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LAMPIRAN

Lampiran 1. Dokumentasi penelitian



1a) Letak media penelitian



1b) Pengambilan sampel (*Halimeda* sp) di pulau Lae-lae

Lanjutan Dokumentasi Penelitian



1c) Pengadaptasian *Halimeda* sp di dalam bak

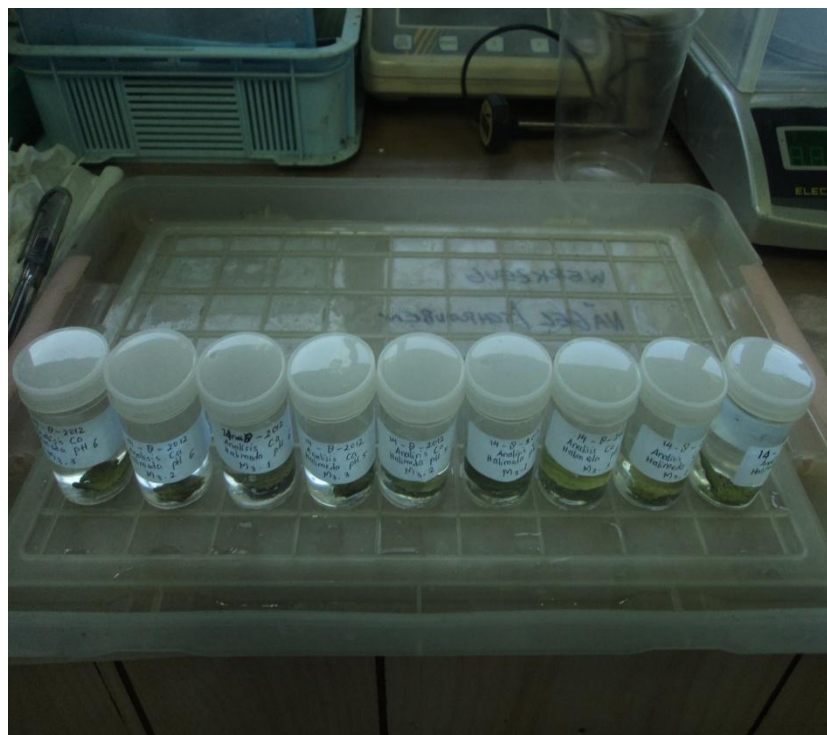


1d) Pengukuran Kualitas air dengan *Water Quality Chaker*

Lanjutan Dokumentasi Penelitian



1e) Menimbang Berat Sampel *Halimeda* sp



1f) Sampel *Halimeda* sp untuk pengukuran kadar Ca

Lanjutan Dokumentasi Penelitian



1g) Pengukuran konsentrasi Ca dengan *Atomic Absorption Spectrophotometer* (AAS)



1h) Rangkaian Alat *Atomic Absorption Spectrophotometer*

Lampiran 2. Pertambahan bobot tiap perlakuan *Halimeda* sp Berdasarkan Waktu Pengamatan

| Perlakuan | Waktu Pengamatan | | | | |
|------------------|------------------|--------|--------|--------|--------|
| | 0 | 7 | 14 | 21 | 28 |
| pH 5 (Ulangan 1) | 106,82 | 107,18 | 107,5 | 107,81 | 108,41 |
| pH 5 (Ulangan 2) | 106,86 | 107,2 | 107,52 | 107,8 | 108,43 |
| pH 5 (Ulangan 3) | 106,84 | 107,16 | 107,53 | 107,79 | 108,39 |
| pH 6 (Ulangan 1) | 106,82 | 107,24 | 107,52 | 107,84 | 108,6 |
| pH 6 (Ulangan 2) | 106,87 | 107,23 | 107,61 | 107,89 | 108,51 |
| pH 6 (Ulangan 3) | 106,83 | 107,11 | 107,55 | 107,8 | 108,56 |
| pH 8 (Ulangan 1) | 106,83 | 107,19 | 107,55 | 107,87 | 108,59 |
| pH 8 (Ulangan 2) | 106,85 | 107,16 | 107,54 | 107,88 | 108,73 |
| pH 8 (Ulangan 3) | 106,84 | 107,28 | 107,8 | 108,23 | 108,98 |

Lampiran 3. Rata-rata Pertambahan Bobot *Halimeda* sp Berdasarkan Waktu Pengamatan

| Perlakuan | Waktu Pengamatan ($\bar{x} \pm SD, n = 3$) | | | | |
|-------------|--|-------------|-------------|-------------|-------------|
| | 0 | 7 | 14 | 21 | 28 |
| pH 5 | 106,84±0,02 | 107,18±0,02 | 107,52±0,02 | 107,80±0,01 | 108,41±0,02 |
| pH 6 | 106,84±0,03 | 107,19±0,07 | 107,56±0,05 | 107,84±0,05 | 108,56±0,05 |
| pH 8 | 106,84±0,01 | 107,21±0,06 | 107,63±0,15 | 107,99±0,21 | 108,77±0,20 |

