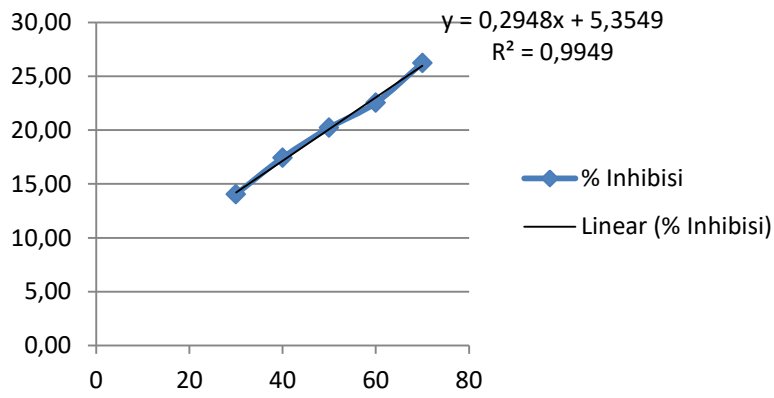
| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|--|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                                 |  |
| 30                 | 0,559      | 13,73     | 163,25               | a = 5,4167<br>b = 0,2731<br>r = 0,9898 | 161,44 ± 1,57                   |  |
| 40                 | 0,54       | 16,67     |                      |  |                                 |  |
| 50                 | 0,528      | 18,52     |                      |  |                                 |  |
| 60                 | 0,509      | 21,45     |                      |  |                                 |  |
| 70                 | 0,486      | 25,00     |                      |  |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |  |                                 |  |
| 30                 | 0,553      | 14,66     | 160,41               | a = 5,6944<br>b = 0,2762<br>r = 0,9718 |                                 |  |
| 40                 | 0,541      | 16,51     |                      |  |                                 |  |
| 50                 | 0,526      | 18,83     |                      |  |                                 |  |
| 60                 | 0,508      | 21,60     |                      |  |                                 |  |
| 70                 | 0,48       | 25,93     |                      |  |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |  |                                 |  |
| 30                 | 0,557      | 14,04     | 160,65               | a = 6,1265<br>b = 0,2731<br>r = 0,9949 |                                 |  |
| 40                 | 0,538      | 16,98     |                      |  |                                 |  |
| 50                 | 0,515      | 20,52     |                      |  |                                 |  |
| 60                 | 0,503      | 22,38     |                      |  |                                 |  |
| 70                 | 0,486      | 25,00     |                      |  |                                 |  |



### Regresi Linier



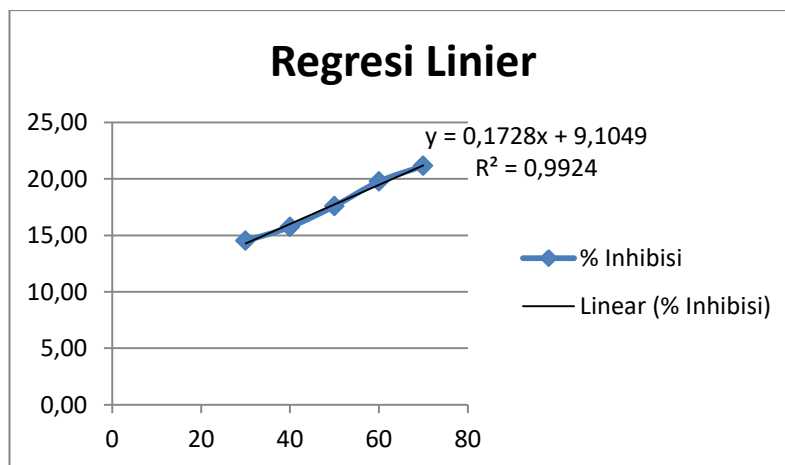
### Regresi Linier

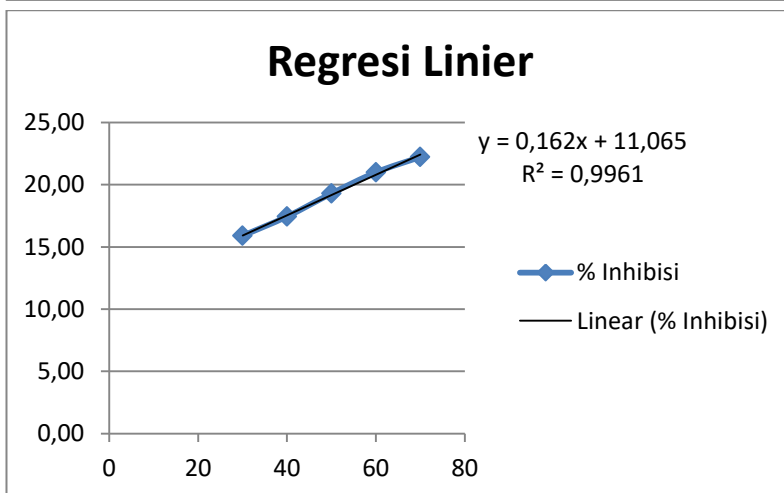
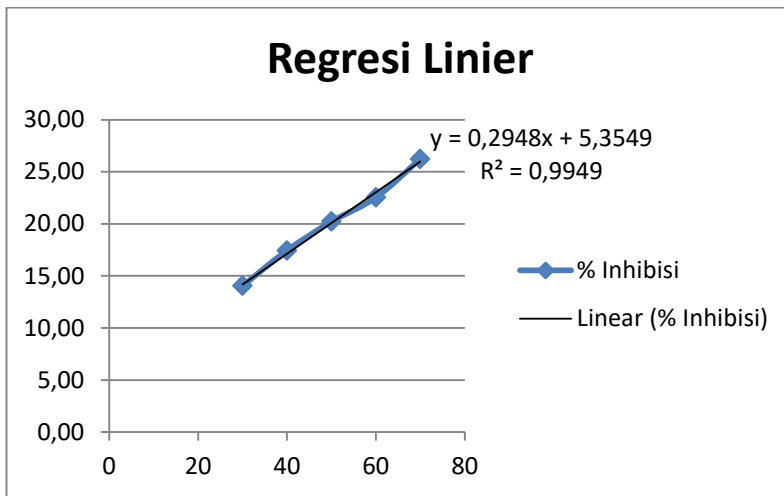


Absorbansi blanko : 0,648

Perlakuan Pengendapan 6 Jam

| Konsentrasi ppm    | Absorbansi | %Inhibisi | IC <sub>50</sub> ppm | Regresi Linier                         | Rata-Rata IC <sub>50</sub> ± SD |  |
|--------------------|------------|-----------|----------------------|--|---------------------------------|--|
| <b>Replikasi 1</b> |            |           |                      |  |                                 |  |
| 30                 | 0,554      | 14,51     | 163,25               | a = 9,1049<br>b = 0,1728<br>r = 0,9924 | 239,18 ± 2,18                   |  |
| 40                 | 0,546      | 15,74     |                      |  |                                 |  |
| 50                 | 0,534      | 17,59     |                      |  |                                 |  |
| 60                 | 0,52       | 19,75     |                      |  |                                 |  |
| 70                 | 0,511      | 21,14     |                      |  |                                 |  |
| <b>Replikasi 2</b> |            |           |                      |  |                                 |  |
| 30                 | 0,545      | 15,90     | 240,53               | a = 11,034<br>b = 0,162<br>r = 0,9949  |                                 |  |
| 40                 | 0,535      | 17,44     |                      |  |                                 |  |
| 50                 | 0,522      | 19,44     |                      |  |                                 |  |
| 60                 | 0,516      | 20,37     |                      |  |                                 |  |
| 70                 | 0,502      | 22,53     |                      |  |                                 |  |
| <b>Replikasi 3</b> |            |           |                      |  |                                 |  |
| 30                 | 0,545      | 15,90     | 240,34               | a = 11,065<br>b = 0,162<br>r = 0,9961  |                                 |  |
| 40                 | 0,535      | 17,44     |                      |  |                                 |  |
| 50                 | 0,523      | 19,29     |                      |  |                                 |  |
| 60                 | 0,512      | 20,99     |                      |  |                                 |  |
| 70                 | 0,504      | 22,22     |                      |  |                                 |  |





Perhitungan Pengenceran Seri Konsentrasi Sampel Serbuk Instan Jahe Merah.

30 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.30 \text{ ppm}$$

$$V1 = \frac{150}{100}$$

$$V1 = 1,5 \text{ mL}$$

40 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.40 \text{ ppm}$$

$$V1 = \frac{200}{100}$$

$$V1 = 2 \text{ mL}$$

50 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.50 \text{ ppm}$$

$$V1 = \frac{250}{100}$$

$$V1 = 2,5 \text{ mL}$$

60 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.60 \text{ ppm}$$

$$V1 = \frac{300}{100}$$

$$V1 = 3 \text{ mL}$$

70 ppm

$$V1.N1 = V2.N2$$

$$100 \text{ ppm} = 5.70 \text{ ppm}$$

$$V1 = \frac{350}{100}$$

$$V1 = 3,5 \text{ mL}$$

### Lampiran 33. Uji Statistika One Way ANOVA Sebelum Stabilitas

#### A. Uji Kadar Air

##### Tests of Normality

|           | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-----------|-----------|---------------------------------|----|------|--------------|----|------|
|           |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Kadar Air | 0 Jam     | .202                            | 3  | .    | .994         | 3  | .853 |
|           | 2 Jam     | .194                            | 3  | .    | .996         | 3  | .886 |
|           | 4 Jam     | .219                            | 3  | .    | .987         | 3  | .780 |
|           | 6 Jam     | .238                            | 3  | .    | .976         | 3  | .702 |

##### Descriptives

|                                  | Perlakuan   |                                  | Statistic   | Std. Error |       |
|----------------------------------|-------------|----------------------------------|-------------|------------|-------|
| Kadar Air                        | 0 Jam       | Mean                             | 1.1233      | .28085     |       |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | -.0851     |       |
|                                  |             |                                  | Upper Bound | 2.3317     |       |
|                                  |             | 5% Trimmed Mean                  | .           |            |       |
|                                  |             | Median                           | 1.0800      |            |       |
|                                  |             | Variance                         | .237        |            |       |
|                                  |             | Std. Deviation                   | .48645      |            |       |
|                                  |             | Minimum                          | .66         |            |       |
|                                  |             | Maximum                          | 1.63        |            |       |
|                                  |             | Range                            | .97         |            |       |
|                                  |             | Interquartile Range              | .           |            |       |
|                                  |             | Skewness                         | .398        | 1.225      |       |
|                                  |             | Kurtosis                         | .           | .          |       |
|                                  |             | 2 Jam                            | 2 Jam       | Mean       | .9800 |
| 95% Confidence Interval for Mean | Lower Bound |                                  |             | .2583      |       |
|                                  | Upper Bound |                                  |             | 1.7017     |       |
| 5% Trimmed Mean                  | .           |                                  |             |            |       |
| Median                           | 1.0000      |                                  |             |            |       |
| Variance                         | .084        |                                  |             |            |       |
| Std. Deviation                   | .29052      |                                  |             |            |       |
| Minimum                          | .68         |                                  |             |            |       |
| Maximum                          | 1.26        |                                  |             |            |       |
| Range                            | .58         |                                  |             |            |       |
| Interquartile Range              | .           |                                  |             |            |       |
| Skewness                         | -.308       |                                  |             | 1.225      |       |
| Kurtosis                         | .           |                                  |             | .          |       |
| 4 Jam                            | 4 Jam       |                                  |             | Mean       | .7867 |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | -.0886     |       |
|                                  |             |                                  | Upper Bound | 1.6619     |       |
|                                  |             | 5% Trimmed Mean                  | .           |            |       |
|                                  |             | Median                           | .7400       |            |       |
|                                  |             | Variance                         | .124        |            |       |
|                                  |             | Std. Deviation                   | .35233      |            |       |
|                                  |             | Minimum                          | .46         |            |       |



|       |                                  |             |        |        |
|-------|----------------------------------|-------------|--------|--------|
|       | Maximum                          |             | 1.16   |        |
|       | Range                            |             | .70    |        |
|       | Interquartile Range              |             | .      |        |
|       | Skewness                         |             | .586   | 1.225  |
|       | Kurtosis                         |             | .      | .      |
| 6 Jam | Mean                             |             | .6000  | .19287 |
|       | 95% Confidence Interval for Mean | Lower Bound | -.2299 |        |
|       |                                  | Upper Bound | 1.4299 |        |
|       | 5% Trimmed Mean                  |             | .      |        |
|       | Median                           |             | .5400  |        |
|       | Variance                         |             | .112   |        |
|       | Std. Deviation                   |             | .33407 |        |
|       | Minimum                          |             | .30    |        |
|       | Maximum                          |             | .96    |        |
|       | Range                            |             | .66    |        |
|       | Interquartile Range              |             | .      |        |
|       | Skewness                         |             | .782   | 1.225  |
|       | Kurtosis                         |             | .      | .      |

### Test of Homogeneity of Variances

| Kadar Air        |     |     |      |  |
|------------------|-----|-----|------|--|
| Levene Statistic | df1 | df2 | Sig. |  |
| .277             | 3   | 8   | .841 |  |

### ANOVA

| Kadar Air      |                |    |             |       |      |
|----------------|----------------|----|-------------|-------|------|
|                | Sum of Squares | Df | Mean Square | F     | Sig. |
| Between Groups | .468           | 3  | .156        | 1.121 | .396 |
| Within Groups  | 1.114          | 8  | .139        |       |      |
| Total          | 1.582          | 11 |             |       |      |

### Multiple Comparisons

Dependent Variable: Kadar Air  
Tukey HSD

| (I) Perlakuan | (J) Perlakuan | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---------------|---------------|-----------------------|------------|------|-------------------------|-------------|
|               |               |                       |            |      | Lower Bound             | Upper Bound |
| 0 Jam         | 2 Jam         | .14333                | .30462     | .963 | -.8322                  | 1.1188      |
|               | 4 Jam         | .33667                | .30462     | .697 | -.6388                  | 1.3122      |
|               | 6 Jam         | .52333                | .30462     | .375 | -.4522                  | 1.4988      |
| 2 Jam         | 0 Jam         | -.14333               | .30462     | .963 | -1.1188                 | .8322       |
|               | 4 Jam         | .19333                | .30462     | .918 | -.7822                  | 1.1688      |
|               | 6 Jam         | .38000                | .30462     | .617 | -.5955                  | 1.3555      |
| 4 Jam         | 0 Jam         | -.33667               | .30462     | .697 | -1.3122                 | .6388       |
|               | 2 Jam         | -.19333               | .30462     | .918 | -1.1688                 | .7822       |
|               | 6 Jam         | .18667                | .30462     | .925 | -.7888                  | 1.1622      |
| 6 Jam         | 0 Jam         | -.52333               | .30462     | .375 | -1.4988                 | .4522       |
|               | 2 Jam         | -.38000               | .30462     | .617 | -1.3555                 | .5955       |
|               | 4 Jam         | -.18667               | .30462     | .925 | -1.1622                 | .7888       |

