

Lampiran. Perhitungan nilai Angka Lempeng total sampel jamu gendong

Tabel 1. Hasil pengujian angka lempeng total

| NO | Sampel | | Jumlah Koloni | | | ALT | ALT rata-rata | ket |
|----|----------|---|-----------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|------------------------|
| | | | 10 ⁰ | 10 ⁻¹ ₁ | 10 ⁻² ₂ | | | |
| 1 | Sampel A | 1 | >300 | 142 | 32 | 1,4 x 10 ³ uk/ml | 1,5 x 10 ³ uk/ml | Tidak Memenuhi Standar |
| 2 | | 2 | >300 | 136 | 36 | 1,4 x 10 ³ uk/ml | | |
| 3 | | 3 | >300 | 164 | 29 | 1,6 x 10 ³ uk/ml | | |
| 4 | Sampel B | 1 | >300 | 68 | 28 | 6,8 x 10 ² uk/ml | 3,6 x 10 ² uk/ml | Memenuhi Standar |
| 5 | | 2 | 224 | 81 | 25 | 2,2 x 10 ² uk/ml | | |
| 6 | | 3 | 180 | 61 | 24 | 1,8 x 10 ² uk/ml | | |
| 7 | Sampel C | 1 | >300 | 89 | 25 | 8,9 x 10 ² uk/ml | 4,4 x 10 ² uk/ml | Memenuhi Standar |
| 8 | | 2 | 168 | 39 | 21 | 1,7 x 10 ² uk/ml | | |
| 9 | | 3 | 264 | 49 | 26 | 2,6 x 10 ² uk/ml | | |

1. Nilai ALT sampel 1

$$\text{a. Nilai ALT} = \frac{\text{ALT tinggi}}{\text{ALT rendah}} = \frac{3,2 \times 10^3}{1,4 \times 10^3} = 2,28 > 2$$

Diambil pengenceran terendah 1,4 x 10³ uk/ml

$$\text{b. Nilai ALT} = \frac{\text{ALT tinggi}}{\text{ALT rendah}} = \frac{3,6 \times 10^3}{1,4 \times 10^3} = 2,56 > 2$$

Diambil pengenceran terendah 1,4 x 10³ uk/ml

$$\begin{aligned} \text{c. Nilai ALT} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 164 \times \frac{1}{10^{-1}} = 1,6 \times 10^3 \text{ uk/ml} \end{aligned}$$

$$\begin{aligned} \text{ALT rata-rata} &= (1,4 \times 10^3 + 1,4 \times 10^3 + 1,6 \times 10^3) / 3 \\ &= 1,5 \times 10^3 \text{ uk/ml} \end{aligned}$$

2. Nilai ALT sampel 2

$$\begin{aligned} \text{a. Nilai ALT} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 68 \times \frac{1}{10^{-1}} = 6,8 \times 10^2 \text{ uk/ml} \end{aligned}$$

$$\text{b. Nilai ALT} = \frac{\text{ALT tinggi}}{\text{ALT rendah}} = \frac{8,1 \times 10^2}{2,2 \times 10^2} = 3,68 > 2$$

Diambil pengenceran terendah $2,2 \times 10^2$ uk/ml

$$\text{c. Nilai ALT} = \frac{\text{ALT tinggi}}{\text{ALT rendah}} = \frac{6,1 \times 10^2}{1,8 \times 10^2} = 3,38 > 2$$

Diambil pengenceran terendah $1,8 \times 10^2$ uk/ml

$$\begin{aligned} \text{ALT rata-rata} &= (6,8 \times 10^2 + 2,2 \times 10^2 + 1,8 \times 10^2) / 3 \\ &= 3,6 \times 10^2 \text{ uk/ml} \end{aligned}$$

3. Nilai ALT sampel 3

$$\begin{aligned} \text{a. Nilai ALT} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 89 \times \frac{1}{10^{-1}} = 8,9 \times 10^2 \text{ uk/ml} \end{aligned}$$

$$\text{b. Nilai ALT} = \frac{\text{ALT tinggi}}{\text{ALT rendah}} = \frac{3,9 \times 10^2}{1,7 \times 10^2} = 2,29 > 2$$