Lampiran 4. Laju Pertumbuhan Spesifik *Halimeda* sp berdasarkan waktu pengamatan

| Perlakuan | Waktu Pengamatan ($\bar{x} \pm SD, n = 3$) | | | |
|-------------|--|----------------|----------------|----------------|
| | 7 | 14 | 21 | 28 |
| pH 5 | 4,0072%±0.0002 | 4,3440%±0.0001 | 4,4578%±0.0001 | 4,5191%±0.0002 |
| pH 6 | 4,0073%±0.0007 | 4,3444%±0.0641 | 4,4582%±0.0004 | 4,5204%±0.0004 |
| pH 8 | 4,0075%±0.0006 | 4,3450%±0.0014 | 4,4596%±0.0019 | 4,5224%±0.0018 |

Lampiran 5. Hasil Analisis Konsentrasi Kalsium *Halimeda* sp dari Setiap Perlakuan

| No | Kode Cth | Abs | Bbt Cth | Vol. Eks. | Faktor | Fp | ppm Ca | % Ca |
|----|------------------------------------|--------------|--------------|---------------|----------------|----------------|------------------|---------------|
| 1 | 25-7-2012 Halimeda I-1 | 0,136 | 0,2391 | 50 | 209,12 | 10 | 22038 | 2,204 |
| 2 | 25-7-2012 Halimeda I-2 | 0,016 | 0,2466 | 50 | 202,76 | 100 | 26514 | 2,651 |
| 3 | 25-7-2012 Halimeda I-3 | 0,078 | 0,5140 | 50 | 97,28 | 100 | 59114 | 5,911 |
| | Average | 0,077 | 0,333 | 50,000 | 169,717 | 70,000 | 35888,750 | 3,589 |
| 4 | 31-7-2012 Halimeda pH Control M1-1 | 0,068 | 0,3200 | 50 | 156,25 | 100 | 82933 | 8,293 |
| 5 | 31-7-2012 Halimeda pH Control M1-2 | 0,009 | 0,3842 | 50 | 130,14 | 100 | 10011 | 1,001 |
| 6 | 31-7-2012 Halimeda pH Control M1-3 | 0,047 | 0,4759 | 50 | 105,06 | 100 | 38793 | 3,879 |
| | Average | 0,041 | 0,393 | 50,000 | 130,485 | 100,000 | 43912,133 | 4,391 |
| 7 | 31-7-2012 Halimeda pH 5 M1-1 | 0,048 | 0,3355 | 50 | 149,03 | 100 | 56173 | 5,617 |
| 8 | 31-7-2012 Halimeda pH 5 M1-2 | 0,143 | 0,5316 | 50 | 94,06 | 100 | 104185 | 10,418 |
| 9 | 31-7-2012 Halimeda pH 5 M1-3 | 0,014 | 0,3328 | 50 | 150,24 | 100 | 17335 | 1,734 |
| | Average | 0,068 | 0,400 | 50,000 | 131,109 | 100,000 | 59231,173 | 5,923 |
| 10 | 31-7-2012 Halimeda pH 6 M1-1 | 0,110 | 0,4057 | 50 | 123,24 | 100 | 105231 | 10,523 |
| 11 | 31-7-2012 Halimeda pH 6 M1-2 | 0,014 | 0,2642 | 50 | 189,25 | 100 | 21837 | 2,184 |
| 12 | 31-7-2012 Halimeda pH 6 M1-3 | 0,217 | 0,6675 | 50 | 74,91 | 100 | 125612 | 12,561 |
| | Average | 0,114 | 0,446 | 50,000 | 129,134 | 100,000 | 84226,681 | 8,423 |
| 13 | 6-8-2012 Halimeda pH Control M2-1 | 0,032 | 0,3115 | 50 | 160,51 | 100 | 40746 | 4,075 |
| 14 | 6-8-2012 Halimeda pH Control M2-2 | 0,078 | 0,3710 | 50 | 134,77 | 100 | 81899 | 8,190 |
| 15 | 6-8-2012 Halimeda pH Control M2-3 | 0,068 | 0,5157 | 50 | 96,96 | 100 | 51461 | 5,146 |
| | Average | 0,059 | 0,399 | 50,000 | 130,747 | 100,000 | 58035,350 | 5,804 |
| 16 | 6-8-2012 Halimeda pH 5 M2-1 | 0,101 | 0,3370 | 50 | 148,37 | 10 | 11641 | 1,164 |