### Kadar Air

Tukey HSD<sup>a</sup>

| Perlakuan | N | Subset for alpha =<br>0.05<br>1 |
|-----------|---|---------------------------------|
| 6 Jam     | 3 | .6000                           |
| 4 Jam     | 3 | .7867                           |
| 2 Jam     | 3 | .9800                           |
| 0 Jam     | 3 | 1.1233                          |
| Sig.      |   | .375                            |

### Waktu Alir

#### Tests of Normality

|                | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|----------------|-----------|---------------------------------|----|------|--------------|----|------|
|                |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Uji Waktu Alir | 0 Jam     | .282                            | 3  | .    | .936         | 3  | .510 |
|                | 2 Jam     | .253                            | 3  | .    | .964         | 3  | .637 |
|                | 4 Jam     | .314                            | 3  | .    | .893         | 3  | .363 |
|                | 6 Jam     | .385                            | 3  | .    | .750         | 3  | .000 |

a. Lilliefors Significance Correction

#### Test Statistics<sup>a,b</sup>

| Uji Waktu Alir |       |
|----------------|-------|
| Chi-Square     | 1.925 |
| df             | 3     |
| Asymp. Sig.    | .588  |

a. Kruskal Wallis Test

b. Grouping Variable:

Perlakuan

#### Ranks

|                | Perlakuan | N  | Mean Rank |
|----------------|-----------|----|-----------|
| Uji Waktu Alir | 0 Jam     | 3  | 7.67      |
|                | 2 Jam     | 3  | 7.67      |
|                | 4 Jam     | 3  | 6.50      |
|                | 6 Jam     | 3  | 4.17      |
|                | Total     | 12 |           |

## Sudut Diam

### Tests of Normality

|            | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|-----------|---------------------------------|----|------|--------------|----|------|
|            |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Sudut Diam | 0 Jam     | .344                            | 3  | .    | .841         | 3  | .217 |
|            | 2 Jam     | .369                            | 3  | .    | .788         | 3  | .086 |
|            | 4 Jam     | .339                            | 3  | .    | .851         | 3  | .244 |
|            | 6 Jam     | .371                            | 3  | .    | .783         | 3  | .075 |

### Descriptives

|                                  | Perlakuan   |                                  | Statistic   | Std. Error |         |
|----------------------------------|-------------|----------------------------------|-------------|------------|---------|
| Sudut Diam                       | 0 Jam       | Mean                             | 24.5467     | .28014     |         |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | 23.3413    |         |
|                                  |             |                                  | Upper Bound | 25.7520    |         |
|                                  |             | 5% Trimmed Mean                  | .           |            |         |
|                                  |             | Median                           | 24.7700     |            |         |
|                                  |             | Variance                         | .235        |            |         |
|                                  |             | Std. Deviation                   | .48521      |            |         |
|                                  |             | Minimum                          | 23.99       |            |         |
|                                  |             | Maximum                          | 24.88       |            |         |
|                                  |             | Range                            | .89         |            |         |
|                                  |             | Interquartile Range              | .           |            |         |
|                                  |             | Skewness                         | -1.632      | 1.225      |         |
|                                  |             | Kurtosis                         | .           | .          |         |
|                                  |             | 2 Jam                            | 2 Jam       | Mean       | 24.5200 |
| 95% Confidence Interval for Mean | Lower Bound |                                  |             | 22.3234    |         |
|                                  | Upper Bound |                                  |             | 26.7166    |         |
| 5% Trimmed Mean                  | .           |                                  |             |            |         |
| Median                           | 24.9900     |                                  |             |            |         |
| Variance                         | .782        |                                  |             |            |         |
| Std. Deviation                   | .88425      |                                  |             |            |         |
| Minimum                          | 23.50       |                                  |             |            |         |
| Maximum                          | 25.07       |                                  |             |            |         |
| Range                            | 1.57        |                                  |             |            |         |
| Interquartile Range              | .           |                                  |             |            |         |
| Skewness                         | -1.716      |                                  |             | 1.225      |         |
| Kurtosis                         | .           |                                  |             | .          |         |
| 4 Jam                            | 4 Jam       |                                  |             | Mean       | 23.3300 |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | 20.9875    |         |
|                                  |             |                                  | Upper Bound | 25.6725    |         |
|                                  |             | 5% Trimmed Mean                  | .           |            |         |
|                                  |             | Median                           | 23.7500     |            |         |
|                                  |             | Variance                         | .889        |            |         |
|                                  |             | Std. Deviation                   | .94297      |            |         |

|       |                                  |             |         |        |
|-------|----------------------------------|-------------|---------|--------|
|       | Minimum                          |             | 22.25   |        |
|       | Maximum                          |             | 23.99   |        |
|       | Range                            |             | 1.74    |        |
|       | Interquartile Range              |             | .       |        |
|       | Skewness                         |             | -1.607  | 1.225  |
|       | Kurtosis                         |             | .       | .      |
| 6 Jam | Mean                             |             | 23.2467 | .44367 |
|       | 95% Confidence Interval for Mean | Lower Bound | 21.3377 |        |
|       |                                  | Upper Bound | 25.1556 |        |
|       | 5% Trimmed Mean                  |             | .       |        |
|       | Median                           |             | 23.6600 |        |
|       | Variance                         |             | .591    |        |
|       | Std. Deviation                   |             | .76846  |        |
|       | Minimum                          |             | 22.36   |        |
|       | Maximum                          |             | 23.72   |        |
|       | Range                            |             | 1.36    |        |
|       | Interquartile Range              |             | .       |        |
|       | Skewness                         |             | -1.720  | 1.225  |
|       | Kurtosis                         |             | .       | .      |

### Test of Homogeneity of Variances

Sudut Diam

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .988             | 3   | 8   | .446 |

### ANOVA

Sudut Diam

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 4.662          | 3  | 1.554       | 2.489 | .135 |
| Within Groups  | 4.994          | 8  | .624        |       |      |
| Total          | 9.656          | 11 |             |       |      |

### Multiple Comparisons

Dependent Variable: Sudut Diam

Tukey HSD

| (I)       | (J)   | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|-----------|-------|-----------------------|------------|-------|-------------------------|-------------|
|           |       |                       |            |       | Lower Bound             | Upper Bound |
| Perlakuan | 2 Jam | .02667                | .64512     | 1.000 | -2.0392                 | 2.0926      |
|           | 4 Jam | 1.21667               | .64512     | .305  | -.8492                  | 3.2826      |
|           | 6 Jam | 1.30000               | .64512     | .259  | -.7659                  | 3.3659      |
| 2 Jam     | 0 Jam | -.02667               | .64512     | 1.000 | -2.0926                 | 2.0392      |

|       |       |          |        |      |         |        |
|-------|-------|----------|--------|------|---------|--------|
|       | 4 Jam | 1.19000  | .64512 | .322 | -.8759  | 3.2559 |
|       | 6 Jam | 1.27333  | .64512 | .273 | -.7926  | 3.3392 |
| 4 Jam | 0 Jam | -1.21667 | .64512 | .305 | -3.2826 | .8492  |
|       | 2 Jam | -1.19000 | .64512 | .322 | -3.2559 | .8759  |
|       | 6 Jam | .08333   | .64512 | .999 | -1.9826 | 2.1492 |
| 6 Jam | 0 Jam | -1.30000 | .64512 | .259 | -3.3659 | .7659  |
|       | 2 Jam | -1.27333 | .64512 | .273 | -3.3392 | .7926  |
|       | 4 Jam | -.08333  | .64512 | .999 | -2.1492 | 1.9826 |

### Sudut Diam

Tukey HSD<sup>a</sup>

| Perlakuan | N | Subset for alpha |
|-----------|---|------------------|
|           |   | = 0.05           |
|           |   | 1                |
| 6 Jam     | 3 | 23.2467          |
| 4 Jam     | 3 | 23.3300          |
| 2 Jam     | 3 | 24.5200          |
| 0 Jam     | 3 | 24.5467          |
| Sig.      |   | .259             |

### Waktu Larut

#### Descriptives

| Perlakuan   |                                  | Statistic                        | Std. Error |
|-------------|----------------------------------|----------------------------------|------------|
| Waktu Larut | 0 Jam                            | Mean                             | 5.1333     |
|             |                                  | 95% Confidence Interval for Mean |            |
|             |                                  | Lower Bound                      | 4.8833     |
|             |                                  | Upper Bound                      | 5.3834     |
|             |                                  | 5% Trimmed Mean                  | .          |
|             |                                  | Median                           | 5.1200     |
|             |                                  | Variance                         | .010       |
|             |                                  | Std. Deviation                   | .10066     |
|             |                                  | Minimum                          | 5.04       |
|             |                                  | Maximum                          | 5.24       |
|             |                                  | Range                            | .20        |
|             |                                  | Interquartile Range              | .          |
|             |                                  | Skewness                         | .586       |
|             |                                  | Kurtosis                         | .          |
|             |                                  |                                  |            |
| 2 Jam       | Mean                             | 3.7200                           |            |
|             | 95% Confidence Interval for Mean |                                  |            |
|             | Lower Bound                      | 2.2982                           |            |
|             | Upper Bound                      | 5.1418                           |            |
|             | 5% Trimmed Mean                  | .                                |            |
|             | Median                           | 4.0200                           |            |
|             | Variance                         | .328                             |            |

|       |                                  |             |         |        |
|-------|----------------------------------|-------------|---------|--------|
|       | Std. Deviation                   |             | .57236  |        |
|       | Minimum                          |             | 3.06    |        |
|       | Maximum                          |             | 4.08    |        |
|       | Range                            |             | 1.02    |        |
|       | Interquartile Range              |             | .       |        |
|       | Skewness                         |             | -1.711  | 1.225  |
|       | Kurtosis                         |             | .       | .      |
| 4 Jam | Mean                             |             | 3.2033  | .67390 |
|       | 95% Confidence Interval for Mean | Lower Bound | .3038   |        |
|       |                                  | Upper Bound | 6.1029  |        |
|       | 5% Trimmed Mean                  |             | .       |        |
|       | Median                           |             | 3.1200  |        |
|       | Variance                         |             | 1.362   |        |
|       | Std. Deviation                   |             | 1.16723 |        |
|       | Minimum                          |             | 2.08    |        |
|       | Maximum                          |             | 4.41    |        |
|       | Range                            |             | 2.33    |        |
|       | Interquartile Range              |             | .       |        |
|       | Skewness                         |             | .320    | 1.225  |
|       | Kurtosis                         |             | .       | .      |
| 6 Jam | Mean                             |             | 3.0533  | .59468 |
|       | 95% Confidence Interval for Mean | Lower Bound | .4946   |        |
|       |                                  | Upper Bound | 5.6120  |        |
|       | 5% Trimmed Mean                  |             | .       |        |
|       | Median                           |             | 3.0600  |        |
|       | Variance                         |             | 1.061   |        |
|       | Std. Deviation                   |             | 1.03002 |        |
|       | Minimum                          |             | 2.02    |        |
|       | Maximum                          |             | 4.08    |        |
|       | Range                            |             | 2.06    |        |
|       | Interquartile Range              |             | .       |        |
|       | Skewness                         |             | -.029   | 1.225  |
|       | Kurtosis                         |             | .       | .      |

### Tests of Normality

|             | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------|-----------|---------------------------------|----|------|--------------|----|------|
|             |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Waktu Larut | 0 Jam     | .219                            | 3  | .    | .987         | 3  | .780 |
|             | 2 Jam     | .367                            | 3  | .    | .794         | 3  | .100 |
|             | 4 Jam     | .195                            | 3  | .    | .996         | 3  | .882 |
|             | 6 Jam     | .175                            | 3  | .    | 1.000        | 3  | .989 |

### Test of Homogeneity of Variances

Waktu Larut

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.619            | 3   | 8   | .260 |

### ANOVA

Waktu Larut

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 8.087          | 3  | 2.696       | 3.905 | .055 |
| Within Groups  | 5.522          | 8  | .690        |       |      |
| Total          | 13.609         | 11 |             |       |      |

### Multiple Comparisons

Dependent Variable: Waktu Larut

Tukey HSD

| (I) Perlakuan | (J) Perlakuan | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | Upper Bound |
|---------------|---------------|-----------------------|------------|------|-------------------------------------|-------------|
| 0 Jam         | 2 Jam         | 1.41333               | .67837     | .237 | -.7590                              | 3.5857      |
|               | 4 Jam         | 1.93000               | .67837     | .083 | -.2424                              | 4.1024      |
|               | 6 Jam         | 2.08000               | .67837     | .061 | -.0924                              | 4.2524      |
| 2 Jam         | 0 Jam         | -1.41333              | .67837     | .237 | -3.5857                             | .7590       |
|               | 4 Jam         | .51667                | .67837     | .869 | -1.6557                             | 2.6890      |
|               | 6 Jam         | .66667                | .67837     | .763 | -1.5057                             | 2.8390      |
| 4 Jam         | 0 Jam         | -1.93000              | .67837     | .083 | -4.1024                             | .2424       |
|               | 2 Jam         | -.51667               | .67837     | .869 | -2.6890                             | 1.6557      |
|               | 6 Jam         | .15000                | .67837     | .996 | -2.0224                             | 2.3224      |
| 6 Jam         | 0 Jam         | -2.08000              | .67837     | .061 | -4.2524                             | .0924       |
|               | 2 Jam         | -.66667               | .67837     | .763 | -2.8390                             | 1.5057      |
|               | 4 Jam         | -.15000               | .67837     | .996 | -2.3224                             | 2.0224      |