Diambil pengenceran terendah $1,7 \times 10^2$ uk/ml

$$\text{c. Nilai ALT} = \frac{\text{ALT tinggi}}{\text{ALT rendah}} = \frac{4,9 \times 10^2}{2,6 \times 10^2} = 1,88 < 2$$

Diambil nilai rata-rata $(4,9 \times 10^2 + 2,6 \times 10^2) / 2 = 4,4 \times 10^2$ uk/ml

$$\begin{aligned} \text{ALT rata-rata} &= (8,9 \times 10^2 + 1,7 \times 10^2 + 4,4 \times 10^2) / 3 \\ &= 4,4 \times 10^2 \text{ uk/ml} \end{aligned}$$

Lampiran 2. Perhitungan nilai Angka kapang dan Khamir sampel jamu gendong

Tabel 6. Pemeriksaan Angka kapang khamir.

| NO | Sampel | Repli- kasi | Jumlah Koloni per Petri | | | Angka Kapang Khamir (AKK) | AKK Rata-rata |
|----|--------|----------------|-------------------------|------------------|------------------|------------------------------|--------------------------------|
| | | | 10 ⁻¹ | 10 ⁻² | 10 ⁻³ | | |
| 1 | A | 1 | 240 | 47 | 15 | 3,6 x 10 ³ uk/ml | 4,3 x 10 ³ uk/ml |
| 2 | | 2 | 284 | 50 | 17 | 3,9 x 10 ³ uk/ml | |
| 3 | | 3 | >300 | 55 | 41 | 5,5 x 10 ³ uk/ml | |
| 4 | B | 1 | 61 | 20 | 2 | 6,1 x 10 ² uk/ml | 5,7 x 10 ² uk/ml |
| 5 | | 2 | 55 | 11 | 0 | 5,5 x 10 ² uk/ml | |
| 6 | | 3 | 56 | 8 | 0 | 5,6 x 10 ² uk/ml | |
| 7 | C | 1 | 32 | 5 | 4 | 3,2 x 10 ² uk/ml | 3,5 x 10 ² uk/ml |
| 8 | | 2 | 31 | 17 | 4 | 3,1 x 10 ² uk/ml | |
| 9 | | 3 | 43 | 17 | 6 | 4,3 x 10 ² uk/ml | |

1. Nilai angka kapang dan khamir sampel A

$$\text{a. Nilai AKK} = \frac{\text{AKK tinggi}}{\text{AKK rendah}} = \frac{4,7 \times 10^3}{2,4 \times 10^3} = 1,95 < 2$$

$$\text{Diambil nilai rata-rata } (4,7 \times 10^3 + 2,4 \times 10^3) / 2 = 3,6 \times 10^3 \text{ uk/ml}$$

$$\text{b. Nilai AKK} = \frac{\text{AKK tinggi}}{\text{AKK rendah}} = \frac{5,0 \times 10^3}{2,8 \times 10^3} = 1,87 < 2$$

$$\text{Diambil nilai rata-rata } (5,0 \times 10^3 + 2,8 \times 10^3) / 2 = 3,9 \times 10^3 \text{ uk/ml}$$

$$\text{c. Nilai AKK} = \frac{\text{AKK tinggi}}{\text{AKK rendah}} = \frac{4,1 \times 10^4}{5,5 \times 10^3} = 7,4 < 2$$

$$\text{Diambil pengenceran terendah } 5,5 \times 10^3 \text{ uk/ml}$$

$$\text{ALT rata-rata} = (3,6 \times 10^3 + 3,9 \times 10^3 + 5,5 \times 10^3) / 3$$

$$= 4,3 \times 10^3 \text{ uk/ml}$$

2. Nilai angka kapang khamir sampel B

$$\text{a. Nilai AKK} = \text{jumlah koloni} \times \frac{1}{\text{pengenceran}}$$

$$= 61 \times \frac{1}{10^{-1}} = 6,1 \times 10^2 \text{ uk/ml}$$

$$\begin{aligned} \text{b. Nilai AKK} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 55 \times \frac{1}{10^{-1}} = 5,5 \times 10^2 \text{ uk/ml} \end{aligned}$$

$$\begin{aligned} \text{c. Nilai AKK} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 56 \times \frac{1}{10^{-1}} = 5,6 \times 10^2 \text{ uk/ml} \end{aligned}$$

$$\begin{aligned} \text{ALT rata-rata} &= (6,1 \times 10^2 + 5,5 \times 10^2 + 5,6 \times 10^2) / 3 \\ &= 5,7 \times 10^2 \text{ uk/ml} \end{aligned}$$

