**LAMPIRAN -2 HASIL PENGAMATAN**

**Larutan Standar Asam Galat**

Polifenol total yang terukur merupakan total fenol yang terdapat pada ekstrak teh putih berdasarkan standar asam galat (AG). Ekstraksi dilakukan dengan cara reflux pada suhu 66oC menggunakan pelarut metanol 70%. Larutan standar yang digunakan yaitu 0.1 mg/g; 0,2 mg/gr; 0,4 mg/g; 0,8 mg/g; dan 1.6 mg/g dan diukur absorbansinya pada panjang gelombang 750 nm. kurva baku dengan persamaan y =1.005 x - 0.001 (x konsestrasi AG (mg/g) dan y = absorbansi) dan R² = 0.999.

1. **Hasil Scan panjang gelombang optimum untuk Asam Galat Menggunakan Spektro fototemeter UV**



750

Position Height

750 nm 0.643

1. **Hasil Pengukuran Larutan Standar Asam Galat**

|  |  |
| --- | --- |
| **Konsentrasi (mg/gram) (X)** | **Absorbansi (Y)** |
| 0.1 | 0.076 |
| 0.2 | 0.229 |
| 0.4 | 0.398 |
| 0.8 | 0.801 |
| 1.6 | 1.608 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. |  (X) |  (Y) | XY | X2 | Y2 |
| 1 | 0.1 | 0.08 | 0.008 | 0.010 | 0.006 |
| 2 | 0.2 | 0.23 | 0.046 | 0.040 | 0.052 |
| 3 | 0.4 | 0.40 | 0.159 | 0.160 | 0.158 |
| 4 | 0.8 | 0.80 | 0.641 | 0.640 | 0.642 |
| 5 | 1.6 | 1.61 | 2.573 | 2.560 | 2.586 |
| ∑ | 3.1 | 3.11 | 3.426 | 3.410 | 3.444 |

**y = a +b x**

$$a=\frac{\left(\sum\_{}^{}Y\right)(\sum\_{}^{}X^{2})-(\sum\_{}^{}Y)(\sum\_{}^{}XY)}{n\sum\_{}^{}X^{2}-(\sum\_{}^{}X)^{2}}$$

$$a=\frac{\left(3.112\right)\left(3.41\right)-\left(3.112\right)(2.426)}{9(3.41)-\left(3.1\right)}$$

a = 0,001

$$b=\frac{n \sum\_{}^{}XY-\left(\sum\_{}^{}X\right)\left(\sum\_{}^{}Y\right)}{n\sum\_{}^{}X^{2}-(\sum\_{}^{}X)^{2}}$$

$$b=\frac{\left(3.426\right)-\left(3.1\right)(3.11)}{9(3.41)-\left(3.1\right)}$$

b = 1,005

$$r=\frac{n \sum\_{}^{}XY-\left(\sum\_{}^{}X\right)\left(\sum\_{}^{}Y\right)}{\sqrt{\left\{n\sum\_{}^{}X^{2}-(\sum\_{}^{}X)^{2}\right\}\left\{n\sum\_{}^{}Y^{2}-(\sum\_{}^{}Y)^{2}\right\}}}$$

$$r=\frac{5 (3,42)-\left(3,1\right)(3,1)}{\sqrt{\left\{5\left(3,41\right)-(3,1)^{2}\right\}\left\{5\left(3,41\right)-(3,11)^{2}\right\}}}$$

$$r=\frac{7,482}{7,487}$$

r = 0,999

R2 = 0,9992

R2 = 0,999

1. **Analisis Pendahuluan**

Nama Uji : Uji Potensi Polifenol

Metode : Follin Ciocalteu (Kulisic *et al.,* 2006)

Alat uji : Spektrofotomer UV

Reagen : Larutan *Folin-Ciocalteau* (1:1 (FeCl3 0,1 M; K3Fe(CN)6 0,008 M)

Nama Sampel : Teh Putih

Kode Sampel : A, B, C, D

Preparasi : Ekstraksi

 Pengekstrak : Metanol 70 %

 Suhu : 66oC

 Kondisi Ektrak : Refluks

**Hasil Analisis Penelitian Pendahuluan Pendahuluan**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Kode sampel** | **C awal** | **C awal (mg/g)** | **C alat (mg/g)** | **C alat rata2** | **Pengenceran** | **C alat rata2 total** | **Kadar Air** | **Kadar polyfenol (%)** |
| 1 | A | 0.500/101 g | 4.95 | 0.5591 | 0.5670 | 2 | 1.1341 | 9.2342 | 25.03 |
| 2 | 0.5750 |
| 3 | B | 0.500/101 g | 4.95 | 0.4721 | 0.46167 | 2 | 0.9233 | 9.8736 | 20.50 |
| 4 | 0.4512 |
| 5 | C | 0.500/101 g | 4.95 | 0.4759 | 0.47295 | 2 | 0.9459 | 10.1863 | 21.06 |
| 6 | 0.4700 |
| 7 | D | 0.500/101 g | 4.95 | 0.5868 | 0.5706 | 2 | 1.1411 | 9.6694 | 25.28 |
| 8 | 0.5543 |