### Waktu Larut

Tukey HSD<sup>a</sup>

| Perlakuan | N | Subset for alpha = 0.05 |
|-----------|---|-------------------------|
| 6 Jam     | 3 | 3.0533                  |
| 4 Jam     | 3 | 3.2033                  |
| 2 Jam     | 3 | 3.7200                  |
| 0 Jam     | 3 | 5.1333                  |
| Sig.      |   | .061                    |

### Ukuran Partikel

#### Tests of Normality

|                        | Perlakuan Pengendapan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------------------|-----------------------|---------------------------------|----|------|--------------|----|------|
|                        |                       | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Ukuran Partikel 250 µm | 0 Jam                 | .257                            | 3  | .    | .961         | 3  | .619 |
|                        | 2 Jam                 | .341                            | 3  | .    | .848         | 3  | .234 |
|                        | 4 Jam                 | .331                            | 3  | .    | .865         | 3  | .280 |
|                        | 6 Jam                 | .232                            | 3  | .    | .980         | 3  | .727 |
| Ukuran Partikel 425 µm | 0 Jam                 | .358                            | 3  | .    | .813         | 3  | .146 |
|                        | 2 Jam                 | .224                            | 3  | .    | .984         | 3  | .761 |
|                        | 4 Jam                 | .363                            | 3  | .    | .802         | 3  | .120 |

|                         |       |      |   |   |       |   |      |
|-------------------------|-------|------|---|---|-------|---|------|
| Ukuran Partikel 850 µm  | 6 Jam | .334 | 3 | . | .861  | 3 | .269 |
|                         | 0 Jam | .348 | 3 | . | .832  | 3 | .194 |
|                         | 2 Jam | .358 | 3 | . | .812  | 3 | .144 |
|                         | 4 Jam | .206 | 3 | . | .993  | 3 | .836 |
|                         | 6 Jam | .258 | 3 | . | .960  | 3 | .618 |
| Ukuran Partikel 1.18 mm | 0 Jam | .347 | 3 | . | .835  | 3 | .201 |
|                         | 2 Jam | .383 | 3 | . | .755  | 3 | .010 |
|                         | 4 Jam | .175 | 3 | . | 1.000 | 3 | .998 |
|                         | 6 Jam | .327 | 3 | . | .871  | 3 | .300 |
|                         | 0 Jam | .258 | 3 | . | .960  | 3 | .616 |
| Ukuran Partikel 2.36 mm | 2 Jam | .385 | 3 | . | .750  | 3 | .000 |
|                         | 4 Jam | .385 | 3 | . | .750  | 3 | .000 |
|                         | 6 Jam | .385 | 3 | . | .750  | 3 | .000 |
|                         | 0 Jam | .385 | 3 | . | .750  | 3 | .000 |
|                         | 6 Jam | .385 | 3 | . | .750  | 3 | .000 |

a. Lilliefors Significance Correction

### Test Statistics<sup>a,b</sup>

|                | Ukuran Partikel<br>250 µm | Ukuran Partikel<br>425 µm | Ukuran Partikel<br>850 µm | Ukuran Partikel<br>1.18 mm | Ukuran Partikel<br>2.36 mm |
|----------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|
| Chi-Square     | 1.974                     | 3.000                     | .436                      | 1.564                      | 2.951                      |
| df             | 3                         | 3                         | 3                         | 3                          | 3                          |
| Asymp.<br>Sig. | .578                      | .392                      | .933                      | .668                       | .399                       |

a. Kruskal Wallis Test

b. Grouping Variable: Perlakuan Pengendapan

### Ranks

|                         | Perlakuan Pengendapan   | N     | Mean Rank |
|-------------------------|-------------------------|-------|-----------|
| Ukuran Partikel 250 µm  | 0 Jam                   | 3     | 5.00      |
|                         | 2 Jam                   | 3     | 8.67      |
|                         | 4 Jam                   | 3     | 5.33      |
|                         | 6 Jam                   | 3     | 7.00      |
|                         | Total                   | 12    |           |
|                         | Ukuran Partikel 425 µm  | 0 Jam | 3         |
| 2 Jam                   |                         | 3     | 9.33      |
| 4 Jam                   |                         | 3     | 4.33      |
| 6 Jam                   |                         | 3     | 6.33      |
| Total                   |                         | 12    |           |
| Ukuran Partikel 850 µm  |                         | 0 Jam | 3         |
|                         | 2 Jam                   | 3     | 5.67      |
|                         | 4 Jam                   | 3     | 7.33      |
|                         | 6 Jam                   | 3     | 6.00      |
|                         | Total                   | 12    |           |
|                         | Ukuran Partikel 1.18 mm | 0 Jam | 3         |
| 2 Jam                   |                         | 3     | 5.33      |
| 4 Jam                   |                         | 3     | 8.67      |
| 6 Jam                   |                         | 3     | 6.33      |
| Total                   |                         | 12    |           |
| Ukuran Partikel 2.36 mm |                         | 0 Jam | 3         |
|                         | 2 Jam                   | 3     | 5.00      |
|                         | 4 Jam                   | 3     | 6.00      |
|                         | 6 Jam                   | 3     | 5.67      |
|                         | Total                   | 12    |           |



## Antioksidan

### Case Processing Summary

|             | Pengendapan       | Cases |         |         |         |       |         |
|-------------|-------------------|-------|---------|---------|---------|-------|---------|
|             |                   | Valid |         | Missing |         | Total |         |
|             |                   | N     | Percent | N       | Percent | N     | Percent |
| Antioksidan | Pengendapan 0 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |
|             | Pengendapan 2 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |
|             | Pengendapan 4 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |
|             | Pengendapan 6 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |

### Descriptives

|                                  | Pengendapan       |                                  |                   | Statistic | Std. Error |
|----------------------------------|-------------------|----------------------------------|-------------------|-----------|------------|
| Antioksidan                      | Pengendapan 0 Jam | Mean                             |                   | 124.2333  | 17.50310   |
|                                  |                   | 95% Confidence Interval for Mean | Lower Bound       | 48.9236   |            |
|                                  |                   |                                  | Upper Bound       | 199.5431  |            |
|                                  |                   |                                  | 5% Trimmed Mean   | .         |            |
|                                  |                   | Median                           |                   | 138.8300  |            |
|                                  |                   | Variance                         |                   | 919.075   |            |
|                                  |                   | Std. Deviation                   |                   | 30.31625  |            |
|                                  |                   | Minimum                          |                   | 89.38     |            |
|                                  |                   | Maximum                          |                   | 144.49    |            |
|                                  |                   | Range                            |                   | 55.11     |            |
|                                  |                   | Interquartile Range              |                   | .         |            |
|                                  |                   | Skewness                         |                   | -1.664    | 1.225      |
|                                  |                   | Kurtosis                         |                   | .         | .          |
|                                  |                   |                                  | Pengendapan 2 Jam | Mean      |            |
| 95% Confidence Interval for Mean | Lower Bound       |                                  |                   | 84.3418   |            |
|                                  | Upper Bound       |                                  |                   | 224.7382  |            |
|                                  | 5% Trimmed Mean   |                                  |                   | .         |            |
| Median                           |                   |                                  |                   | 143.9200  |            |
| Variance                         |                   |                                  |                   | 798.547   |            |
| Std. Deviation                   |                   |                                  |                   | 28.25857  |            |
| Minimum                          |                   |                                  |                   | 133.13    |            |
| Maximum                          |                   |                                  |                   | 186.57    |            |
| Range                            |                   |                                  |                   | 53.44     |            |
| Interquartile Range              |                   |                                  |                   | .         |            |
| Skewness                         |                   |                                  |                   | 1.452     | 1.225      |
| Kurtosis                         |                   |                                  |                   | .         | .          |
|                                  | Pengendapan 4 Jam |                                  |                   | Mean      |            |
|                                  |                   | 95% Confidence Interval for Mean | Lower Bound       | 143.4347  |            |
|                                  |                   |                                  | Upper Bound       | 172.3119  |            |
|                                  |                   |                                  |                   |           |            |

|  |                   |                                  |             |          |          |       |
|--|-------------------|----------------------------------|-------------|----------|----------|-------|
|  |                   | 5% Trimmed Mean                  |             | .        |          |       |
|  |                   | Median                           |             | 158.2100 |          |       |
|  |                   | Variance                         |             | 33.783   |          |       |
|  |                   | Std. Deviation                   |             | 5.81232  |          |       |
|  |                   | Minimum                          |             | 151.90   |          |       |
|  |                   | Maximum                          |             | 163.51   |          |       |
|  |                   | Range                            |             | 11.61    |          |       |
|  |                   | Interquartile Range              |             | .        |          |       |
|  |                   | Skewness                         |             | -.260    | 1.225    |       |
|  |                   | Kurtosis                         |             | .        | .        |       |
|  | Pengendapan 6 Jam | Mean                             |             | 217.0700 | 22.78237 |       |
|  |                   | 95% Confidence Interval for Mean | Lower Bound |          | 119.0454 |       |
|  |                   |                                  | Upper Bound |          | 315.0946 |       |
|  |                   | 5% Trimmed Mean                  |             |          | .        |       |
|  |                   | Median                           |             |          | 201.6600 |       |
|  |                   | Variance                         |             |          | 1557.109 |       |
|  |                   | Std. Deviation                   |             |          | 39.46022 |       |
|  |                   | Minimum                          |             |          | 187.64   |       |
|  |                   | Maximum                          |             |          | 261.91   |       |
|  |                   | Range                            |             |          | 74.27    |       |
|  |                   | Interquartile Range              |             |          | .        |       |
|  |                   | Skewness                         |             |          | 1.489    | 1.225 |
|  |                   | Kurtosis                         |             |          | .        | .     |

### Tests of Normality

|             | Pengendapan       | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------|-------------------|---------------------------------|----|------|--------------|----|------|
|             |                   | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Antioksidan | Pengendapan 0 Jam | .352                            | 3  | .    | .826         | 3  | .179 |
|             | Pengendapan 2 Jam | .313                            | 3  | .    | .894         | 3  | .367 |
|             | Pengendapan 4 Jam | .190                            | 3  | .    | .997         | 3  | .904 |
|             | Pengendapan 6 Jam | .319                            | 3  | .    | .886         | 3  | .341 |

### Descriptives

| Antioksidan       |    |          |                |            |                                  |             |         |         |
|-------------------|----|----------|----------------|------------|----------------------------------|-------------|---------|---------|
|                   | N  | Mean     | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|                   |    |          |                |            | Lower Bound                      | Upper Bound |         |         |
| Pengendapan 0 Jam | 3  | 124.2333 | 30.31625       | 17.50310   | 48.9236                          | 199.5431    | 89.38   | 144.49  |
| Pengendapan 2 Jam | 3  | 154.5400 | 28.25857       | 16.31509   | 84.3418                          | 224.7382    | 133.13  | 186.57  |
| Pengendapan 4 Jam | 3  | 157.8733 | 5.81232        | 3.35574    | 143.4347                         | 172.3119    | 151.90  | 163.51  |
| Pengendapan 6 Jam | 3  | 217.0700 | 39.46022       | 22.78237   | 119.0454                         | 315.0946    | 187.64  | 261.91  |
| Total             | 12 | 163.4292 | 42.83970       | 12.36676   | 136.2101                         | 190.6482    | 89.38   | 261.91  |

### Test of Homogeneity of Variances

Antioksidan

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 3.251            | 3   | 8   | .081 |

### ANOVA

Antioksidan

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 13570.611      | 3  | 4523.537    | 5.469 | .024 |
| Within Groups  | 6617.028       | 8  | 827.129     |       |      |
| Total          | 20187.639      | 11 |             |       |      |

### Multiple Comparisons

Dependent Variable: Antioksidan

Tukey HSD

| (I) Pengendapan   | (J) Pengendapan   | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|-------------------|-------------------|-----------------------|------------|------|-------------------------------------|-------------------------------------|
| Pengendapan 0 Jam | Pengendapan 2 Jam | -30.30667             | 23.48231   | .593 | -105.5053                           | 44.8920                             |
|                   | Pengendapan 4 Jam | -33.64000             | 23.48231   | .515 | -108.8386                           | 41.5586                             |
|                   | Pengendapan 6 Jam | -92.83667*            | 23.48231   | .018 | -168.0353                           | -17.6380                            |
| Pengendapan 2 Jam | Pengendapan 0 Jam | 30.30667              | 23.48231   | .593 | -44.8920                            | 105.5053                            |
|                   | Pengendapan 4 Jam | -3.33333              | 23.48231   | .999 | -78.5320                            | 71.8653                             |
|                   | Pengendapan 6 Jam | -62.53000             | 23.48231   | .107 | -137.7286                           | 12.6686                             |
| Pengendapan 4 Jam | Pengendapan 0 Jam | 33.64000              | 23.48231   | .515 | -41.5586                            | 108.8386                            |
|                   | Pengendapan 2 Jam | 3.33333               | 23.48231   | .999 | -71.8653                            | 78.5320                             |
|                   | Pengendapan 6 Jam | -59.19667             | 23.48231   | .131 | -134.3953                           | 16.0020                             |
| Pengendapan 6 Jam | Pengendapan 0 Jam | 92.83667*             | 23.48231   | .018 | 17.6380                             | 168.0353                            |
|                   | Pengendapan 2 Jam | 62.53000              | 23.48231   | .107 | -12.6686                            | 137.7286                            |
|                   | Pengendapan 4 Jam | 59.19667              | 23.48231   | .131 | -16.0020                            | 134.3953                            |

### Antioksidan

Tukey HSD<sup>a</sup>

| Pengendapan       | N | Subset for alpha = 0.05 |          |
|-------------------|---|-------------------------|----------|
|                   |   | 1                       | 2        |
| Pengendapan 0 Jam | 3 | 124.2333                |          |
| Pengendapan 2 Jam | 3 | 154.5400                | 154.5400 |
| Pengendapan 4 Jam | 3 | 157.8733                | 157.8733 |
| Pengendapan 6 Jam | 3 |                         | 217.0700 |
| Sig.              |   | .515                    | .107     |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

## Lampiran 34. Uji Statistika One Way ANOVA Sesudah Stabilitas

### A. Kadar Air

#### Tests of Normality

|           | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |       |
|-----------|-----------|---------------------------------|----|------|--------------|----|-------|
|           |           | Statistic                       | df | Sig. | Statistic    | df | Sig.  |
| Kadar Air | 0 Jam     | .236                            | 3  | .    | .977         | 3  | .712  |
|           | 2 Jam     | .341                            | 3  | .    | .847         | 3  | .232  |
|           | 4 Jam     | .177                            | 3  | .    | 1.000        | 3  | .974  |
|           | 6 Jam     | .175                            | 3  | .    | 1.000        | 3  | 1.000 |