3. Nilai angka kapang dan khamir sampel C

$$\begin{aligned} \text{a. Nilai AKK} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 32 \times \frac{1}{10^{-1}} = 3,2 \times 10^2 \text{ uk/ml} \end{aligned}$$

$$\begin{aligned} \text{b. Nilai AKK} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 31 \times \frac{1}{10^{-1}} = 3,1 \times 10^2 \text{ uk/ml} \end{aligned}$$

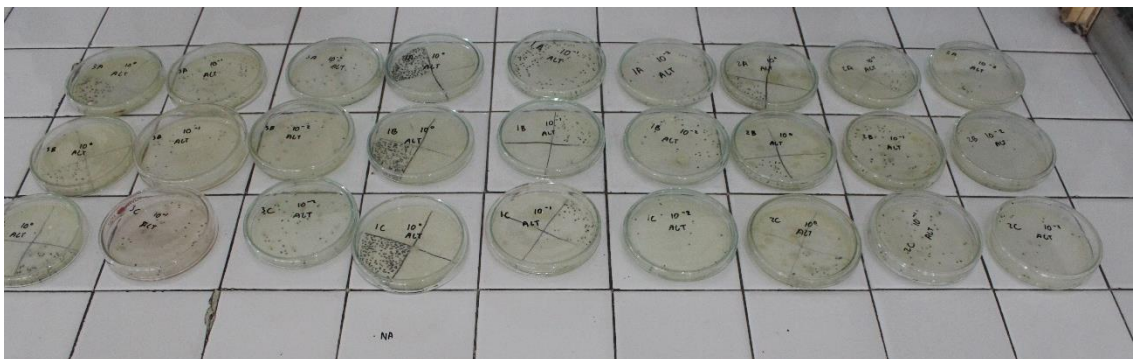
$$\begin{aligned} \text{c. Nilai AKK} &= \text{jumlah koloni} \times \frac{1}{\text{pengenceran}} \\ &= 43 \times \frac{1}{10^{-1}} = 4,3 \times 10^2 \text{ uk/ml} \end{aligned}$$

$$\begin{aligned} \text{ALT rata-rata} &= (3,2 \times 10^2 + 3,1 \times 10^2 + 4,3 \times 10^2) / 3 \\ &= 3,5 \times 10^2 \text{ uk/ml} \end{aligned}$$