| | | | | | | | | |
|----|------------------------------------|--------------|--------------|---------------|----------------|----------------|------------------|--------------|
| 17 | 6-8-2012 Halimeda pH 5 M2-2 | 0,016 | 0,4095 | 50 | 122,10 | 100 | 15967 | 1,597 |
| 18 | 6-8-2012 Halimeda pH 5 M2-3 | 0,141 | 0,3671 | 50 | 136,20 | 10 | 14878 | 1,488 |
| | Average | 0,086 | 0,371 | 50,000 | 135,557 | 40,000 | 14161,880 | 1,416 |
| 19 | 6-8-2012 Halimeda pH 6 M2-1 | 0,036 | 0,2771 | 50 | 180,44 | 100 | 51356 | 5,136 |
| 20 | 6-8-2012 Halimeda pH 6 M2-2 | 0,024 | 0,3265 | 50 | 153,14 | 100 | 29450 | 2,945 |
| 21 | 6-8-2012 Halimeda pH 6 M2-3 | 0,007 | 0,4381 | 50 | 114,13 | 100 | 7023 | 0,702 |
| | Average | 0,022 | 0,347 | 50,000 | 149,236 | 100,000 | 29276,430 | 2,928 |
| 22 | 14-8-2012 Halimeda pH Control M3-1 | 0,018 | 0,2860 | 50 | 174,83 | 100 | 25551 | 2,555 |
| 23 | 14-8-2012 Halimeda pH Control M3-2 | 0,080 | 0,3812 | 50 | 131,16 | 100 | 81726 | 8,173 |
| 24 | 14-8-2012 Halimeda pH Control M3-3 | 0,111 | 0,5133 | 50 | 97,41 | 100 | 83922 | 8,392 |
| | Average | 0,070 | 0,394 | 50,000 | 134,466 | 100,000 | 63732,877 | 6,373 |
| 25 | 14-8-2012 Halimeda pH 5 M3-1 | 0,187 | 0,3521 | 50 | 142,01 | 1 | 2054 | 0,205 |
| 26 | 14-8-2012 Halimeda pH 5 M3-2 | 0,117 | 0,2873 | 50 | 174,03 | 10 | 15797 | 1,580 |
| 27 | 14-8-2012 Halimeda pH 5 M3-3 | 0,153 | 0,3170 | 50 | 157,73 | 10 | 18685 | 1,868 |
| | Average | 0,152 | 0,319 | 50,000 | 157,923 | 7,000 | 12178,447 | 1,218 |
| 28 | 14-8-2012 Halimeda pH 6 M3-1 | 0,030 | 0,3418 | 50 | 146,28 | 100 | 34883 | 3,488 |
| 29 | 14-8-2012 Halimeda pH 6 M3-2 | 0,016 | 0,2545 | 50 | 196,46 | 100 | 25691 | 2,569 |
| 30 | 14-8-2012 Halimeda pH 6 M3-3 | 0,031 | 0,3238 | 50 | 154,42 | 100 | 38010 | 3,801 |
| | Average | 0,026 | 0,307 | 50,000 | 165,721 | 100,000 | 32861,589 | 3,286 |
| 31 | 23-8-2012 Halimeda pH Control M4-1 | 0,046 | 0,4903 | 50 | 101,98 | 100 | 36869 | 3,687 |
| 32 | 23-8-2012 Halimeda pH Control M4-2 | 0,103 | 0,4439 | 50 | 112,64 | 100 | 90110 | 9,011 |
| 33 | 23-8-2012 Halimeda pH Control M4-3 | 0,101 | 0,5501 | 50 | 90,89 | 100 | 71316 | 7,132 |
| | Average | 0,083 | 0,495 | 50,000 | 101,836 | 100,000 | 66098,399 | 6,610 |
| 34 | 23-8-2012 Halimeda pH 5 M4-1 | 0,057 | 0,4165 | 50 | 120,05 | 100 | 53560 | 5,356 |
| 35 | 23-8-2012 Halimeda pH 5 M4-2 | 0,144 | 0,3920 | 50 | 127,55 | 10 | 14227 | 1,423 |

| | | | | | | | | |
|----|------------------------------|--------------|--------------|---------------|----------------|---------------|------------------|--------------|
| 36 | 23-8-2012 Halimeda pH 5 M4-3 | 0,113 | 0,5167 | 50 | 96,77 | 10 | 8486 | 0,849 |
| | Average | 0,105 | 0,442 | 50,000 | 114,789 | 40,000 | 25424,178 | 2,542 |
| 37 | 23-8-2012 Halimeda pH 6 M4-1 | 0,036 | 0,4692 | 50 | 106,56 | 100 | 30330 | 3,033 |
| 38 | 23-8-2012 Halimeda pH 6 M4-2 | 0,158 | 0,3276 | 50 | 152,63 | 10 | 18667 | 1,867 |
| 39 | 23-8-2012 Halimeda pH 6 M4-3 | 0,115 | 1,0480 | 50 | 47,71 | 100 | 42572 | 4,257 |
| | Average | 0,103 | 0,615 | 50,000 | 102,300 | 70,000 | 30523,007 | 3,052 |