#### Descriptives

|                                  | Perlakuan   |                                  | Statistic   | Std. Error |        |
|----------------------------------|-------------|----------------------------------|-------------|------------|--------|
| Kadar Air                        | 0 Jam       | Mean                             | 1.1467      | .22191     |        |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | .1919      |        |
|                                  |             |                                  | Upper Bound | 2.1015     |        |
|                                  |             | 5% Trimmed Mean                  | .           |            |        |
|                                  |             | Median                           | 1.0800      |            |        |
|                                  |             | Variance                         | .148        |            |        |
|                                  |             | Std. Deviation                   | .38436      |            |        |
|                                  |             | Minimum                          | .80         |            |        |
|                                  |             | Maximum                          | 1.56        |            |        |
|                                  |             | Range                            | .76         |            |        |
|                                  |             | Interquartile Range              | .           |            |        |
|                                  |             | Skewness                         | .757        | 1.225      |        |
|                                  |             | Kurtosis                         | .           | .          |        |
|                                  |             | 2 Jam                            | 2 Jam       | Mean       | 1.0333 |
| 95% Confidence Interval for Mean | Lower Bound |                                  |             | .0075      |        |
|                                  | Upper Bound |                                  |             | 2.0592     |        |
| 5% Trimmed Mean                  | .           |                                  |             |            |        |
| Median                           | 1.2200      |                                  |             |            |        |
| Variance                         | .171        |                                  |             |            |        |
| Std. Deviation                   | .41296      |                                  |             |            |        |
| Minimum                          | .56         |                                  |             |            |        |
| Maximum                          | 1.32        |                                  |             |            |        |
| Range                            | .76         |                                  |             |            |        |
| Interquartile Range              | .           |                                  |             |            |        |
| Skewness                         | -1.618      |                                  |             | 1.225      |        |
| Kurtosis                         | .           |                                  |             | .          |        |
| 4 Jam                            | 4 Jam       |                                  |             | Mean       | .9533  |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | -.1149     |        |
|                                  |             |                                  | Upper Bound | 2.0216     |        |
|                                  |             | 5% Trimmed Mean                  | .           |            |        |
|                                  |             | Median                           | .9600       |            |        |

|       |                                  |             |        |        |
|-------|----------------------------------|-------------|--------|--------|
|       | Variance                         |             | .185   |        |
|       | Std. Deviation                   |             | .43004 |        |
|       | Minimum                          |             | .52    |        |
|       | Maximum                          |             | 1.38   |        |
|       | Range                            |             | .86    |        |
|       | Interquartile Range              |             | .      |        |
|       | Skewness                         |             | -.070  | 1.225  |
|       | Kurtosis                         |             | .      | .      |
| 6 Jam | Mean                             |             | .8000  | .08083 |
|       | 95% Confidence Interval for Mean | Lower Bound | .4522  |        |
|       |                                  | Upper Bound | 1.1478 |        |
|       | 5% Trimmed Mean                  |             | .      |        |
|       | Median                           |             | .8000  |        |
|       | Variance                         |             | .020   |        |
|       | Std. Deviation                   |             | .14000 |        |
|       | Minimum                          |             | .66    |        |
|       | Maximum                          |             | .94    |        |
|       | Range                            |             | .28    |        |
|       | Interquartile Range              |             | .      |        |
|       | Skewness                         |             | .000   | 1.225  |
|       | Kurtosis                         |             | .      | .      |

### Test of Homogeneity of Variances

Kadar Air

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.017            | 3   | 8   | .435 |

### ANOVA

Kadar Air

|                | Sum of Squares | df | Mean Square | F    | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | .191           | 3  | .064        | .487 | .701 |
| Within Groups  | 1.046          | 8  | .131        |      |      |
| Total          | 1.237          | 11 |             |      |      |

### Multiple Comparisons

Dependent Variable: Kadar Air

Tukey HSD

| (I) Perlakuan | (J) Perlakuan | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | Upper Bound |
|---------------|---------------|-----------------------|------------|------|-------------------------------------|-------------|
| 0 Jam         | 2 Jam         | .11333                | .29518     | .979 | -.8319                              | 1.0586      |
|               | 4 Jam         | .19333                | .29518     | .911 | -.7519                              | 1.1386      |
|               | 6 Jam         | .34667                | .29518     | .658 | -.5986                              | 1.2919      |
| 2 Jam         | 0 Jam         | -.11333               | .29518     | .979 | -1.0586                             | .8319       |
|               | 4 Jam         | .08000                | .29518     | .992 | -.8653                              | 1.0253      |
|               | 6 Jam         | .23333                | .29518     | .857 | -.7119                              | 1.1786      |
| 4 Jam         | 0 Jam         | -.19333               | .29518     | .911 | -1.1386                             | .7519       |
|               | 2 Jam         | -.08000               | .29518     | .992 | -1.0253                             | .8653       |
|               | 6 Jam         | .15333                | .29518     | .952 | -.7919                              | 1.0986      |

|       |       |  |         |        |      |         |       |
|-------|-------|--|---------|--------|------|---------|-------|
| 6 Jam | 0 Jam |  | -.34667 | .29518 | .658 | -1.2919 | .5986 |
|       | 2 Jam |  | -.23333 | .29518 | .857 | -1.1786 | .7119 |
|       | 4 Jam |  | -.15333 | .29518 | .952 | -1.0986 | .7919 |

### Kadar Air

Tukey HSD<sup>a</sup>

| Perlakuan | N | Subset for alpha<br>= 0.05 |        |
|-----------|---|----------------------------|--------|
|           |   |                            | 1      |
| 6 Jam     | 3 |                            | .8000  |
| 4 Jam     | 3 |                            | .9533  |
| 2 Jam     | 3 |                            | 1.0333 |
| 0 Jam     | 3 |                            | 1.1467 |
| Sig.      |   |                            | .658   |

### B. Waktu Alir

#### Tests of Normality

|            | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|-----------|---------------------------------|----|------|--------------|----|------|
|            |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Waktu Alir | 0 Jam     | .340                            | 3  | .    | .848         | 3  | .235 |
|            | 2 Jam     | .314                            | 3  | .    | .893         | 3  | .363 |
|            | 4 Jam     | .292                            | 3  | .    | .923         | 3  | .463 |
|            | 6 Jam     | .385                            | 3  | .    | .750         | 3  | .000 |

a. Lilliefors Significance Correction

#### Test statistics<sup>a,b</sup>

| Waktu Alir  |       |
|-------------|-------|
| Chi-Square  | 3.013 |
| Df          | 3     |
| Asymp. Sig. | .390  |

a. Kruskal Wallis Test

b. Grouping Variable:

Perlakuan

#### Ranks

|            | Perlakuan | N | Mean Rank |
|------------|-----------|---|-----------|
| Waktu Alir | 0 Jam     | 3 | 9.00      |
|            | 2 Jam     | 3 | 6.67      |
|            | 4 Jam     | 3 | 6.33      |
|            | 6 Jam     | 3 | 4.00      |
|            | Total     |   | 12        |

### C. Sudut Diam

#### Tests of Normality

|            | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|-----------|---------------------------------|----|------|--------------|----|------|
|            |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Sudut Diam | 0 Jam     | .176                            | 3  | .    | 1.000        | 3  | .980 |
|            | 2 Jam     | .189                            | 3  | .    | .998         | 3  | .909 |
|            | 4 Jam     | .348                            | 3  | .    | .833         | 3  | .196 |
|            | 6 Jam     | .349                            | 3  | .    | .831         | 3  | .192 |

## Descriptives

|                     |         | Perlakuan                        | Statistic   | Std. Error                       |             |         |
|---------------------|---------|----------------------------------|-------------|----------------------------------|-------------|---------|
| Sudut Diam          | 0 Jam   | Mean                             | 26.4600     | .48211                           |             |         |
|                     |         | 95% Confidence Interval for Mean | Lower Bound | 24.3856                          |             |         |
|                     |         |                                  | Upper Bound | 28.5344                          |             |         |
|                     |         | 5% Trimmed Mean                  | .           |                                  |             |         |
|                     |         | Median                           | 26.4500     |                                  |             |         |
|                     |         | Variance                         | .697        |                                  |             |         |
|                     |         | Std. Deviation                   | .83504      |                                  |             |         |
|                     |         | Minimum                          | 25.63       |                                  |             |         |
|                     |         | Maximum                          | 27.30       |                                  |             |         |
|                     |         | Range                            | 1.67        |                                  |             |         |
|                     |         | Interquartile Range              | .           |                                  |             |         |
|                     |         | Skewness                         | .054        | 1.225                            |             |         |
|                     |         | Kurtosis                         | .           |                                  |             |         |
|                     |         |                                  | 2 Jam       | Mean                             | 26.1200     | .31501  |
|                     |         |                                  |             | 95% Confidence Interval for Mean | Lower Bound | 24.7646 |
| Upper Bound         | 27.4754 |                                  |             |                                  |             |         |
| 5% Trimmed Mean     | .       |                                  |             |                                  |             |         |
| Median              | 26.0900 |                                  |             |                                  |             |         |
| Variance            | .298    |                                  |             |                                  |             |         |
| Std. Deviation      | .54562  |                                  |             |                                  |             |         |
| Minimum             | 25.59   |                                  |             |                                  |             |         |
| Maximum             | 26.68   |                                  |             |                                  |             |         |
| Range               | 1.09    |                                  |             |                                  |             |         |
| Interquartile Range | .       |                                  |             |                                  |             |         |
| Skewness            | .247    |                                  |             | 1.225                            |             |         |
| Kurtosis            | .       |                                  |             |                                  |             |         |
|                     | 4 Jam   |                                  |             | Mean                             | 25.4433     | .33844  |
|                     |         |                                  |             | 95% Confidence Interval for Mean | Lower Bound | 23.9871 |
|                     |         | Upper Bound                      | 26.8995     |                                  |             |         |
|                     |         | 5% Trimmed Mean                  | .           |                                  |             |         |
|                     |         | Median                           | 25.7200     |                                  |             |         |
|                     |         | Variance                         | .344        |                                  |             |         |
|                     |         | Std. Deviation                   | .58620      |                                  |             |         |
|                     |         | Minimum                          | 24.77       |                                  |             |         |
|                     |         | Maximum                          | 25.84       |                                  |             |         |
|                     |         | Range                            | 1.07        |                                  |             |         |
|                     |         | Interquartile Range              | .           |                                  |             |         |
|                     |         | Skewness                         | -1.651      | 1.225                            |             |         |
|                     |         | Kurtosis                         | .           |                                  |             |         |
|                     |         |                                  | 6 Jam       | Mean                             | 25.1700     | .71863  |
|                     |         |                                  |             | 95% Confidence Interval for Mean | Lower Bound | 22.0780 |
| Upper Bound         | 28.2620 |                                  |             |                                  |             |         |
| 5% Trimmed Mean     | .       |                                  |             |                                  |             |         |

|                     |         |       |
|---------------------|---------|-------|
| Median              | 25.7600 |       |
| Variance            | 1.549   |       |
| Std. Deviation      | 1.24471 |       |
| Minimum             | 23.74   |       |
| Maximum             | 26.01   |       |
| Range               | 2.27    |       |
| Interquartile Range | .       |       |
| Skewness            | -1.654  | 1.225 |
| Kurtosis            | .       | .     |

### Test of Homogeneity of Variances

Sudut Diam

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.471            | 3   | 8   | .294 |

### ANOVA

Sudut Diam

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 3.186          | 3  | 1.062       | 1.471 | .294 |
| Within Groups  | 5.776          | 8  | .722        |       |      |
| Total          | 8.962          | 11 |             |       |      |

### Multiple Comparisons

Dependent Variable: Sudut Diam

Tukey HSD

| (I) Perlakuan | (J) Perlakuan | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---------------|---------------|-----------------------|------------|------|-------------------------|-------------|
|               |               |                       |            |      | Lower Bound             | Upper Bound |
| 0 Jam         | 2 Jam         | .34000                | .69377     | .959 | -1.8817                 | 2.5617      |
|               | 4 Jam         | 1.01667               | .69377     | .498 | -1.2050                 | 3.2384      |
|               | 6 Jam         | 1.29000               | .69377     | .316 | -.9317                  | 3.5117      |
| 2 Jam         | 0 Jam         | -.34000               | .69377     | .959 | -2.5617                 | 1.8817      |
|               | 4 Jam         | .67667                | .69377     | .767 | -1.5450                 | 2.8984      |
|               | 6 Jam         | .95000                | .69377     | .550 | -1.2717                 | 3.1717      |
| 4 Jam         | 0 Jam         | -1.01667              | .69377     | .498 | -3.2384                 | 1.2050      |
|               | 2 Jam         | -.67667               | .69377     | .767 | -2.8984                 | 1.5450      |
|               | 6 Jam         | .27333                | .69377     | .978 | -1.9484                 | 2.4950      |
| 6 Jam         | 0 Jam         | -1.29000              | .69377     | .316 | -3.5117                 | .9317       |
|               | 2 Jam         | -.95000               | .69377     | .550 | -3.1717                 | 1.2717      |
|               | 4 Jam         | -.27333               | .69377     | .978 | -2.4950                 | 1.9484      |

### Sudut Diam

Tukey HSD<sup>a</sup>

| Perlakuan | N | Subset for alpha = 0.05 |
|-----------|---|-------------------------|
| 6 Jam     | 3 | 25.1700                 |
| 4 Jam     | 3 | 25.4433                 |
| 2 Jam     | 3 | 26.1200                 |
| 0 Jam     | 3 | 26.4600                 |
| Sig.      |   | .316                    |



## D. Waktu Larut

### Tests of Normality

|             | Perlakuan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------|-----------|---------------------------------|----|------|--------------|----|------|
|             |           | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Waktu Larut | 0 Jam     | .267                            | 3  | .    | .952         | 3  | .576 |
|             | 2 Jam     | .285                            | 3  | .    | .931         | 3  | .494 |
|             | 4 Jam     | .254                            | 3  | .    | .963         | 3  | .633 |
|             | 6 Jam     | .298                            | 3  | .    | .916         | 3  | .437 |