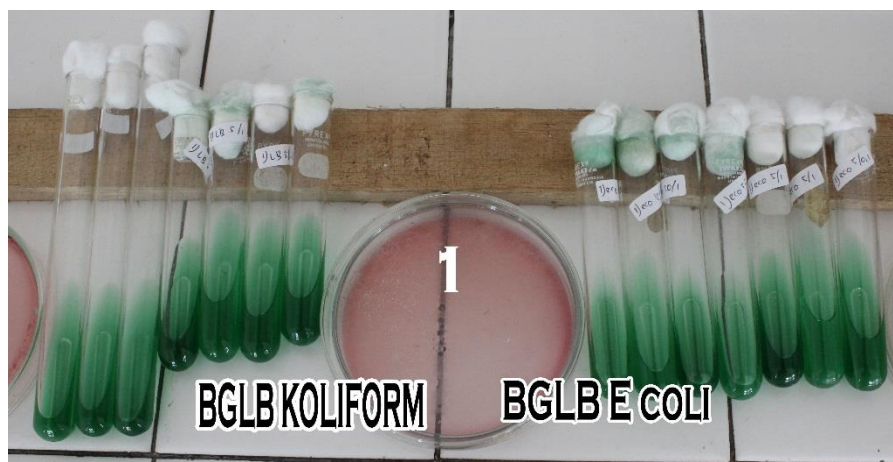
Lampiran



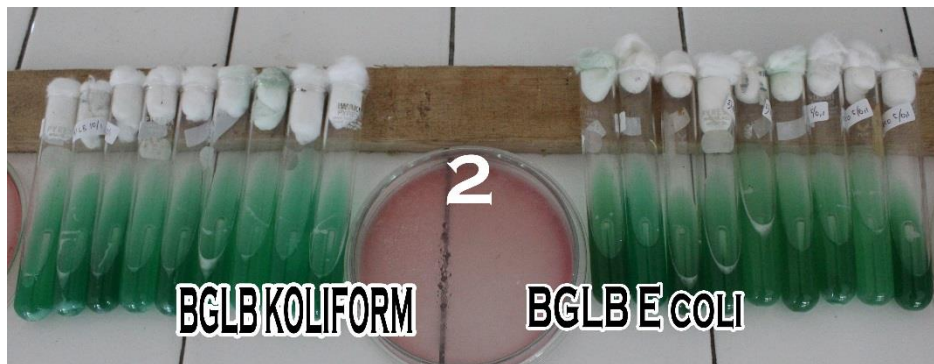
Gambar 1. Jamu gendong sampel 1,2 dan 3



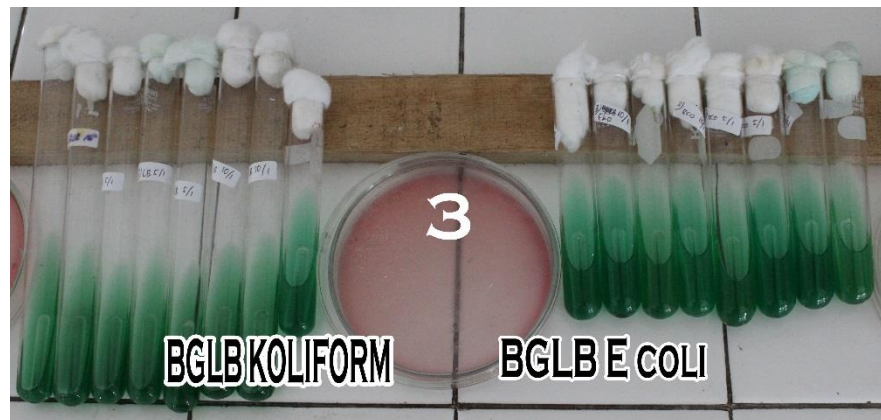
Gambar 2. angka lempeng total sampel 1,2 dan 3



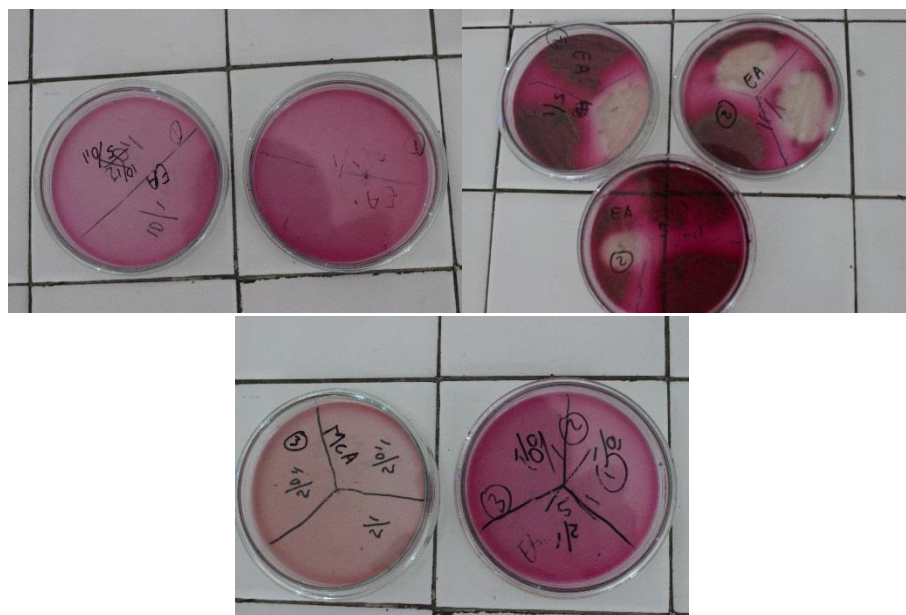
Gambar 3. Angka perkiraan minimum koliform & E coli sampel 1