Lampiran 6. Rata-rata Konsentrasi Kalsium setiap perlakuan berdasarkan waktu pengamatan

| Perlakuan | Waktu Pengamatan | | | | |
|-------------|------------------|-------|-------|-------|-------|
| | 0 | 7 | 14 | 21 | 28 |
| pH 5 | 3,589 | 5,923 | 1,416 | 1,218 | 2,542 |
| pH 6 | 3,589 | 8,423 | 2,928 | 3,286 | 3,052 |
| pH 8 | 3,589 | 4,391 | 5,804 | 6,373 | 6,610 |

Lampiran 7. Data suhu, oksigen terlarut, pH dan salinitas air media penelitian

| Perlakuan | Suhu | | | | |
|-------------------------|------|------|------|------|------|
| | 0 | 7 | 14 | 21 | 28 |
| pH 5 (Ulangan 1) | 29,1 | 31,1 | 30,4 | 30,9 | 30,4 |
| pH 5 (Ulangan 2) | 29,4 | 31,8 | 31,2 | 32,0 | 31,7 |
| pH 5 (Ulangan 3) | 29,4 | 31,5 | 31,0 | 32,1 | 31,6 |
| pH 6 (Ulangan 1) | 29,2 | 31,7 | 31,0 | 31,9 | 31,6 |
| pH 6 (Ulangan 2) | 29,2 | 31,5 | 31,2 | 32,1 | 31,9 |
| pH 6 (Ulangan 3) | 29,3 | 31,5 | 31,8 | 32,1 | 32,0 |
| pH 8 (Ulangan 1) | 28,5 | 29,8 | 30,2 | 30,9 | 30,0 |
| pH 8 (Ulangan 2) | 28,6 | 29,9 | 29,8 | 31,0 | 30,0 |
| pH 8 (Ulangan 3) | 28,9 | 30,5 | 30,4 | 30,9 | 30,4 |
| Oksigen Terlarut | | | | | |
| pH 5 (Ulangan 1) | 6,24 | 6,43 | 6,24 | 6,36 | 6,54 |
| pH 5 (Ulangan 2) | 6,23 | 6,40 | 6,40 | 6,41 | 6,40 |
| pH 5 (Ulangan 3) | 6,30 | 6,33 | 6,28 | 6,20 | 6,20 |
| pH 6 (Ulangan 1) | 6,27 | 6,40 | 6,46 | 6,39 | 6,46 |
| pH 6 (Ulangan 2) | 6,27 | 6,45 | 6,58 | 6,53 | 6,31 |
| pH 6 (Ulangan 3) | 6,27 | 6,45 | 6,44 | 6,43 | 6,46 |
| pH 8 (Ulangan 1) | 6,31 | 6,68 | 6,70 | 6,70 | 6,74 |
| pH 8 (Ulangan 2) | 6,31 | 6,68 | 6,72 | 6,76 | 6,74 |
| pH 8 (Ulangan 3) | 6,20 | 6,68 | 6,64 | 6,80 | 6,76 |
| pH | | | | | |
| pH 5 (Ulangan 1) | 8,05 | 5,02 | 5,03 | 5,03 | 5,03 |
| pH 5 (Ulangan 2) | 8,06 | 5,03 | 5,02 | 5,02 | 5,02 |
| pH 5 (Ulangan 3) | 8,04 | 5,02 | 5,03 | 5,03 | 5,02 |
| pH 6 (Ulangan 1) | 8,06 | 6,03 | 6,04 | 6,03 | 6,04 |
| pH 6 (Ulangan 2) | 8,06 | 6,02 | 6,03 | 6,03 | 6,03 |
| pH 6 (Ulangan 3) | 8,05 | 6,03 | 6,03 | 6,03 | 6,03 |
| pH 8 (Ulangan 1) | 8,06 | 8,04 | 8,04 | 8,03 | 8,04 |
| pH 8 (Ulangan 2) | 8,06 | 8,04 | 8,04 | 8,04 | 8,04 |
| pH 8 (Ulangan 3) | 8,06 | 8,05 | 8,04 | 8,04 | 8,04 |
| Salinitas | | | | | |
| pH 5 (Ulangan 1) | 39,1 | 39,3 | 39,2 | 39,3 | 39,1 |
| pH 5 (Ulangan 2) | 39,1 | 39,8 | 39,4 | 39,6 | 39,4 |
| pH 5 (Ulangan 3) | 39,3 | 40,0 | 39,6 | 39,9 | 40,0 |
| pH 6 (Ulangan 1) | 39,7 | 40,0 | 39,8 | 40,0 | 40,0 |
| pH 6 (Ulangan 2) | 40,0 | 40,0 | 39,8 | 40,0 | 40,0 |
| pH 6 (Ulangan 3) | 40,0 | 40,0 | 40,0 | 40,0 | 40,0 |
| pH 8 (Ulangan 1) | 38,6 | 38,8 | 39,0 | 38,6 | 39,0 |
| pH 8 (Ulangan 2) | 38,6 | 39,2 | 39,0 | 38,6 | 39,0 |
| pH 8 (Ulangan 3) | 38,9 | 39,3 | 39,2 | 39,0 | 39,1 |