### Descriptives

|                                  | Perlakuan   |                                  | Statistic   | Std. Error |        |
|----------------------------------|-------------|----------------------------------|-------------|------------|--------|
| Waktu Larut                      | 0 Jam       | Mean                             | 3.4867      | .85526     |        |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | -.1932     |        |
|                                  |             |                                  | Upper Bound | 7.1666     |        |
|                                  |             | 5% Trimmed Mean                  | .           |            |        |
|                                  |             | Median                           | 3.1100      |            |        |
|                                  |             | Variance                         | 2.194       |            |        |
|                                  |             | Std. Deviation                   | 1.48136     |            |        |
|                                  |             | Minimum                          | 2.23        |            |        |
|                                  |             | Maximum                          | 5.12        |            |        |
|                                  |             | Range                            | 2.89        |            |        |
|                                  |             | Interquartile Range              | .           |            |        |
|                                  |             | Skewness                         | 1.070       | 1.225      |        |
|                                  |             | Kurtosis                         | .           | .          |        |
|                                  |             | 2 Jam                            | 2 Jam       | Mean       | 2.6000 |
| 95% Confidence Interval for Mean | Lower Bound |                                  |             | -.6045     |        |
|                                  | Upper Bound |                                  |             | 5.8045     |        |
| 5% Trimmed Mean                  | .           |                                  |             |            |        |
| Median                           | 2.2100      |                                  |             |            |        |
| Variance                         | 1.664       |                                  |             |            |        |
| Std. Deviation                   | 1.29000     |                                  |             |            |        |
| Minimum                          | 1.55        |                                  |             |            |        |
| Maximum                          | 4.04        |                                  |             |            |        |
| Range                            | 2.49        |                                  |             |            |        |
| Interquartile Range              | .           |                                  |             |            |        |
| Skewness                         | 1.236       |                                  |             | 1.225      |        |
| Kurtosis                         | .           |                                  |             | .          |        |
| 4 Jam                            | 4 Jam       |                                  |             | Mean       | 2.2700 |
|                                  |             | 95% Confidence Interval for Mean | Lower Bound | .1315      |        |
|                                  |             |                                  | Upper Bound | 4.4085     |        |
|                                  |             | 5% Trimmed Mean                  | .           |            |        |
|                                  |             | Median                           | 2.0800      |            |        |
|                                  |             | Variance                         | .741        |            |        |
|                                  |             | Std. Deviation                   | .86087      |            |        |
|                                  |             | Minimum                          | 1.52        |            |        |
|                                  |             | Maximum                          | 3.21        |            |        |

|       |                                  |        |        |
|-------|----------------------------------|--------|--------|
|       | Range                            | 1.69   |        |
|       | Interquartile Range              | .      |        |
|       | Skewness                         | .945   | 1.225  |
|       | Kurtosis                         | .      | .      |
| 6 Jam | Mean                             | 1.8333 | .35597 |
|       | 95% Confidence Interval for Mean |        |        |
|       | Lower Bound                      | .3017  |        |
|       | Upper Bound                      | 3.3649 |        |
|       | 5% Trimmed Mean                  | .      |        |
|       | Median                           | 2.0400 |        |
|       | Variance                         | .380   |        |
|       | Std. Deviation                   | .61655 |        |
|       | Minimum                          | 1.14   |        |
|       | Maximum                          | 2.32   |        |
|       | Range                            | 1.18   |        |
|       | Interquartile Range              | .      |        |
|       | Skewness                         | -1.339 | 1.225  |
|       | Kurtosis                         | .      | .      |

### Test of Homogeneity of Variances

Waktu Larut

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.110            | 3   | 8   | .400 |

### ANOVA

Waktu Larut

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 4.415          | 3  | 1.472       | 1.182 | .376 |
| Within Groups  | 9.960          | 8  | 1.245       |       |      |
| Total          | 14.375         | 11 |             |       |      |

### Multiple Comparisons

Dependent Variable: Waktu Larut

Tukey HSD

| (I)<br>Perlakuan | (J)<br>Perlakuan | Mean Difference (I-<br>J) | Std.<br>Error | Sig. | 95% Confidence Interval<br>Lower Bound | Upper Bound |
|------------------|------------------|---------------------------|---------------|------|--|-------------|
| 0 Jam            | 2 Jam            | .88667                    | .91102        | .768 | -2.0307                                | 3.8041      |
|                  | 4 Jam            | 1.21667                   | .91102        | .568 | -1.7007                                | 4.1341      |
|                  | 6 Jam            | 1.65333                   | .91102        | .334 | -1.2641                                | 4.5707      |
| 2 Jam            | 0 Jam            | -.88667                   | .91102        | .768 | -3.8041                                | 2.0307      |
|                  | 4 Jam            | .33000                    | .91102        | .983 | -2.5874                                | 3.2474      |
|                  | 6 Jam            | .76667                    | .91102        | .834 | -2.1507                                | 3.6841      |
| 4 Jam            | 0 Jam            | -1.21667                  | .91102        | .568 | -4.1341                                | 1.7007      |
|                  | 2 Jam            | -.33000                   | .91102        | .983 | -3.2474                                | 2.5874      |
|                  | 6 Jam            | .43667                    | .91102        | .962 | -2.4807                                | 3.3541      |
| 6 Jam            | 0 Jam            | -1.65333                  | .91102        | .334 | -4.5707                                | 1.2641      |
|                  | 2 Jam            | -.76667                   | .91102        | .834 | -3.6841                                | 2.1507      |
|                  | 4 Jam            | -.43667                   | .91102        | .962 | -3.3541                                | 2.4807      |

### Waktu Larut

Tukey HSD<sup>a</sup>

| Perlakuan | N | Subset for alpha<br>= 0.05<br>1 |
|-----------|---|---------------------------------|
| 6 Jam     | 3 | 1.8333                          |
| 4 Jam     | 3 | 2.2700                          |
| 2 Jam     | 3 | 2.6000                          |
| 0 Jam     | 3 | 3.4867                          |
| Sig.      |   | .334                            |

### E. Ukuran Partikel

#### Tests of Normality<sup>b,c</sup>

|                                   | Pengaruh Pengendapan | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-----------------------------------|----------------------|---------------------------------|----|------|--------------|----|------|
|                                   |                      | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Ukuran Partikel 250 $\mu\text{m}$ | 0 Jam                | .267                            | 3  | .    | .951         | 3  | .574 |
|                                   | 2 Jam                | .308                            | 3  | .    | .902         | 3  | .391 |
|                                   | 4 Jam                | .264                            | 3  | .    | .955         | 3  | .591 |
|                                   | 6 Jam                | .213                            | 3  | .    | .990         | 3  | .809 |
| Ukuran Partikel 425 $\mu\text{m}$ | 0 Jam                | .317                            | 3  | .    | .888         | 3  | .349 |
|                                   | 2 Jam                | .207                            | 3  | .    | .992         | 3  | .831 |
|                                   | 4 Jam                | .177                            | 3  | .    | 1.000        | 3  | .963 |
|                                   | 6 Jam                | .194                            | 3  | .    | .997         | 3  | .888 |
| Ukuran Partikel 850 $\mu\text{m}$ | 0 Jam                | .299                            | 3  | .    | .915         | 3  | .434 |
|                                   | 2 Jam                | .383                            | 3  | .    | .753         | 3  | .007 |
|                                   | 4 Jam                | .177                            | 3  | .    | 1.000        | 3  | .962 |
|                                   | 6 Jam                | .280                            | 3  | .    | .938         | 3  | .520 |
| Ukuran Partikel 1.18 mm           | 0 Jam                | .298                            | 3  | .    | .916         | 3  | .438 |
|                                   | 2 Jam                | .282                            | 3  | .    | .935         | 3  | .509 |
|                                   | 4 Jam                | .312                            | 3  | .    | .896         | 3  | .372 |
|                                   | 6 Jam                | .201                            | 3  | .    | .994         | 3  | .857 |
| Ukuran Partikel 2.36 mm           | 0 Jam                | .385                            | 3  | .    | .750         | 3  | .000 |
|                                   | 2 Jam                | .385                            | 3  | .    | .750         | 3  | .000 |

a. Lilliefors Significance Correction

b. Ukuran Partikel 2.36 mm is constant when Pengaruh Pengendapan = 4 Jam. It has been omitted.

c. Ukuran Partikel 2.36 mm is constant when Pengaruh Pengendapan = 6 Jam. It has been omitted.

#### Ranks

|                                   | Pengaruh Pengendapan | N  | Mean Rank |
|-----------------------------------|----------------------|----|-----------|
| Ukuran Partikel 250 $\mu\text{m}$ | 0 Jam                | 3  | 4.00      |
|                                   | 2 Jam                | 3  | 5.67      |
|                                   | 4 Jam                | 3  | 8.33      |
|                                   | 6 Jam                | 3  | 8.00      |
|                                   | Total                | 12 |           |
| Ukuran Partikel 425 $\mu\text{m}$ | 0 Jam                | 3  | 3.67      |
|                                   | 2 Jam                | 3  | 5.67      |
|                                   | 4 Jam                | 3  | 7.33      |
|                                   | 6 Jam                | 3  | 9.33      |

|                             |       |    |      |
|-----------------------------|-------|----|------|
|                             | Total | 12 |      |
| Ukuran Partikel 850 $\mu$ m | 0 Jam | 3  | 7.67 |
|                             | 2 Jam | 3  | 7.00 |
|                             | 4 Jam | 3  | 5.67 |
|                             | 6 Jam | 3  | 5.67 |
|                             | Total | 12 |      |
| Ukuran Partikel 1.18 mm     | 0 Jam | 3  | 9.67 |
|                             | 2 Jam | 3  | 8.00 |
|                             | 4 Jam | 3  | 3.67 |
|                             | 6 Jam | 3  | 4.67 |
|                             | Total | 12 |      |
| Ukuran Partikel 2.36 mm     | 0 Jam | 3  | 7.33 |
|                             | 2 Jam | 3  | 7.67 |
|                             | 4 Jam | 3  | 5.50 |
|                             | 6 Jam | 3  | 5.50 |
|                             | Total | 12 |      |

### Test Statistics<sup>a,b</sup>

|             | Ukuran Partikel<br>250 $\mu$ m | Ukuran Partikel<br>425 $\mu$ m | Ukuran Partikel<br>850 $\mu$ m | Ukuran Partikel<br>1.18 mm | Ukuran Partikel<br>2.36 mm |
|-------------|--------------------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|
| Chi-Square  | 2.897                          | 4.026                          | .692                           | 5.462                      | 2.212                      |
| df          | 3                              | 3                              | 3                              | 3                          | 3                          |
| Asymp. Sig. | .408                           | .259                           | .875                           | .141                       | .530                       |

a. Kruskal Wallis Test

b. Grouping Variable: Pengaruh Pengendapan

## F. Antioksidan

### Case Processing Summary

|             | Pengendapan       | Cases |         |         |         |       |         |
|-------------|-------------------|-------|---------|---------|---------|-------|---------|
|             |                   | Valid |         | Missing |         | Total |         |
|             |                   | N     | Percent | N       | Percent | N     | Percent |
| Antioksidan | Pengendapan 0 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |
|             | Pengendapan 2 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |
|             | Pengendapan 4 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |
|             | Pengendapan 6 Jam | 3     | 100.0%  | 0       | 0.0%    | 3     | 100.0%  |

### Descriptives

|             | Pengendapan       | Statistic                        | Std. Error              |
|-------------|-------------------|----------------------------------|-------------------------|
| Antioksidan | Pengendapan 0 Jam | Mean                             | 130.4867                |
|             |                   | 95% Confidence Interval for Mean | Lower Bound<br>84.1978  |
|             |                   |                                  | Upper Bound<br>176.7755 |
|             |                   | 5% Trimmed Mean                  | .                       |
|             |                   | Median                           | 137.2300                |
|             |                   | Variance                         | 347.217                 |
|             |                   | Std. Deviation                   | 18.63377                |

|                      |                                     |                |          |          |
|----------------------|-------------------------------------|----------------|----------|----------|
|                      | Minimum                             |                | 109.42   |          |
|                      | Maximum                             |                | 144.81   |          |
|                      | Range                               |                | 35.39    |          |
|                      | Interquartile Range                 |                | .        |          |
|                      | Skewness                            |                | -1.415   | 1.225    |
|                      | Kurtosis                            |                | .        | .        |
| Pengendapan 2<br>Jam | Mean                                |                | 156.8133 | 11.31484 |
|                      | 95% Confidence Interval for<br>Mean | Lower<br>Bound | 108.1295 |          |
|                      |                                     | Upper<br>Bound | 205.4971 |          |
|                      | 5% Trimmed Mean                     |                | .        |          |
|                      | Median                              |                | 147.3200 |          |
|                      | Variance                            |                | 384.077  |          |
|                      | Std. Deviation                      |                | 19.59787 |          |
|                      | Minimum                             |                | 143.77   |          |
|                      | Maximum                             |                | 179.35   |          |
|                      | Range                               |                | 35.58    |          |
|                      | Interquartile Range                 |                | .        |          |
|                      | Skewness                            |                | 1.668    | 1.225    |
|                      | Kurtosis                            |                | .        | .        |
| Pengendapan 4<br>Jam | Mean                                |                | 158.3667 | 3.55905  |
|                      | 95% Confidence Interval for<br>Mean | Lower<br>Bound | 143.0533 |          |
|                      |                                     | Upper<br>Bound | 173.6800 |          |
|                      | 5% Trimmed Mean                     |                | .        |          |
|                      | Median                              |                | 160.4100 |          |
|                      | Variance                            |                | 38.000   |          |
|                      | Std. Deviation                      |                | 6.16445  |          |
|                      | Minimum                             |                | 151.44   |          |
|                      | Maximum                             |                | 163.25   |          |
|                      | Range                               |                | 11.81    |          |
|                      | Interquartile Range                 |                | .        |          |
|                      | Skewness                            |                | -1.328   | 1.225    |
|                      | Kurtosis                            |                | .        | .        |
| Pengendapan 6<br>Jam | Mean                                |                | 239.1767 | 1.25953  |
|                      | 95% Confidence Interval for<br>Mean | Lower<br>Bound | 233.7574 |          |
|                      |                                     | Upper<br>Bound | 244.5960 |          |
|                      | 5% Trimmed Mean                     |                | .        |          |
|                      | Median                              |                | 240.3400 |          |
|                      | Variance                            |                | 4.759    |          |
|                      | Std. Deviation                      |                | 2.18157  |          |
|                      | Minimum                             |                | 236.66   |          |
|                      | Maximum                             |                | 240.53   |          |
|                      | Range                               |                | 3.87     |          |

|                     |        |       |
|---------------------|--------|-------|
| Interquartile Range | .      |       |
| Skewness            | -1.717 | 1.225 |
| Kurtosis            | .      | .     |