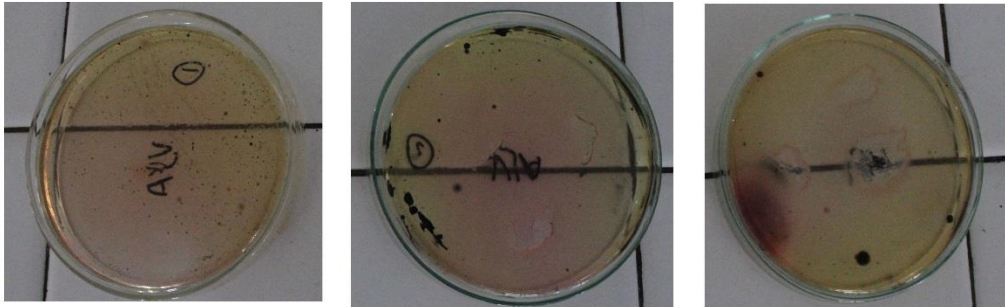
Gambar 4. Angka perkiraan minimum koliform & *E coli* sampel 2



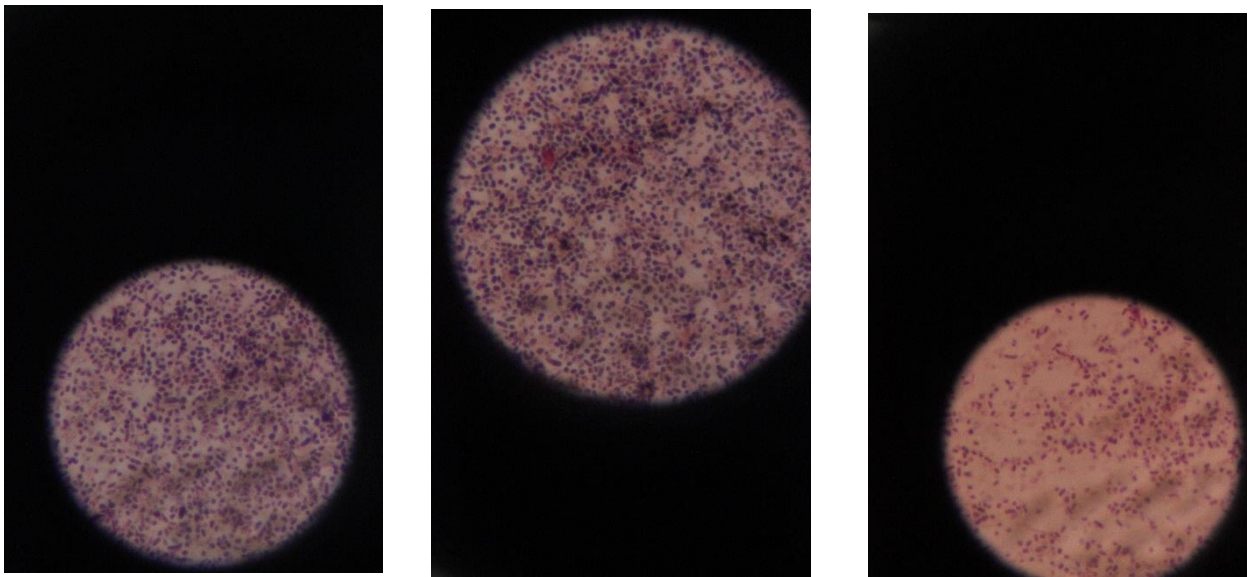
Gambar 5. Angka perkiraan minimum koliform & *E coli* sampel 3



Gambar 6. Media endo agar pengujian bakteri *Escherichia coli* sampel 1,2 dan 3



Gambar 7. Media Vogel Jhonson Agar sampel 1,2 dan 3



Gambar 8. Mikroskopis bakteri *Staphylococcus aureus* sampel 1, 2 dan 3