Lampiran 8. Cara Kerja Atomic Absorption Spectrophotometer

1. Pertama-tama gas di buka terlebih dahulu, kemudian kompresor, lalu ducting, main unit, dan komputer secara berurutan.
2. Di buka program saa (spectrum analyse specialist), kemudian muncul perintah "apakah ingin mengganti lampu katoda, jika ingin mengganti klik yes dan jika tidak no.
3. Dipilih yes untuk masuk ke menu individual command, dimasukkan nomor lampu katoda yang dipasang ke dalam kotak dialog, kemudian diklik setup, kemudian soket lampu katoda akan berputar menuju posisi paling atas supaya lampu katoda yang baru dapat diganti atau ditambahkan dengan mudah.
4. Dipilih no jika tidak ingin mengganti lampu katoda yang baru.
5. Pada program sas 3.0, dipilih menu select element and working mode. dipilih unsur yang akan dianalisis dengan mengklik langsung pada symbol unsur yang diinginkan
6. Jika telah selesai klik ok, kemudian muncul tampilan condition settings. Diatur parameter yang dianalisis dengan mensetting fuel flow :1,2 ; measurement; concentration ; number of sample: 2 ; unit concentration : ppm ; number of standard : 3 ; standard list : 1 ppm, 3 ppm, 9 ppm.
7. Diklik ok and setup, ditunggu hingga selesai warming up.
8. Diklik icon bergambar burner/ pembakar, setelah pembakar dan lampu menyala alat siap digunakan untuk mengukur logam.
9. Pada menu measurements pilih measure sample.
10. Dimasukkan blanko, didiamkan hingga garis lurus terbentuk, kemudian dipindahkan ke standar 1 ppm hingga data keluar.
11. Dimasukkan blanko untuk meluruskan kurva, diukur dengan tahapan yang sama untuk standar 3 ppm dan 9 ppm.
12. Jika data kurang baik akan ada perintah untuk pengukuran ulang, dilakukan pengukuran blanko, hingga kurva yang dihasilkan turun dan lurus.
13. Dimasukkan ke sampel 1 hingga kurva naik dan belok baru dilakukan pengukuran.
14. Dimasukkan blanko kembali dan dilakukan pengukuran sampel ke 2.
15. Setelah pengukuran selesai, data dapat diperoleh dengan mengklik icon print atau pada baris menu dengan mengklik file lalu print.
16. Apabila pengukuran telah selesai, aspirasikan air deionisasi untuk membilas burner selama 10 menit, api dan lampu burner dimatikan, program pada komputer dimatikan, lalu main unit aas, kemudian kompresor, setelah itu ducting dan terakhir gas.

Lampiran 9. Analisis varians jumlah konsentrasi kalsium pada *Halimeda* sp

Case Processing Summary

| | | Cases | | | | | |
|--------|------|-------|---------|---------|---------|-------|---------|
| | | Valid | | Missing | | Total | |
| | | N | Percent | N | Percent | N | Percent |
| Hari7 | pH 8 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 5 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 6 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| Hari14 | pH 8 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 5 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 6 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| Hari21 | pH 8 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 5 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 6 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| Hari28 | pH 8 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 5 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |
| | pH 6 | 3 | 100.0% | 0 | .0% | 3 | 100.0% |