### Tests of Normality

|             | Pengendapan       | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------|-------------------|---------------------------------|----|------|--------------|----|------|
|             |                   | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Antioksidan | Pengendapan 0 Jam | .308                            | 3  | .    | .902         | 3  | .391 |
|             | Pengendapan 2 Jam | .353                            | 3  | .    | .824         | 3  | .173 |
|             | Pengendapan 4 Jam | .297                            | 3  | .    | .918         | 3  | .444 |
|             | Pengendapan 6 Jam | .370                            | 3  | .    | .787         | 3  | .083 |

### Descriptives

Antioksidan

|                   | N  | Mean     | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|-------------------|----|----------|----------------|------------|----------------------------------|-------------|---------|---------|
|                   |    |          |                |            | Lower Bound                      | Upper Bound |         |         |
| Pengendapan 0 Jam | 3  | 130.4867 | 18.63377       | 10.75821   | 84.1978                          | 176.7755    | 109.42  | 144.81  |
| Pengendapan 2 Jam | 3  | 156.8133 | 19.59787       | 11.31484   | 108.1295                         | 205.4971    | 143.77  | 179.35  |
| Pengendapan 4 Jam | 3  | 158.3667 | 6.16445        | 3.55905    | 143.0533                         | 173.6800    | 151.44  | 163.25  |
| Pengendapan 6 Jam | 3  | 239.1767 | 2.18157        | 1.25953    | 233.7574                         | 244.5960    | 236.66  | 240.53  |
| Total             | 12 | 171.2108 | 44.20852       | 12.76190   | 143.1221                         | 199.2996    | 109.42  | 240.53  |

### Test of Homogeneity of Variances

Antioksidan

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 5.203            | 3   | 8   | .028 |

### ANOVA

Antioksidan

|                | Sum of Squares | df | Mean Square | F      | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 19950.219      | 3  | 6650.073    | 34.365 | .000 |
| Within Groups  | 1548.107       | 8  | 193.513     |        |      |
| Total          | 21498.326      | 11 |             |        |      |

### Multiple Comparisons

Dependent Variable: Antioksidan

Tukey HSD

| (I) Pengendapan   | (J) Pengendapan   | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|-------------------|-------------------|-----------------------|------------|------|-------------------------|-------------|
|                   |                   |                       |            |      | Lower Bound             | Upper Bound |
| Pengendapan 0 Jam | Pengendapan 2 Jam | -26.32667             | 11.35821   | .173 | -62.6997                | 10.0463     |
|                   | Pengendapan 4 Jam | -27.88000             | 11.35821   | .143 | -64.2530                | 8.4930      |
|                   | Pengendapan 6 Jam | -108.69000            | 11.35821   | .000 | -145.0630               | -72.3170    |

|                   |                   |            |          |      |           |          |
|-------------------|-------------------|------------|----------|------|-----------|----------|
| Pengendapan 2 Jam | Pengendapan 0 Jam | 26.32667   | 11.35821 | .173 | -10.0463  | 62.6997  |
|                   | Pengendapan 4 Jam | -1.55333   | 11.35821 | .999 | -37.9263  | 34.8197  |
|                   | Pengendapan 6 Jam | -82.36333* | 11.35821 | .000 | -118.7363 | -45.9903 |
| Pengendapan 4 Jam | Pengendapan 0 Jam | 27.88000   | 11.35821 | .143 | -8.4930   | 64.2530  |
|                   | Pengendapan 2 Jam | 1.55333    | 11.35821 | .999 | -34.8197  | 37.9263  |
|                   | Pengendapan 6 Jam | -80.81000* | 11.35821 | .000 | -117.1830 | -44.4370 |
| Pengendapan 6 Jam | Pengendapan 0 Jam | 108.69000* | 11.35821 | .000 | 72.3170   | 145.0630 |
|                   | Pengendapan 2 Jam | 82.36333*  | 11.35821 | .000 | 45.9903   | 118.7363 |
|                   | Pengendapan 4 Jam | 80.81000*  | 11.35821 | .000 | 44.4370   | 117.1830 |

\*. The mean difference is significant at the 0.05 level.

### Antioksidan

Tukey HSD<sup>a</sup>

| Pengendapan       | N | Subset for alpha = 0.05 |          |
|-------------------|---|-------------------------|----------|
|                   |   | 1                       | 2        |
| Pengendapan 0 Jam | 3 | 130.4867                |          |
| Pengendapan 2 Jam | 3 | 156.8133                |          |
| Pengendapan 4 Jam | 3 | 158.3667                |          |
| Pengendapan 6 Jam | 3 |                         | 239.1767 |
| Sig.              |   | .143                    | 1.000    |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

**Lampiran 35. Paired Samples T-Test**

**Kadar air 0 jam**

**Tests of Normality**

|           | Uji Kadar Air      | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-----------|--------------------|---------------------------------|----|------|--------------|----|------|
|           |                    | Statistic                       | Df | Sig. | Statistic    | df | Sig. |
| Kadar Air | Sebelum Stabilitas | .202                            | 3  | .    | .994         | 3  | .853 |
|           | Sesudah Stabilitas | .236                            | 3  | .    | .977         | 3  | .712 |

**Paired Samples Statistics**

|        |                          | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|--------------------------|--------|---|----------------|-----------------|
| Pair 1 | Hasil Sebelum Stabilitas | 1.1233 | 3 | .48645         | .28085          |
|        | Hasil Sesudah Stabilitas | 1.1467 | 3 | .38436         | .22191          |

**Paired Samples Statistics**

|        |                          | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|--------------------------|--------|---|----------------|-----------------|
| Pair 1 | Hasil Sebelum Stabilitas | 1.1233 | 3 | .48645         | .28085          |
|        | Hasil Sesudah Stabilitas | 1.1467 | 3 | .38436         | .22191          |

**Paired Samples Test**

|        |   | Mean    | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t     | df | Sig. (2-tailed) |
|--------|---|---------|----------------|-----------------|---|--------|-------|----|-----------------|
|        |   |         |                |                 | Lower                                     | Upper  |       |    |                 |
| Pair 1 | Hasil Sebelum Stabilitas - Hasil Sesudah Stabilitas | -.02333 | .10693         | .06173          | -.28895                                   | .24229 | -.378 | 2  | .742            |

**Kadar air 2 jam**

**Tests of Normality**

|                 | Pengendapan 2 Jam            | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-----------------|------------------------------|---------------------------------|----|------|--------------|----|------|
|                 |                              | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Kadar Air 2 jam | Kadar Air Sebelum Stabilitas | .194                            | 3  | .    | .996         | 3  | .886 |
|                 | Kadar Air Sesudah Stabilitas | .341                            | 3  | .    | .847         | 3  | .232 |

**Paired Samples Statistics**

|        |           | Mean  | N | Std. Deviation | Std. Error Mean |
|--------|-----------|-------|---|----------------|-----------------|
| Pair 1 | Kadar Air | .9800 | 3 | .29052         | .16773          |



|            |        |   |        |        |
|------------|--------|---|--------|--------|
| Kadar AAir | 1.0333 | 3 | .41296 | .23842 |
|------------|--------|---|--------|--------|

### Paired Samples Correlations

|        |                        | N | Correlation | Sig. |
|--------|------------------------|---|-------------|------|
| Pair 1 | Kadar Air & Kadar AAir | 3 | .942        | .218 |

### Paired Samples Test

|        |                        | Mean    | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t     | df | Sig. (2-tailed) |
|--------|------------------------|---------|----------------|-----------------|---|--------|-------|----|-----------------|
|        |                        |         |                |                 | Lower                                     | Upper  |       |    |                 |
| Pair 1 | Kadar Air - Kadar AAir | -.05333 | .17010         | .09821          | -.47588                                   | .36921 | -.543 | 2  | .642            |

### Kadar Air 4 Jam

#### Tests of Normality

|                 |                              | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-----------------|------------------------------|---------------------------------|----|------|--------------|----|------|
|                 |                              | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Kadar Air 4 jam | Kadar Air Sebelum Stabilitas | .219                            | 3  | .    | .987         | 3  | .780 |
|                 | Kadar Air Sesudah Stabilitas | .177                            | 3  | .    | 1.000        | 3  | .974 |

### Paired Samples Statistics

|        |           | Mean  | N | Std. Deviation | Std. Error Mean |
|--------|-----------|-------|---|----------------|-----------------|
| Pair 1 | Kadar Air | .7867 | 3 | .35233         | .20342          |
|        | Kadar Air | .9533 | 3 | .43004         | .24828          |

### Paired Samples Correlations

|        |                       | N | Correlation | Sig. |
|--------|-----------------------|---|-------------|------|
| Pair 1 | Kadar Air & Kadar Air | 3 | .992        | .082 |

### Paired Samples Test

|        |                       | Mean   | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t     | df | Sig. (2-tailed) |
|--------|-----------------------|--------|----------------|-----------------|---|--------|-------|----|-----------------|
|        |                       |        |                |                 | Lower                                     | Upper  |       |    |                 |
| Pair 1 | Kadar Air - Kadar Air | .16667 | .09238         | .05333          | -.39614                                   | .06281 | 3.125 | 2  | .089            |

## Kadar Air 6 Jam

### Tests of Normality

|                 | Pengendapan 6 Jam            | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |       |
|-----------------|------------------------------|---------------------------------|----|------|--------------|----|-------|
|                 |                              | Statistic                       | df | Sig. | Statistic    | df | Sig.  |
| Kadar Air 6 jam | Kadar Air Sebelum Stabilitas | .238                            | 3  | .    | .976         | 3  | .702  |
|                 | Kadar Air Sesudah Stabilitas | .175                            | 3  | .    | 1.000        | 3  | 1.000 |

a. Lilliefors Significance Correction

### Paired Samples Statistics

|        |           | Mean  | N | Std. Deviation | Std. Error Mean |
|--------|-----------|-------|---|----------------|-----------------|
| Pair 1 | Kadar Air | .6000 | 3 | .33407         | .19287          |
|        | Kadar Air | .8000 | 3 | .14000         | .08083          |

### Paired Samples Correlations

|        |                       | N | Correlation | Sig. |
|--------|-----------------------|---|-------------|------|
| Pair 1 | Kadar Air & Kadar Air | 3 | .988        | .099 |

### Paired Samples Test

|        |                       | Mean    | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t      | df | Sig. (2-tailed) |
|--------|-----------------------|---------|----------------|-----------------|---|--------|--------|----|-----------------|
|        |                       |         |                |                 | Lower                                     | Upper  |        |    |                 |
| Pair 1 | Kadar Air - Kadar Air | -.20000 | .19698         | .11372          | -.68932                                   | .28932 | -1.759 | 2  | .221            |

## Waktu Alir

Perlakuan Pengendapan 0 Jam

### Tests of Normality

|                  | Pengendapan 0 Jam             | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                  |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Waktu Alir 0 jam | Waktu Alir Sebelum Stabilitas | .282                            | 3  | .    | .936         | 3  | .510 |
|                  | Waktu Alir Sesudah Stabilitas | .340                            | 3  | .    | .848         | 3  | .235 |

### Paired Samples Statistics

|        |                  | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Alir 0 Jam | 1.2833 | 3 | .28431         | .16415          |
|        | Waktu Alir 0 Jam | 1.3433 | 3 | .08145         | .04702          |

### Paired Samples Correlations

|        |                                     | N | Correlation | Sig. |
|--------|-------------------------------------|---|-------------|------|
| Pair 1 | Waktu Alir 0 Jam & Waktu Alir 0 Jam | 3 | .133        | .915 |

### Paired Samples Test

|        |                                     | Paired Differences |                |                 |   |        |       |    |                 |
|--------|-------------------------------------|--------------------|----------------|-----------------|---|--------|-------|----|-----------------|
|        |                                     | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t     | df | Sig. (2-tailed) |
|        |                                     |                    |                |                 | Lower                                     | Upper  |       |    |                 |
| Pair 1 | Waktu Alir 0 Jam - Waktu Alir 0 Jam | -.06000            | .28513         | .16462          | -.76831                                   | .64831 | -.364 | 2  | .750            |

Perlakuan Pengendalian 2 Jam

### Tests of Normality

|                  |                               | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                  |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
|                  | Pengendalian 2 Jam            |                                 |    |      |              |    |      |
| Waktu Alir 2 jam | Waktu Alir Sebelum Stabilitas | .253                            | 3  | .    | .964         | 3  | .637 |
|                  | Waktu Alir Sesudah Stabilitas | .314                            | 3  | .    | .893         | 3  | .363 |

### Paired Samples Statistics

|        |                  | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Alir 2 Jam | 1.2333 | 3 | .15275         | .08819          |
|        | Waktu Alir 2 Jam | 1.3000 | 3 | .26458         | .15275          |

### Paired Samples Correlations

|        |                                     | N | Correlation | Sig. |
|--------|-------------------------------------|---|-------------|------|
| Pair 1 | Waktu Alir 2 Jam & Waktu Alir 2 Jam | 3 | .990        | .091 |

### Paired Samples Test

|        |                                     | Paired Differences |                |                 |   |        |       |    |                 |
|--------|-------------------------------------|--------------------|----------------|-----------------|---|--------|-------|----|-----------------|
|        |                                     | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t     | df | Sig. (2-tailed) |
|        |                                     |                    |                |                 | Lower                                     | Upper  |       |    |                 |
| Pair 1 | Waktu Alir 2 Jam - Waktu Alir 2 Jam | .06667             | .11547         | .06667          | -.22018                                   | .35351 | 1.000 | 2  | .423            |

Perlakuan Pengendapan 4 Jam

**Tests of Normality**

|                   |                               | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Pengendapan 4 Jam |                               |                                 |    |      |              |    |      |
| Waktu Alir 4 jam  | Waktu Alir Sebelum Stabilitas | .314                            | 3  | .    | .893         | 3  | .363 |
|                   | Waktu Alir Sesudah Stabilitas | .292                            | 3  | .    | .923         | 3  | .463 |

