LAMPIRAN

Perhitungan Volume Seed

1. Pengenceran 30

$$\left[\left[(150-\left(\frac{150}{P}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

$$\left[\left[(150-\left(\frac{150}{30}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

= 0,145 : 0,15

= 0,97

2. Pengenceran 50

$$\left[\left[(150-\left(\frac{150}{P}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

$$\left[\left[(150-\left(\frac{150}{50}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

= 0,147 : 0,15

= 0,98

3. Pengenceran 2,0

$$\left[\left[(150-\left(\frac{150}{P}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

$$\left[\left[(150-\left(\frac{150}{2}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

= 0,075 : 0,15

= 0,5

4. Pengenceran 3,0

$$\left[\left[(150-\left(\frac{150}{P}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

$$\left[\left[(150-\left(\frac{150}{3}\right)\right]:1000\right]:\left(\frac{150}{1000}\right)$$

= 0,1 : 0,15

= 0,67

Perhitungan BOD

5. Standar 198 mg/l (pengenceran 30)

$$\text{BOD } mg/l = \frac{(\text{DO0}-\text{DO5})-(\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}90-3{,}19)-(0{,}1)0{,}97}{\frac{1}{30}}$$

$$\text{BOD}\frac{mg}{l} = \frac{4{,}71-0{,}097}{\frac{1}{30}}$$

$= 138{,}4$

6. Standar 198 mg/l (pengenceran 50)

$$\text{BOD } mg/l = \frac{(\text{DO0}-\text{DO5})-(\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}91-3{,}29)-(0{,}1)0{,}98}{\frac{1}{50}}$$

$$\text{BOD}\frac{mg}{l} = \frac{4{,}62-0{,}098}{\frac{1}{50}}$$

$= 226{,}1$

Rata-rata BOD = 182,25

7. Aquadest (pengenceran 1,0)

$$\text{BOD } mg/l = \frac{(\text{DO0}-\text{DO5})-(\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}65-7{,}58)-(0{,}1)0}{1}$$

$$\text{BOD}\frac{mg}{l} = \frac{0{,}07-0{,}0}{1}$$

$= 0{,}07$

8. Blanko (pengenceran 1,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}70 - 7{,}60) - (0{,}1)0}{1}$$

$$\text{BOD } \frac{mg}{l} = \frac{0{,}1-0{,}0}{1}$$

$$= 0{,}1$$

9. Hulu 1 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}85 - 3{,}84) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}96-0{,}05}{\frac{1}{2}}$$

$$= 5{,}92$$

10. Hulu 1 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}98 - 4{,}13) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}783-0{,}067}{\frac{1}{3}}$$

$$= 8{,}4$$

Rata-rata BOD = 7,13

11. Hulu 1 duplo (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}85 - 3{,}84) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}01-0.05}{\frac{1}{2}}$$

$$= 5{,}92$$

12. Hulu 1 duplo (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}98 - 4{,}13) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}85 - 0{,}067}{\frac{1}{3}}$$

$$= 8{,}43$$

Rata-rata BOD = 7,14

13. Hulu 2 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}85 - 3{,}84) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}01 - 0{,}05}{\frac{1}{2}}$$

$$= 5{,}92$$

14. Hulu 2 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}08 - 4{,}13) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}95 - 0{,}067}{\frac{1}{3}}$$

$$= 8{,}65$$

Rata-rata BOD = 7,29

15. Tengah 1 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}88 - 3{,}80) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}08 - 0{,}05}{\frac{1}{2}}$$

$$= 6{,}06$$

16. Tengah 1 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}02 - 4{,}13) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}89 - 0{,}067}{\frac{1}{3}}$$

$$= 8{,}55$$

Rata-rata BOD = 7,27

17. Tengah 2 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}90 - 3{,}84) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}06 - 0{,}05}{\frac{1}{2}}$$

$$= 6{,}02$$

18. Tengah 2 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}98 - 4{,}03) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}89 - 0{,}067}{\frac{1}{3}}$$

$$= 8{,}73$$

Rata-rata BOD = 7,34

19. Tengah 3 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}90 - 3{,}84) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}06 - 0{,}05}{\frac{1}{2}}$$

$$= 6{,}02$$

20. Tengah 3 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}04 - 4{,}03) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}01 - 0{,}067}{\frac{1}{3}}$$

$$= 8{,}91$$

Rata-rata BOD = 7,43

21. Hilir 1 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(6{,}96 - 3{,}80) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}16 - 0{,}05}{\frac{1}{2}}$$

$$= 6{,}22$$

22. Hilir 1 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}06 - 4{,}13) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{2{,}93 - 0{,}067}{\frac{1}{3}}$$

$$= 8{,}67$$

Rata-rata BOD = 7,41

23. Hilir 2 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}04 - 3{,}84) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}2 - 0{,}05}{\frac{1}{2}}$$

$$= 6{,}3$$

24. Hilir 2 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}12 - 4{,}12) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3-0{,}067}{\frac{1}{3}}$$

$$= 8{,}88$$

Rata-rata BOD = 7,55

25. Hilir 3 (pengenceran 2,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}06 - 3{,}80) - (0{,}1)0{,}5}{\frac{1}{2}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}26-0{,}05}{\frac{1}{2}}$$

$$= 6{,}42$$

26. Hilir 3 (pengenceran 3,0)

$$\text{BOD } mg/l = \frac{(\text{DO0} - \text{DO5}) - (\text{S})\ \text{Vs}}{P}$$

$$\text{BOD } mg/l = \frac{(7{,}12 - 4{,}12) - (0{,}1)0{,}67}{\frac{1}{3}}$$

$$\text{BOD } \frac{mg}{l} = \frac{3{,}01-0{,}067}{\frac{1}{3}}$$

$$= 8{,}91$$

Rata-rata BOD = 7,63

27. Larutan standar

%Recovery = $\left(\frac{Hasil\ uji}{Nilai\ teoritis}\right) x100\% = \left(\frac{182{,}3}{198}\right) x100\% = 92.05\%$

%Recovery yang baik dalam batas toleransi 80-120%

%RPD=$\left(\frac{Nilai\ 1-Nilai\ 2}{Rata-rata\ dari\ keduanya}\right) x100\% = \left(\frac{7{,}13-7{,}14}{7{,}13+7{,}14/2}\right) x100\% = 0{,}14\%$

%RPD presisi yang bagus <20%

Dokumentasi sampling



Gambar 5. 1 Sampling Air



Gambar 5. 2 Perjalanan Mengambil Sampel



Gambar 5. 3 Alat-alat Sampling



Gambar 5. 4 Sampel Air



Gambar 5. 6 Menyiapkan Kertas Saring



Gambar 5. 5 Alat DO Meter