Tests of Normality

| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|--------|------|---------------------------------|----|------|--------------|----|------|
| | | Statistic | df | Sig. | Statistic | Df | Sig. |
| Hari7 | pH 8 | .222 | 3 | . | .985 | 3 | .769 |
| | pH 5 | .194 | 3 | . | .996 | 3 | .884 |
| | pH 6 | .315 | 3 | . | .891 | 3 | .356 |
| Hari14 | pH 8 | .288 | 3 | . | .929 | 3 | .484 |
| | pH 5 | .292 | 3 | . | .924 | 3 | .467 |
| | pH 6 | .176 | 3 | . | 1.000 | 3 | .987 |
| Hari21 | pH 8 | .373 | 3 | . | .778 | 3 | .063 |
| | pH 5 | .325 | 3 | . | .875 | 3 | .311 |
| | pH 6 | .290 | 3 | . | .925 | 3 | .472 |
| Hari28 | pH 8 | .243 | 3 | . | .972 | 3 | .679 |
| | pH 5 | .343 | 3 | . | .844 | 3 | .224 |
| | pH 6 | .177 | 3 | . | 1.000 | 3 | .973 |

Oneway

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum | |
|------------|-------|------|----------------|------------|----------------------------------|-------------|---------|---------|-------|
| | | | | | Lower Bound | Upper Bound | | | |
| Hari7 | pH 8 | 3 | 4.3910 | 3.67286 | 2.12053 | -4.7329 | 13.5149 | 1.00 | 8.29 |
| | pH 5 | 3 | 5.9203 | 4.34595 | 2.50913 | -4.8756 | 16.7163 | 1.73 | 10.41 |
| | pH 6 | 3 | 8.4213 | 5.49715 | 3.17378 | -5.2343 | 22.0770 | 2.18 | 12.56 |
| | Total | 9 | 6.2442 | 4.33055 | 1.44352 | 2.9155 | 9.5730 | 1.00 | 12.56 |
| Hari1 4 | pH 8 | 3 | 5.8037 | 2.13488 | 1.23257 | .5003 | 11.1070 | 4.08 | 8.19 |
| | pH 5 | 3 | 1.4163 | .22522 | .13003 | .8569 | 1.9758 | 1.16 | 1.60 |
| | pH 6 | 3 | 2.9277 | 2.21705 | 1.28001 | -2.5798 | 8.4351 | .70 | 5.14 |
| | Total | 9 | 3.3826 | 2.47113 | .82371 | 1.4831 | 5.2820 | .70 | 8.19 |
| Hari2 1 | pH 8 | 3 | 6.3733 | 3.30859 | 1.91021 | -1.8457 | 14.5923 | 2.56 | 8.39 |
| | pH 5 | 3 | 1.2177 | .88874 | .51311 | -.9901 | 3.4254 | .20 | 1.87 |
| | pH 6 | 3 | 3.2860 | .64036 | .36971 | 1.6953 | 4.8767 | 2.57 | 3.80 |
| | Total | 9 | 3.6257 | 2.84350 | .94783 | 1.4400 | 5.8114 | .20 | 8.39 |
| Hari2 8 | pH 8 | 3 | 6.6100 | 2.70011 | 1.55891 | -.0975 | 13.3175 | 3.69 | 9.01 |
| | pH 5 | 3 | 2.5427 | 2.45326 | 1.41639 | -3.5516 | 8.6369 | .85 | 5.36 |
| | pH 6 | 3 | 3.0523 | 1.19512 | .69000 | .0835 | 6.0212 | 1.87 | 4.26 |
| | Total | 9 | 4.0683 | 2.71419 | .90473 | 1.9820 | 6.1546 | .85 | 9.01 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|--------|------------------|-----|-----|------|
| Hari7 | .452 | 2 | 6 | .657 |
| Hari14 | 2.371 | 2 | 6 | .174 |
| Hari21 | 8.367 | 2 | 6 | .018 |
| Hari28 | 1.323 | 2 | 6 | .334 |

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|--------|----------------|----------------|----|-------------|-------|------|
| Hari7 | Between Groups | 24.837 | 2 | 12.419 | .595 | .581 |
| | Within Groups | 125.192 | 6 | 20.865 | | |
| | Total | 150.029 | 8 | | | |
| Hari14 | Between Groups | 29.804 | 2 | 14.902 | 4.694 | .059 |
| | Within Groups | 19.047 | 6 | 3.175 | | |
| | Total | 48.852 | 8 | | | |
| Hari21 | Between Groups | 40.391 | 2 | 20.195 | 4.988 | .053 |
| | Within Groups | 24.293 | 6 | 4.049 | | |
| | Total | 64.684 | 8 | | | |
| Hari28 | Between Groups | 29.460 | 2 | 14.730 | 2.998 | .125 |
| | Within Groups | 29.475 | 6 | 4.912 | | |
| | Total | 58.935 | 8 | | | |