**Paired Samples Statistics**

|        |                  | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Alir 4 Jam | 1.1500 | 3 | .13229         | .07638          |
|        | Waktu Alir 4 Jam | 1.2667 | 3 | .20817         | .12019          |

**Paired Samples Correlations**

|        |                                     | N | Correlation | Sig. |
|--------|-------------------------------------|---|-------------|------|
| Pair 1 | Waktu Alir 4 Jam & Waktu Alir 4 Jam | 3 | .545        | .633 |

**Paired Samples Test**

|        |                                     | Paired Differences |                |                 |   |        | t      | df | Sig. (2-tailed) |
|--------|-------------------------------------|--------------------|----------------|-----------------|---|--------|--------|----|-----------------|
|        |                                     | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        |        |    |                 |
|        |                                     |                    |                |                 | Lower                                     | Upper  |        |    |                 |
| Pair 1 | Waktu Alir 4 Jam - Waktu Alir 4 Jam | -.11667            | .17559         | .10138          | -.55287                                   | .31953 | -1.151 | 2  | .369            |

Perlakuan Pengendapan 6 Jam

**Tests of Normality**

|                      |                               | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|----------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                      |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Pengendapan 6 jam    |                               |                                 |    |      |              |    |      |
| Hasil Uji Waktu Alir | Waktu Alir Sebelum Stabilitas | .385                            | 3  | .    | .750         | 3  | .000 |
|                      | Waktu Alir Sesudah Stabilitas | .385                            | 3  | .    | .750         | 3  | .000 |

a. Lilliefors Significance Correction

### Descriptives

|                       |   |                                  | Statistic   | Std. Error |  |
|-----------------------|---|----------------------------------|-------------|------------|--|
| sHasil Uji Waktu Alir | Pengendapan 6 jam Waktu Alir Sebelum Stabilitas | Mean                             | 1.1000      | .05000     |  |
|                       |   | 95% Confidence Interval for Mean | Lower Bound | .8849      |  |
|                       |   |                                  | Upper Bound | 1.3151     |  |
|                       |   | 5% Trimmed Mean                  | .           |            |  |
|                       |   | Median                           | 1.1500      |            |  |
|                       |   | Variance                         | .008        |            |  |
|                       |   | Std. Deviation                   | .08660      |            |  |
|                       |   | Minimum                          | 1.00        |            |  |
|                       |   | Maximum                          | 1.15        |            |  |
|                       |   | Range                            | .15         |            |  |
|                       | Interquartile Range                             | .                                |             |            |  |
|                       | Skewness  | -1.732                           | 1.225       |            |  |
|                       | Kurtosis  | .                                | .           |            |  |
|                       | Waktu Alir Sesudah Stabilitas                   | Mean                             | 1.1333      | .06667     |  |
|                       |   | 95% Confidence Interval for Mean | Lower Bound | .8465      |  |
|                       |   |                                  | Upper Bound | 1.4202     |  |
|                       |   | 5% Trimmed Mean                  | .           |            |  |
|                       |   | Median                           | 1.2000      |            |  |
|                       |   | Variance                         | .013        |            |  |
|                       |   | Std. Deviation                   | .11547      |            |  |
| Minimum               |   | 1.00                             |             |            |  |
| Maximum               |   | 1.20                             |             |            |  |
| Range                 |   | .20                              |             |            |  |
| Interquartile Range   | .   |                                  |             |            |  |
| Skewness              | -1.732  | 1.225                            |             |            |  |
| Kurtosis              | .   | .                                |             |            |  |

### Ranks

|   |                | N              | Mean Rank | Sum of Ranks |
|---|----------------|----------------|-----------|--------------|
| Waktu Alir Pengendapan 6 Jam Sesudah stabilitas - Waktu Alir Pengendapan 6 Jam Sebelum stabilitas | Negative Ranks | 1 <sup>a</sup> | 2.00      | 2.00         |
|   | Positive Ranks | 2 <sup>b</sup> | 2.00      | 4.00         |
|   | Ties           | 0 <sup>c</sup> |           |              |
|   | Total          | 3              |           |              |

a. Waktu Alir Pengendapan 6 Jam Sesudah stabilitas < Waktu Alir Pengendapan 6 Jam Sebelum stabilitas

b. Waktu Alir Pengendapan 6 Jam Sesudah stabilitas > Waktu Alir Pengendapan 6 Jam Sebelum stabilitas

c. Waktu Alir Pengendapan 6 Jam Sesudah stabilitas = Waktu Alir Pengendapan 6 Jam Sebelum stabilitas

### Test Statistics<sup>a</sup>

Waktu Alir  
Pengendapan 6  
Jam Sesudah  
stabilitas -  
Waktu Alir  
Pengendapan 6  
Jam Sebelum  
stabilitas

|                        |                     |
|------------------------|---------------------|
| Z                      | - .535 <sup>b</sup> |
| Asymp. Sig. (2-tailed) | .593                |

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

### Sudut Diam

Perlakuan Pengendapan 0 Jam

#### Tests of Normality

|                  |                                     | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------------|-------------------------------------|---------------------------------|----|------|--------------|----|------|
|                  |                                     | Statistic                       | df | Sig. | Statistic    | df | Sig. |
|                  | Pengendapan 0 JAM                   |                                 |    |      |              |    |      |
| Sudut Diam 0 jam | Sudut Diam 0 Jam Sebelum Stabilitas | .344                            | 3  | .    | .841         | 3  | .217 |
|                  | Sudut Diam 0 Jam Sesudah Stabilitas | .176                            | 3  | .    | 1.000        | 3  | .980 |

#### Paired Samples Statistics

|        |                              | Mean    | N | Std. Deviation | Std. Error Mean |
|--------|------------------------------|---------|---|----------------|-----------------|
| Pair 1 | Sudut Diam Pengendapan 0 Jam | 24.5467 | 3 | .48521         | .28014          |
|        | Sudut Diam Pengendapan 0 Jam | 26.4600 | 3 | .83504         | .48211          |

#### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Sudut Diam Pengendapan 0 Jam & Sudut Diam Pengendapan 0 Jam | 3 | -.810       | .399 |

#### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |        | t | df   | Sig. (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|---------|--------|---|------|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |        |   |      |                 |
|        |   |                    |                |                 | Lower                                     | Upper   |        |   |      |                 |
| Pair 1 | Sudut Diam Pengendapan 0 Jam - Sudut Diam Pengendapan 0 Jam | -1.91333           | 1.26057        | .72779          | -5.04476                                  | 1.21809 | -2.629 | 2 | .119 |                 |

Perlakuan Pengendapan 2 Jam

**Tests of Normality**

|                   |                               | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Pengendapan 2 jam |                               |                                 |    |      |              |    |      |
| Sudut Diam 2 jam  | Sudut Diam Sebelum Stabilitas | .369                            | 3  | .    | .788         | 3  | .086 |
|                   | Sudut Diam Sesudah Stabilitas | .189                            | 3  | .    | .998         | 3  | .909 |

**Paired Samples Statistics**

|        |                              | Mean    | N | Std. Deviation | Std. Error Mean |
|--------|------------------------------|---------|---|----------------|-----------------|
| Pair 1 | Sudut Diam Pengendapan 2 Jam | 24.5200 | 3 | .88425         | .51052          |
|        | Sudut Diam Pengendapan 2 Jam | 26.1200 | 3 | .54562         | .31501          |

**Paired Samples Correlations**

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Sudut Diam Pengendapan 2 Jam & Sudut Diam Pengendapan 2 Jam | 3 | -.909       | .274 |

**Paired Samples Test**

|        |   | Paired Differences |                |                 |   |         | t      | df | Sig. (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|---------|--------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |        |    |                 |
|        |   |                    |                |                 | Lower                                     | Upper   |        |    |                 |
| Pair 1 | Sudut Diam Pengendapan 2 Jam - Sudut Diam Pengendapan 2 Jam | -1.60000           | 1.39871        | .80755          | -5.07460                                  | 1.87460 | -1.981 | 2  | .186            |

Perlakuan Pengendapan 4 Jam

**Tests of Normality**

|                   |                               | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Pengendapan 4 jam |                               |                                 |    |      |              |    |      |
| Sudut Diam4 jam   | Sudut Diam Sebelum Stabilitas | .339                            | 3  | .    | .851         | 3  | .244 |
|                   | Sudut Diam Sesudah Stabilitas | .348                            | 3  | .    | .833         | 3  | .196 |

**Paired Samples Statistics**

|        |                              | Mean    | N | Std. Deviation | Std. Error Mean |
|--------|------------------------------|---------|---|----------------|-----------------|
| Pair 1 | Sudut Diam Pengendapan 4 Jam | 23.3300 | 3 | .94297         | .54443          |
|        | Sudut Diam Pengendapan 4 Jam | 25.4433 | 3 | .58620         | .33844          |

**Paired Samples Correlations**

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Sudut Diam Pengendapan 4 Jam & Sudut Diam Pengendapan 4 Jam | 3 | -.478       | .683 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |        |    |                 |
|--------|---|--------------------|----------------|-----------------|---|---------|--------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         | t      | df | Sig. (2-tailed) |
|        |   |                    |                |                 | Lower                                     | Upper   |        |    |                 |
| Pair 1 | Sudut Diam Pengendapan 4 Jam - Sudut Diam Pengendapan 4 Jam | -2.11333           | 1.32719        | .76625          | -5.41026                                  | 1.18359 | -2.758 | 2  | .110            |

### Perlakuan Pengendapan 6 Jam

#### Tests of Normality

|                  |                               | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------------|-------------------------------|---------------------------------|----|------|--------------|----|------|
|                  |                               | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Perlakuan 6 jam  |                               |                                 |    |      |              |    |      |
| Sudut Diam 6 jam | Sudut Diam Sebelum Stabilitas | .371                            | 3  | .    | .783         | 3  | .075 |
|                  | Sudut Diam Sesudah Stabilitas | .349                            | 3  | .    | .831         | 3  | .192 |

#### Paired Samples Statistics

|        |                              | Mean    | N | Std. Deviation | Std. Error Mean |
|--------|------------------------------|---------|---|----------------|-----------------|
| Pair 1 | Sudut Diam Pengendapan 6 Jam | 23.2467 | 3 | .76846         | .44367          |
|        | Sudut Diam Pengendapan 6 Jam | 25.1700 | 3 | 1.24471        | .71863          |

#### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Sudut Diam Pengendapan 6 Jam & Sudut Diam Pengendapan 6 Jam | 3 | -.552       | .627 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |        |    |                 |
|--------|---|--------------------|----------------|-----------------|---|---------|--------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         | t      | df | Sig. (2-tailed) |
|        |   |                    |                |                 | Lower                                     | Upper   |        |    |                 |
| Pair 1 | Sudut Diam Pengendapan 6 Jam - Sudut Diam Pengendapan 6 Jam | -1.92333           | 1.78786        | 1.03222         | -6.36462                                  | 2.51795 | -1.863 | 2  | .203            |



## Waktu Larut

Perlakuan Pengendapan 0 Jam

### Tests of Normality

|                   |                                | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|--------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                                | Statistic                       | df | Sig. | Statistic    | df | Sig. |
|                   | Pengendapan 0 jam              |                                 |    |      |              |    |      |
| Waktu Larut 0 jam | Waktu Larut Sebelum Stabilitas | .219                            | 3  | .    | .987         | 3  | .780 |
|                   | Waktu Larut Sesudah Stabilitas | .267                            | 3  | .    | .952         | 3  | .576 |

### Paired Samples Statistics

|        |                               | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|-------------------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Larut Pengendapan 0 Jam | 5.1333 | 3 | .10066         | .05812          |
|        | Waktu Larut Pengendapan 0 Jam | 3.4867 | 3 | 1.48136        | .85526          |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Waktu Larut Pengendapan 0 Jam & Waktu Larut Pengendapan 0 Jam | 3 | -.590       | .599 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         | t     | df | Sig. (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|---------|-------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |       |    |                 |
|        |   |                    |                |                 | Lower                                     | Upper   |       |    |                 |
| Pair 1 | Waktu Larut Pengendapan 0 Jam - Waktu Larut Pengendapan 0 Jam | 1.64667            | 1.54287        | .89077          | -2.18602                                  | 5.47936 | 1.849 | 2  | .206            |

## Perlakuan Pengendapan 2 Jam

### Tests of Normality

|                   |                                | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|--------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                                | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Waktu Larut 2 jam | Waktu Larut Sebelum Stabilitas | .367                            | 3  | .    | .794         | 3  | .100 |
|                   | Waktu Larut Sesudah Stabilitas | .285                            | 3  | .    | .931         | 3  | .494 |

### Paired Samples Statistics

|        |                               | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|-------------------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Larut Pengendapan 2 Jam | 3.7200 | 3 | .57236         | .33045          |
|        | Waktu Larut Pengendapan 2 Jam | 2.6000 | 3 | 1.29000        | .74478          |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Waktu Larut Pengendapan 2 Jam & Waktu Larut Pengendapan 2 Jam | 3 | .741        | .469 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |       | t | df   | Sig. (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|---------|-------|---|------|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |       |   |      |                 |
|        |   |                    |                |                 | Lower                                     | Upper   |       |   |      |                 |
| Pair 1 | Waktu Larut Pengendapan 2 Jam - Waktu Larut Pengendapan 2 Jam | 1.12000            | .94726         | .54690          | -1.23312                                  | 3.47312 | 2.048 | 2 | .177 |                 |

## Perlakuan Pengendapan 4 Jam

### Tests of Normality

|                   |                                    | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|------------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                                    | Statistic                       | df | Sig. | Statistic    | df | Sig. |
|                   | Pengendapan 4 jam                  |                                 |    |      |              |    |      |
| Waktu Larut 4 jam | Uji Waktu Larut Sebelum Stabilitas | .195                            | 3  | .    | .996         | 3  | .882 |
|                   | Waktu Larut Sesudah Stabilitas     | .254                            | 3  | .    | .963         | 3  | .633 |

### Paired Samples Statistics

|        |                               | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|-------------------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Larut Pengendapan 4 Jam | 3.2033 | 3 | 1.16723        | .67390          |
|        | Waktu Larut Pengendapan 4 Jam | 2.2700 | 3 | .86087         | .49702          |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Waktu Larut Pengendapan 4 Jam & Waktu Larut Pengendapan 4 Jam | 3 | .702        | .505 |

