

Lampiran 10

Uji Normalitas hasil kelembaban kulit wajah kering menggunakan Ekstrak Almond

Sampel	XA	z_i	z_t	F(z_i)	S(z_i)	[F(z_i) - S(z_i)]
1	1,71	-1,041	0,3508	0,149	0,2	0,051
2	1,73	-0,822	0,2939	0,206	0,4	0,194
3	1,78	0,052	0,0199	0,520	0,6	0,080
4	1,79	0,359	0,1368	0,637	0,8	0,163
5	1,86	1,452	0,4265	0,927	1,0	0,074
$\sum X_A$	8,860					
\bar{x}	1,772					
S	0,057					

$$\sum X_A = 8,860$$

$$\bar{x}_A = \frac{8,860}{5} = 1,772$$

$$S_{\text{baku}} = \frac{\sum (X_i - \bar{X})^2}{n-1}$$

$$S_A^2 = \frac{(1,71 - 1,772)^2 + (1,73 - 1,772)^2 + (1,78 - 1,772)^2 + (1,79 - 1,772)^2 + (1,86 - 1,772)^2}{5 - 1}$$

$$= \frac{0,0131}{4} = 0,0033$$

$$S_A^2 = 0,0033$$

$$S = \sqrt{0,0033}$$

$$= 0,057$$

Cara mencari (z_i)

$$Z = \frac{X - \bar{X}}{S}$$

$$Z_1 = \frac{1,71 - 1,772}{0,057} = -1,041$$

$$Z_2 = \frac{1,73 - 1,772}{0,057} = -0,822$$

$$Z_3 = \frac{1,78 - 1,772}{0,057} = 0,052$$

$$Z_4 = \frac{1,79 - 1,772}{0,057} = 0,359$$

$$Z_5 = \frac{1,86 - 1,772}{0,057} = 1,452$$

Cari $F(Z_i) : F = (Z \leq Z_i)$

$$\text{Sampel 1 } (Z_i)_1 = -1,041 \quad F(Z_1) = 0,5 - 0,3508$$

$$Z_{t1} = 0,3508 \quad = 0,149$$

$$\text{Sampel 2 } (Z_i)_2 = -0,822 \quad F(Z_2) = 0,5 - 0,2939$$

$$Z_{t2} = 0,206 \quad = 0,206$$

$$\text{Sampel 3 } (Z_i)_3 = 0,052 \quad F(Z_3) = 0,5 + 0,0199$$

$$Z_{t3} = 0,520 \quad = 0,520$$

$$\text{Sampel 4 } (Z_i)_4 = 0,359 \quad F(Z_4) = 0,5 + 0,1368$$

$$Z_{t4} = 0,637 \quad = 0,637$$

$$\text{Sampel 5 } (Z_i)_5 = 1,452 \quad F(Z_5) = 0,5 + 0,4265$$

$$Z_{t5} = 0,927 \quad = 0,927$$

$$S(Z_i) = \frac{\text{banyaknya } Z_i - Z_n \text{ yang } \leq Z_i}{n}$$

$$\text{Cari } S(Z_i)_1 = 1 : 5 = 0,2$$

$$\text{Cari } S(Z_i)_2 = 2 : 5 = 0,4$$

$$\text{Cari } S(Z_i)_3 = 3 : 5 = 0,6$$

$$\text{Cari } S(Z_i)_4 = 4 : 5 = 0,8$$

$$\text{Cari } S(Z_i)_5 = 5 : 5 = 1,0$$

$$\text{Cari } |F(Z_i) - S(Z_i)|$$

$$\text{Sampel 1} = 0,149 - 0,2 = 0,051$$

$$\text{Sampel 2} = 0,206 - 0,4 = 0,194$$

$$\text{Sampel 3} = 0,520 - 0,6 = 0,080$$

$$\text{Sampel 4} = 0,637 - 0,8 = 0,163$$

$$\text{Sampel 5} = 0,927 - 1,0 = 0,074$$

Interpretasi

Dari tabel di atas, pada kolom terakhir harga paling besar didapat $L_o = 0,194$ dengan $n = 5$, dan taraf signifikansi $\alpha = 0,05$ diperoleh $L_{\text{tabel}} = 0,337$, ternyata $L_o < L_{\text{tabel}}$ yaitu : $0,194 < 0,337$. Sehingga hipotesis nol diterima, artinya sampel yang diambil berasal dari populasi yang berdistribusi normal.