Post Hoc Tests

Multiple Comparisons

Tukey HSD

| Dependent Variable | (I) pH | (J) pH | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|--------|--------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Hari7 | pH 8 | pH 5 | -1.52933 | 3.72964 | .913 | -12.9729 | 9.9142 |
| | | pH 6 | -4.03033 | 3.72964 | .559 | -15.4739 | 7.4132 |
| | pH 5 | pH 8 | 1.52933 | 3.72964 | .913 | -9.9142 | 12.9729 |
| | | pH 6 | -2.50100 | 3.72964 | .788 | -13.9445 | 8.9425 |
| | pH 6 | pH 8 | 4.03033 | 3.72964 | .559 | -7.4132 | 15.4739 |
| | | pH 5 | 2.50100 | 3.72964 | .788 | -8.9425 | 13.9445 |
| Hari14 | pH 8 | pH 5 | 4.38733 | 1.45478 | .053 | -.0763 | 8.8510 |
| | | pH 6 | 2.87600 | 1.45478 | .199 | -1.5877 | 7.3397 |
| | pH 5 | pH 8 | -4.38733 | 1.45478 | .053 | -8.8510 | .0763 |
| | | pH 6 | -1.51133 | 1.45478 | .582 | -5.9750 | 2.9523 |
| | pH 6 | pH 8 | -2.87600 | 1.45478 | .199 | -7.3397 | 1.5877 |
| | | pH 5 | 1.51133 | 1.45478 | .582 | -2.9523 | 5.9750 |
| Hari21 | pH 8 | pH 5 | 5.15567* | 1.64294 | .046 | .1147 | 10.1967 |
| | | pH 6 | 3.08733 | 1.64294 | .225 | -1.9537 | 8.1283 |
| | pH 5 | pH 8 | -5.15567* | 1.64294 | .046 | -10.1967 | -.1147 |
| | | pH 6 | -2.06833 | 1.64294 | .466 | -7.1093 | 2.9727 |
| | pH 6 | pH 8 | -3.08733 | 1.64294 | .225 | -8.1283 | 1.9537 |
| | | pH 5 | 2.06833 | 1.64294 | .466 | -2.9727 | 7.1093 |
| Hari28 | pH 8 | pH 5 | 4.06733 | 1.80969 | .141 | -1.4853 | 9.6200 |
| | | pH 6 | 3.55767 | 1.80969 | .201 | -1.9950 | 9.1103 |
| | pH 5 | pH 8 | -4.06733 | 1.80969 | .141 | -9.6200 | 1.4853 |
| | | pH 6 | -.50967 | 1.80969 | .958 | -6.0623 | 5.0430 |
| | pH 6 | pH 8 | -3.55767 | 1.80969 | .201 | -9.1103 | 1.9950 |
| | | pH 5 | .50967 | 1.80969 | .958 | -5.0430 | 6.0623 |

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

Lampiran 10. Analisis varians laju pertumbuhan pada *Halimeda* sp

Case Processing Summary

| | Cases | | | | | |
|--------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| Hari7 | 9 | 100.0% | 0 | .0% | 9 | 100.0% |
| Hari14 | 9 | 100.0% | 0 | .0% | 9 | 100.0% |
| Hari21 | 9 | 100.0% | 0 | .0% | 9 | 100.0% |
| Hari28 | 9 | 100.0% | 0 | .0% | 9 | 100.0% |

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|--------|---------------------------------|----|-------|--------------|----|------|
| | Statistic | Df | Sig. | Statistic | df | Sig. |
| Hari7 | .234 | 9 | .167 | .946 | 9 | .648 |
| Hari14 | .247 | 9 | .121 | .926 | 9 | .447 |
| Hari21 | .204 | 9 | .200* | .882 | 9 | .163 |
| Hari28 | .224 | 9 | .200* | .888 | 9 | .191 |

a. Lilliefors Significance Correction

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

Oneway

Descriptives

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum | |
|----|-------|------|----------------|------------|----------------------------------|-------------|---------|---------|-----|
| | | | | | Lower Bound | Upper Bound | | | |
| 7 | pH 8 | 3 | .3700 | .06557 | .03786 | .2071 | .5329 | .31 | .44 |
| | pH 5 | 3 | .3400 | .02000 | .01155 | .2903 | .3897 | .32 | .36 |
| | pH 6 | 3 | .3533 | .07024 | .04055 | .1789 | .5278 | .28 | .42 |
| | Total | 9 | .3544 | .05077 | .01692 | .3154 | .3935 | .28 | .44 |
| 14 | pH 8 | 3 | .4200 | .08718 | .05033 | .2034 | .6366 | .36 | .52 |
| | pH 5 | 3 | .3367 | .02887 | .01667 | .2650 | .4084 | .32 | .37 |
| | pH 6 | 3 | .3667 | .08083 | .04667 | .1659 | .5675 | .28 | .44 |
| | Total | 9 | .3744 | .07126 | .02375 | .3197 | .4292 | .28 | .52 |