### Paired Samples Test

|        |   | Paired Differences |                |            |   |         |       |    |                 |
|--------|---|--------------------|----------------|------------|---|---------|-------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error | 95% Confidence Interval of the Difference |         | t     | df | Sig. (2-tailed) |
|        |   |                    |                |            | Lower                                     | Upper   |       |    |                 |
| Pair 1 | Waktu Larut Pengendapan 4 Jam - Waktu Larut Pengendapan 4 Jam | .93333             | .83267         | .48074     | -1.13512                                  | 3.00179 | 1.941 | 2  | .192            |

## Perlakuan Pengendapan 6 Jam

### Tests of Normality

|                   |                                | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-------------------|--------------------------------|---------------------------------|----|------|--------------|----|------|
|                   |                                | Statistic                       | df | Sig. | Statistic    | df | Sig. |
|                   | Pengendapan 6 jam              |                                 |    |      |              |    |      |
| Waktu Larut 0 jam | Waktu Larut Sebelum Stabilitas | .175                            | 3  | .    | 1.000        | 3  | .989 |
|                   | Waktu Larut Sesudah Stabilitas | .298                            | 3  | .    | .916         | 3  | .437 |

### Paired Samples Statistics

|        |                               | Mean   | N | Std. Deviation | Std. Error Mean |
|--------|-------------------------------|--------|---|----------------|-----------------|
| Pair 1 | Waktu Larut Pengendapan 6 Jam | 3.0533 | 3 | 1.03002        | .59468          |
|        | Waktu Larut Pengendapan 6 Jam | 1.8333 | 3 | .61655         | .35597          |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Waktu Larut Pengendapan 6 Jam & Waktu Larut Pengendapan 6 Jam | 3 | .222        | .858 |

### Paired Samples Test

|        |  | Paired Differences |                |                 |   |         |       | t | df   | Sig. (2-tailed) |
|--------|--|--------------------|----------------|-----------------|---|---------|-------|---|------|-----------------|
|        |  | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |       |   |      |                 |
|        |  |                    |                |                 | Lower                                     | Upper   |       |   |      |                 |
| Pair 1 | Watu Larut Pengendapan 6 Jam - Waktu Larut Pengendapan 6 Jam | 1.22000            | 1.07685        | .62172          | -1.45504                                  | 3.89504 | 1.962 | 2 | .189 |                 |

## Ukuran Partikel

### Perlakuan Pengendapan 0 Jam

#### Tests of Normality

|                                 | Ukuran Partikel 0 jam | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|---------------------------------|-----------------------|---------------------------------|----|-------|--------------|----|------|
|                                 |                       | Statistic                       | df | Sig.  | Statistic    | df | Sig. |
| Hasil Uji Ukuran Partikel 0 jam | Sebelum stabilitas    | .150                            | 15 | .200* | .937         | 15 | .346 |
|                                 | Sesudah Satabilitas   | .127                            | 15 | .200* | .933         | 15 | .306 |

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

a. Lilliefors Significance Correction

#### Paired Samples Statistics

| Pair   |   | Mean    | N  | Std. Deviation | Std. Error Mean |
|--------|---|---------|----|----------------|-----------------|
| Pair 1 | Ukuran Partikel Perlakuan 0 Jam Pengendapan | 15.5700 | 15 | 9.69026        | 2.50202         |
|        | Ukuran Partikel Perlakuan 0 Jam Pengendapan | 15.5347 | 15 | 10.56799       | 2.72864         |

#### Paired Samples Test

| Pair   |   | Paired Differences |                |                 |   |         |      |    |                 |
|--------|---|--------------------|----------------|-----------------|---|---------|------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         | t    | df | Sig. (2-tailed) |
|        |   |                    |                |                 | Lower                                     | Upper   |      |    |                 |
| Pair 1 | Ukuran Partikel Perlakuan 0 Jam Pengendapan - Ukuran Partikel Perlakuan 0 Jam Pengendapan | .03533             | 3.75284        | .96898          | -2.04292                                  | 2.11359 | .036 | 14 | .971            |

### Perlakuan Pengendapan 2 Jam

#### Tests of Normality

|           | Ukuran Partikel     | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|-----------|---------------------|---------------------------------|----|-------|--------------|----|------|
|           |                     | Statistic                       | df | Sig.  | Statistic    | df | Sig. |
| Hasil Uji | Sebelum Satabilitas | .127                            | 15 | .200* | .921         | 15 | .199 |
|           | Sesudah Stabilitas  | .126                            | 15 | .200* | .953         | 15 | .566 |

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

a. Lilliefors Significance Correction

#### Paired Samples Correlations

| Pair   |   | N  | Correlation | Sig. |
|--------|---|----|-------------|------|
| Pair 1 | Ukuran Partikel Pengendapan 2 Jam & Ukuran Partikel Pengendapan 2 Jam | 15 | .863        | .000 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |       |    |                 |  |
|--------|---|--------------------|----------------|-----------------|---|---------|-------|----|-----------------|--|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         | t     | df | Sig. (2-tailed) |  |
|        |   |                    |                |                 | Lower                                     | Upper   |       |    |                 |  |
| Pair 1 | Ukuran Partikel Pengendapan 2 Jam - Ukuran Partikel Pengendapan 2 Jam | -.24467            | 6.20806        | 1.60291         | -3.68257                                  | 3.19324 | -.153 | 14 | .881            |  |

### Perlakuan Pengendapan 4 Jam

#### Tests of Normality

|                                   | Uji Ukuran Partikel | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|-----------------------------------|---------------------|---------------------------------|----|-------|--------------|----|------|
|                                   |                     | Statistic                       | df | Sig.  | Statistic    | df | Sig. |
| Ukuran Partikel 4 Jam Pengendapan | Sebelum Stabilitas  | .177                            | 15 | .200* | .887         | 15 | .060 |
|                                   | Sesudah Stabilitas  | .162                            | 15 | .200* | .917         | 15 | .176 |

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

a. Lilliefors Significance Correction

#### Paired Samples Correlations

|        |   | N  | Correlation | Sig. |
|--------|---|----|-------------|------|
| Pair 1 | Ukuran Partikel Pengendapan 4 jam & Ukuran Partikel Pengendapan 4 jam | 15 | .788        | .000 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |       |    |                 |  |
|--------|---|--------------------|----------------|-----------------|---|---------|-------|----|-----------------|--|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         | t     | df | Sig. (2-tailed) |  |
|        |   |                    |                |                 | Lower                                     | Upper   |       |    |                 |  |
| Pair 1 | Ukuran Partikel Pengendapan 4 jam - Ukuran Partikel Pengendapan 4 jam | .74400             | 8.77974        | 2.26692         | -5.60606                                  | 4.11806 | -.328 | 14 | .748            |  |

### Perlakuan Pengendapan 6 Jam

#### Tests of Normality

|   | Perlakuan Uji      | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|---|--------------------|---------------------------------|----|-------|--------------|----|------|
|   |                    | Statistic                       | df | Sig.  | Statistic    | df | Sig. |
| Hasil Uji Ukuran Partikel Pengendapan 6 Jam | Sebelum Stabilitas | .134                            | 15 | .200* | .929         | 15 | .267 |
|   | Sesudah Stabilitas | .171                            | 15 | .200* | .906         | 15 | .117 |

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

a. Lilliefors Significance Correction

### Paired Samples Statistics

|        |                                       | Mean    | N  | Std. Deviation | Std. Error Mean |
|--------|---------------------------------------|---------|----|----------------|-----------------|
| Pair 1 | Uji Ukuran Partikel Pengendapan 6 Jam | 16.3107 | 15 | 10.46827       | 2.70289         |
|        | Uji Ukuran Partikel Pengendapan 6 Jam | 17.4427 | 15 | 15.28453       | 3.94645         |

### Paired Samples Statistics

|        |                                       | Mean    | N  | Std. Deviation | Std. Error Mean |
|--------|---------------------------------------|---------|----|----------------|-----------------|
| Pair 1 | Uji Ukuran Partikel Pengendapan 6 Jam | 16.3107 | 15 | 10.46827       | 2.70289         |
|        | Uji Ukuran Partikel Pengendapan 6 Jam | 17.4427 | 15 | 15.28453       | 3.94645         |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         |       |    |                 |
|--------|---|--------------------|----------------|-----------------|---|---------|-------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         | t     | df | Sig. (2-tailed) |
|        |   |                    |                |                 | Lower                                     | Upper   |       |    |                 |
| Pair 1 | Uji Ukuran Partikel Pengendapan 6 Jam - Uji Ukuran Partikel Pengendapan 6 Jam | -1.13200           | 9.35649        | 2.41584         | -6.31345                                  | 4.04945 | -.469 | 14 | .647            |

### Antioksidan

Perlakuan Pengendapan 0 Jam

### Tests of Normality

|            |                    | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|--------------------|---------------------------------|----|------|--------------|----|------|
|            |                    | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Hasil IC50 | Sebelum Stabilitas | .352                            | 3  | .    | .826         | 3  | .179 |
|            | Sesudah Stabilitas | .317                            | 3  | .    | .889         | 3  | .351 |

### Paired Samples Statistics

|        |                             | Mean     | N | Std. Deviation | Std. Error Mean |
|--------|-----------------------------|----------|---|----------------|-----------------|
| Pair 1 | Antioksidan Perlakuan 0 Jam | 124.2333 | 3 | 30.31625       | 17.50310        |
|        | Antioksidan Perlakuan 0 Jam | 120.4867 | 3 | 14.74847       | 8.51503         |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Antioksidan Perlakuan 0 Jam & Antioksidan Perlakuan 0 Jam | 3 | .576        | .609 |

### Paired Samples Test

|        |   | Paired Differences |                 |                 |   |          |      |    |                 |
|--------|---|--------------------|-----------------|-----------------|---|----------|------|----|-----------------|
|        |   | Mean               | SStd. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |          | t    | df | Sig. (2-tailed) |
|        |   |                    |                 |                 | Lower                                     | Upper    |      |    |                 |
| Pair 1 | Antioksidan Perlakuan 0 Jam - Antioksidan Perlakuan 0 Jam | 3.74667            | 24.92942        | 14.39300        | -58.18143                                 | 65.67477 | .260 | 2  | .819            |

Perlakuan Pengendapan 2 Jam

### Tests of Normality

|            |                    | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|--------------------|---------------------------------|----|------|--------------|----|------|
|            |                    | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Hasil IC50 | Sebelum Stabilitas | .313                            | 3  | .    | .894         | 3  | .367 |
|            | Sesudah Stabilitas | .353                            | 3  | .    | .824         | 3  | .173 |

### Paired Samples Statistics

|        |                             | Mean     | N | Std. Deviation | Std. Error Mean |
|--------|-----------------------------|----------|---|----------------|-----------------|
| Pair 1 | Antioksidan Perlakuan 2 Jam | 147.8733 | 3 | 17.06693       | 9.85360         |
|        | Antioksidan Perlakuan 2 Jam | 156.8133 | 3 | 19.59787       | 11.31484        |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Antioksidan Perlakuan 2 Jam & Antioksidan Perlakuan 2 Jam | 3 | -.685       | .520 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |          |       |    |                 |
|--------|---|--------------------|----------------|-----------------|---|----------|-------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |          | t     | df | Sig. (2-tailed) |
|        |   |                    |                |                 | Lower                                     | Upper    |       |    |                 |
| Pair 1 | Antioksidan Perlakuan 2 Jam - Antioksidan Perlakuan 2 Jam | 8.94000            | 33.66825       | 19.43838        | -92.57658                                 | 74.69658 | -.460 | 2  | .691            |

Perlakuan Pengendapan 4 Jam

### Tests of Normality

|            |                    | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|--------------------|---------------------------------|----|------|--------------|----|------|
|            |                    | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Hasil IC50 | Sebelum Stabilitas | .190                            | 3  | .    | .997         | 3  | .904 |
|            | Sesudah Stabilitas | .297                            | 3  | .    | .918         | 3  | .444 |



### Paired Samples Statistics

|        |                             | Mean     | N | Std. Deviation | Std. Error Mean |
|--------|-----------------------------|----------|---|----------------|-----------------|
| Pair 1 | Antioksidan Perlakuan 4 Jam | 157.8733 | 3 | 5.81232        | 3.35574         |
|        | Antioksidan Perlakuan 4 Jam | 161.4367 | 3 | 1.57497        | .90931          |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Antioksidan Perlakuan 4 Jam & Antioksidan Perlakuan 4 Jam | 3 | .879        | .317 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |         | t      | df | Sig. (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|---------|--------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |        |    |                 |
|        |   |                    |                |                 | Lower                                     | Upper   |        |    |                 |
| Pair 1 | Antioksidan Perlakuan 4 Jam - Antioksidan Perlakuan 4 Jam | 3.56333            | 4.49162        | 2.59324         | -14.72113                                 | 7.59446 | -1.374 | 2  | .303            |

Perlakuan Pengendapan 6 Jam

### Tests of Normality

|            |                    | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|------------|--------------------|---------------------------------|----|------|--------------|----|------|
|            |                    | Statistic                       | df | Sig. | Statistic    | df | Sig. |
| Hasil IC50 | Sebelum Stabilitas | .319                            | 3  | .    | .886         | 3  | .341 |
|            | Sesudah Stabilitas | .370                            | 3  | .    | .787         | 3  | .083 |

### Paired Samples Statistics

|        |                             | Mean     | N | Std. Deviation | Std. Error Mean |
|--------|-----------------------------|----------|---|----------------|-----------------|
| Pair 1 | Antioksidan Perlakuan 6 Jam | 217.0700 | 3 | 39.46022       | 22.78237        |
|        | Antioksidan Perlakuan 6 Jam | 239.1767 | 3 | 2.18157        | 1.25953         |

### Paired Samples Correlations

|        |   | N | Correlation | Sig. |
|--------|---|---|-------------|------|
| Pair 1 | Antioksidan Perlakuan 6 Jam & Antioksidan Perlakuan 6 Jam | 3 | -.991       | .086 |

### Paired Samples Test

|        |   | Paired Differences |                |                 |   |          | t     | df | Sig. (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|----------|-------|----|-----------------|
|        |   | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |          |       |    |                 |
|        |   |                    |                |                 | Lower                                     | Upper    |       |    |                 |
| Pair 1 | Antioksidan Perlakuan 6 Jam - Antioksidan Perlakuan 6 Jam | 22.10667           | 41.62297       | 24.03103        | -125.50385                                | 81.29052 | -.920 | 2  | .455            |