Lampiran 11

Uji Normalitas hasil kelembaban kulit wajah kering menggunakan kontrol

Sampel	XB	z_i	z_t	$F(z_i)$	$S(z_i)$	$[F(z_i) - S(z_i)]$
1	0,84	-1,561	0,4406	0,059	0,20	0,141
2	0,91	-0,408	0,1554	0,345	0,40	0,055
3	0,96	0,523	0,1985	0,699	0,60	0,099
4	0,96	0,523	0,1985	0,699	0,80	0,102
5	0,98	0,922	0,3212	0,821	1,00	0,179
$\sum X_B$	4,640					
\bar{x}	0,928					
S	0,056					

$$\sum X_B = 4,640$$

$$\bar{x}_B = \frac{4,640}{5} = 0,928$$

$$S_{\text{baku}} = \frac{\sum (X_i - \bar{x})^2}{n-1}$$

$$S_B^2 = (0,84 - 0,928)^2 + (0,91 - 0,928)^2 + (0,96 - 0,928)^2 + (0,96 - 0,928)^2 + (0,98 - 0,928)^2$$

$$5 - 1$$

$$= \frac{0,0127}{4} = 0,0032$$

$$S_B^2 = 0,0032$$

$$S = \sqrt{0,0032}$$

$$= \mathbf{0,056}$$

Cara mencari (Z_i)

$$Z = \frac{X - \bar{X}}{S}$$

$$Z_1 = \frac{0,84 - 0,928}{0,056} = -1,561$$

$$Z_2 = \frac{0,91 - 0,928}{0,056} = -0,408$$

$$Z_3 = \frac{0,96 - 0,928}{0,056} = 0,523$$

$$Z_4 = \frac{0,96 - 0,928}{0,056} = 0,523$$

$$Z_5 = \frac{0,98 - 0,928}{0,056} = 0,922$$

Cari $F(Z_i) : F = (Z \leq Z_i)$

Sampel 1 (Z_i) ₁ = -1,561	$F(Z_1) = 0,5 - 0,4406$
$Z_{t1} = 0,4406$	$= 0,059$
Sampel 2 (Z_i) ₂ = -0,408	$F(Z_2) = 0,5 - 0,1554$
$Z_{t2} = 0,1554$	$= 0,345$
Sampel 3 (Z_i) ₃ = 0,523	$F(Z_3) = 0,5 + 0,1985$
$Z_{t3} = 0,1985$	$= 0,699$
Sampel 4 (Z_i) ₄ = 0,523	$F(Z_4) = 0,5 + 0,1985$
$Z_{t4} = 0,1985$	$= 0,699$
Sampel 5 (Z_i) ₅ = 0,922	$F(Z_5) = 0,5 + 0,3212$
$Z_{t5} = 0,3212$	$= 0,821$

$$S(Z_i) = \frac{\text{banyaknya } Z_i - Z_n \text{ yang } \leq Z_i}{n}$$

$$\text{Cari } S(Z_i)_1 = 1 : 5 = 0,2$$

$$\text{Cari } S(Z_i)_2 = 2 : 5 = 0,4$$

$$\text{Cari } S(Z_i)_3 = 3 : 5 = 0,6$$

$$\text{Cari } S(Z_i)_4 = 4 : 5 = 0,8$$

$$\text{Cari } S(Z_i)_5 = 5 : 5 = 1,0$$

$$\text{Cari } |F(Z_i) - S(Z_i)|$$

$$\text{Sampel A} = 0,059 - 0,2 = 0,141$$

$$\text{Sampel B} = 0,345 - 0,4 = 0,055$$

$$\text{Sampel C} = 0,699 - 0,6 = 0,099$$

$$\text{Sampel D} = 0,699 - 0,8 = 0,102$$

$$\text{Sampel E} = 0,821 - 1,0 = 0,179$$

Interpretasi

Dari tabel di atas, pada kolom terakhir harga paling besar didapat $L_o = 0,179$ dengan $n = 5$, dan taraf signifikansi $\alpha = 0,05$ diperoleh $L_{\text{tabel}} = 0,337$, ternyata $L_o < L_{\text{tabel}}$ yaitu : $0,179 < 0,337$. Sehingga hipotesis nol diterima, artinya sampel yang diambil berasal dari populasi yang berdistribusi normal.