| | | | | | | | | | |
|------------|-------|---|-------|--------|--------|-------|-------|-----|-----|
| Hari 21 | pH 8 | 3 | .3633 | .05859 | .03383 | .2178 | .5089 | .32 | .43 |
| | pH 5 | 3 | .2833 | .02517 | .01453 | .2208 | .3458 | .26 | .31 |
| | pH 6 | 3 | .2833 | .03512 | .02028 | .1961 | .3706 | .25 | .32 |
| | Total | 9 | .3100 | .05408 | .01803 | .2684 | .3516 | .25 | .43 |
| Hari 28 | pH 8 | 3 | .7733 | .06807 | .03930 | .6042 | .9424 | .72 | .85 |
| | pH 5 | 3 | .6100 | .01732 | .01000 | .5670 | .6530 | .60 | .63 |
| | pH 6 | 3 | .7133 | .08083 | .04667 | .5125 | .9141 | .62 | .76 |
| | Total | 9 | .6989 | .08937 | .02979 | .6302 | .7676 | .60 | .85 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|--------|------------------|-----|-----|------|
| Hari7 | 1.420 | 2 | 6 | .313 |
| Hari14 | 1.951 | 2 | 6 | .223 |
| Hari21 | 1.793 | 2 | 6 | .245 |
| Hari28 | 4.010 | 2 | 6 | .078 |

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|--------|----------------|----------------|----|-------------|-------|------|
| Hari7 | Between Groups | .001 | 2 | .001 | .211 | .815 |
| | Within Groups | .019 | 6 | .003 | | |
| | Total | .021 | 8 | | | |
| Hari14 | Between Groups | .011 | 2 | .005 | 1.071 | .400 |
| | Within Groups | .030 | 6 | .005 | | |
| | Total | .041 | 8 | | | |
| Hari21 | Between Groups | .013 | 2 | .006 | 3.623 | .093 |
| | Within Groups | .011 | 6 | .002 | | |
| | Total | .023 | 8 | | | |
| Hari28 | Between Groups | .041 | 2 | .020 | 5.358 | .046 |
| | Within Groups | .023 | 6 | .004 | | |
| | Total | .064 | 8 | | | |

Post Hoc Tests

Multiple Comparisons

Tukey HSD

| Dependent Variable | (I) pH | (J) pH | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|--------|--------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Hari7 | pH 8 | pH 5 | .03000 | .04627 | .800 | -.1120 | .1720 |
| | | pH 6 | .01667 | .04627 | .932 | -.1253 | .1586 |
| | pH 5 | pH 8 | -.03000 | .04627 | .800 | -.1720 | .1120 |
| | | pH 6 | -.01333 | .04627 | .956 | -.1553 | .1286 |
| | pH 6 | pH 8 | -.01667 | .04627 | .932 | -.1586 | .1253 |
| | | pH 5 | .01333 | .04627 | .956 | -.1286 | .1553 |
| Hari14 | pH 8 | pH 5 | .08333 | .05767 | .379 | -.0936 | .2603 |
| | | pH 6 | .05333 | .05767 | .646 | -.1236 | .2303 |
| | pH 5 | pH 8 | -.08333 | .05767 | .379 | -.2603 | .0936 |
| | | pH 6 | -.03000 | .05767 | .865 | -.2069 | .1469 |
| | pH 6 | pH 8 | -.05333 | .05767 | .646 | -.2303 | .1236 |
| | | pH 5 | .03000 | .05767 | .865 | -.1469 | .2069 |
| Hari21 | pH 8 | pH 5 | .08000 | .03432 | .127 | -.0253 | .1853 |
| | | pH 6 | .08000 | .03432 | .127 | -.0253 | .1853 |
| | pH 5 | pH 8 | -.08000 | .03432 | .127 | -.1853 | .0253 |
| | | pH 6 | .00000 | .03432 | 1.000 | -.1053 | .1053 |
| | pH 6 | pH 8 | -.08000 | .03432 | .127 | -.1853 | .0253 |
| | | pH 5 | .00000 | .03432 | 1.000 | -.1053 | .1053 |
| Hari28 | pH 8 | pH 5 | .16333* | .05048 | .041 | .0084 | .3182 |
| | | pH 6 | .06000 | .05048 | .501 | -.0949 | .2149 |
| | pH 5 | pH 8 | -.16333* | .05048 | .041 | -.3182 | -.0084 |
| | | pH 6 | -.10333 | .05048 | .182 | -.2582 | .0516 |
| | pH 6 | pH 8 | -.06000 | .05048 | .501 | -.2149 | .0949 |
| | | pH 5 | .10333 | .05048 | .182 | -.0516 | .2582 |

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