Lampiran 12

Uji Homogenitas

$$F_{hitung} = \frac{\text{Variansi Terbesar}}{\text{Variansi Terkecil}} \longrightarrow F = \frac{S_A^2}{S_B^2}$$

Diketahui :

$$S_A^2 = 0,0033$$

$$S_B^2 = 0,0032$$

$$\begin{aligned} F &= \frac{S_A^2}{S_B^2} \\ &= \frac{0,0033}{0,0032} \\ &= 1,027 \end{aligned}$$

Mencari Ftabel :

$$1. n_A = 5$$

$$n_B = 5$$

$$2. dk = (n_A + n_B - 2)$$

$$= (5 + 5 - 2) = 8$$

$$3. \text{Pembilang} = S_A^2 \text{ dengan } dk = n_A - 1$$

$$dk \text{ pembilang} = 5 - 1 = 4$$

$$4. \text{Penyebut} = S_B^2 \text{ dengan } dk = n_B - 1$$

$$dk \text{ penyebut} = 5 - 1 = 4$$

5. Dari tabel F dengan dk pembilang = 4, dk penyebut = 4 dan taraf signifikan

$$\alpha = 0,05$$

Diperoleh nilai Ftabel = 6,39

Karena Fhitung = 1,027, dan Ftabel = 6,39 maka Fhitung < Ftabel maka

H₀ diterima, sehingga disimpulkan bahwa data penelitian bersifat homogen.

Lampiran 13

Pengujian Hipotesis

Pengujian hipotesis pengaruh penggunaan ekstrak almond terhadap hasil kelembaban kulit pada kulit wajah kering.

Langkah pengujian :

1. Statistik Penguji

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S \sqrt{\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Diketahui :

$$\bar{X}_1 = 1,772$$

$$\bar{X}_2 = 0,928$$

$$n_1 = 5$$

$$n_2 = 5$$

$$S_1^2 = 0,0033$$

$$S_2^2 = 0,0032$$

2. Simpangan gabungan

$$\begin{aligned} S_{\text{gab}}^2 &= \frac{(n_1 - 1)(S_1^2) + (n_2 - 1)(S_2^2)}{n_1 + n_2 - 2} \\ &= \frac{(5 - 1)(0,0033) + (5 - 1)(0,0032)}{5 + 5 - 2} \\ &= \frac{0,0132 + 0,0128}{8} \\ &= \frac{0,026}{8} \end{aligned}$$

$$S_{\text{gab}}^2 = 0,00325$$

$$S_{gab} = \sqrt{0,00325} = 0,057$$

$$t_{hitung} = \frac{\bar{X}_1 - \bar{X}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t_{hitung} = \frac{1,772 - 0,928}{0,057 \sqrt{\left(\frac{1}{5} + \frac{1}{5}\right)}}$$

$$t_{hitung} = \frac{0,844}{0,057 \sqrt{0,4}}$$

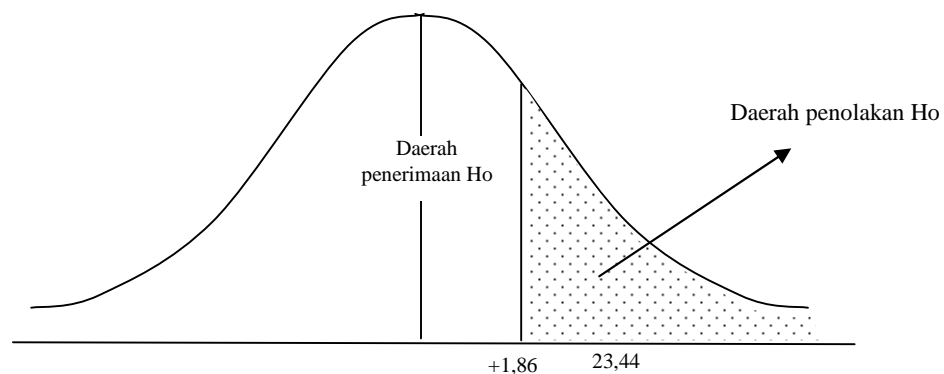
$$t_{hitung} = \frac{0,844}{0,057(0,632)}$$

$$t_{hitung} = \frac{0,844}{0,036} = 23,44$$

- Kriteria pengujian : terima H_0 jika $t < t_1 - \alpha$
- Keterangan : $t_1 - \alpha$ didapat dari daftar distribusi t dengan $dk = (n_1 + n_2 - 2)$ maka harga $t_{0,95}$ dengan $dk = 8$, dari daftar distribusi t adalah 1,86.

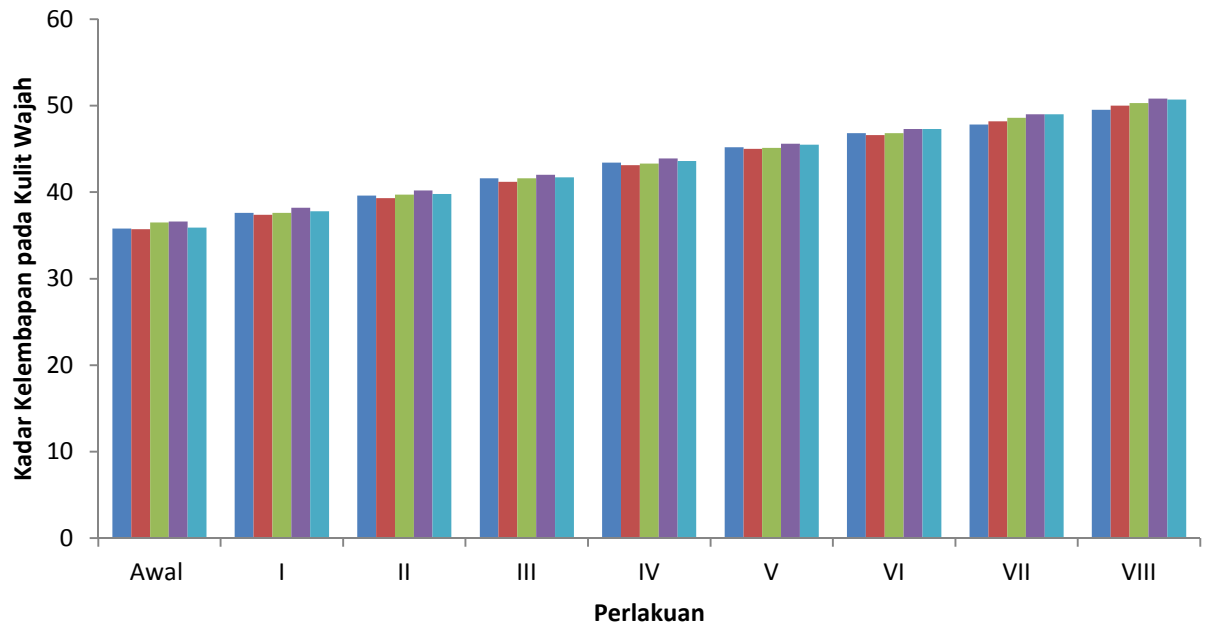
Interpretasi

Berdasarkan hasil perhitungan didapat $t_{hitung} > t_{tabel}$ yaitu $23,44 > 1,86$, maka H_0 ditolak dan H_1 diterima pada taraf signifikansi 0,05. Jadi kesimpulannya terdapat pengaruh penggunaan ekstrak almond terhadap kelembaban kulit wajah kering.



Lampiran 14:

Ekstrak Almond



Lampiran 15:

Kontrol