1. **Analisis Utama Polifenol Total**

Metode : Follin Ciocalteu

Nama Sampel : Teh Putih

Kode Sampel :

|  |  |  |
| --- | --- | --- |
| Suhu (0C)  | Waktu (menit) | KODE PENGUJIAN |
| 55 | **3** | t1w1 |
| **6** | t1w2 |
| **9** | t1w3 |
| 75 | **3** | t2w1 |
| **6** | t2w2 |
| **9** | t2w2 |
| 95 | **3** | t3w1 |
| **6** | t3w2 |
| **9** | t3w3 |

Preparasi : Diseduh (mengacu kepada SNI 01-1902-1995 )

 Penyeduh : Aquades

 Suhu : 95oC (suhu didih),75, dan 85.

 Kondisi : Muka tempat seduh di tutup

Konsentrasi Larutan Standar = mg/gram

Kosentrasi Awal Seduhan Teh : 2,84g/140mL

BJ air = 1 gram/ml

Berat Teh = 2,84 gram (kadar air 9,67 %)

 = 284 mg

Kosentrasi Awal = 284/140

 = 20,89 mg/g

Konsentrasi Kering = 18.33 mg/g

**Pengenceran** dilakukan karena pada konsentrasi 20,89 gram/gram melebihi absorbansi terukur melebihi larutan standar. sehingga diencerkan 2 kali.

Hasil Pengukuran Spektrofotometer

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Sampel | Absorbansi (X) | Konsentrasi | Standar Eror | Konsentrasi (Y) |
| 1 | t1w1 | 0.121 | 0.1215 | 0.000 | 0.1215 |
| 2 | t1w1 | 0.110 | 0.1106 | 0.000 | 0.1106 |
| 3 | t1w2 | 0.224 | 0.2239 | 0.000 | 0.2239 |
| 4 | t1w2 | 0.241 | 0.2408 | 0.000 | 0.2408 |
| 5 | t1w3 | 0.233 | 0.2329 | 0.000 | 0.2329 |
| 6 | t1w3 | 0.238 | 0.2379 | 0.000 | 0.2379 |
| 7 | t2w1 | 0.314 | 0.2886 | 0.000 | 0.2886 |
| 8 | t2w1 | 0.304 | 0.2836 | 0.000 | 0.2836 |
| 9 | t2w2 | 0.287 | 0.3581 | 0.000 | 0.3581 |
| 10 | t2w2 | 0.290 | 0.3552 | 0.000 | 0.3552 |
| 11 | t2w3 | 0.449 | 0.4426 | 0.000 | 0.4426 |
| 12 | t2w3 | 0.459 | 0.4476 | 0.000 | 0.4476 |
| 13 | t3w1 | 0.258 | 0.2587 | 0.000 | 0.2587 |
| 14 | t3w1 | 0.249 | 0.2577 | 0.000 | 0.2577 |
| 15 | t3w2 | 0.423 | 0.4218 | 0.000 | 0.4218 |
| 16 | t3w2 | 0.404 | 0.4029 | 0.000 | 0.4029 |
| 17 | t3w3 | 0.549 | 0.5470 | 0.000 | 0.5470 |
| 18 | t3w3 | 0.557 | 0.5550 | 0.000 | 0.5550 |

Contoh perhitungan Secara manual

Persamaan Kurva Standar : y = 1.005x - 0.001

Absorbansi t1w1 = 0.1215

y = 1.005 (0.1215) – 0.001

y = 0.1225 – 0.001

**y = 0.1215**

Konsentrasi polifenol total rata-rata t1w1 = 0,1162 mg/g

Konsentrasi polifenol pada seduhan sebelum diencerkan = 0,1161 x 2

= 0,2321 mg/g

Kadar Polifenol dalam seduhan = (0,2321/(18,33)\*(100)

= 1,44 %

**Hasil Uji Penelitian Utama**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Kode sampel** | **Konsentrasi Awal** | **Pengenceran** | **Konsentrasi Polifenol Terukur Spektro** | **Konsentrasi Polifenol dalam seduhan awal** | **Kadar polifenol pada seduhan (%AG)** |
| **Gram teh/ml air** | **Teh Kering (mg/g)** | **(mg/g)** | **Rata-rata (mg/g)** |
| 1 | t1w1 | 2,84g/140mL | 18.33 | 2 | 0.1215 | 0.1161 | 0.2321 | 1.14 |
| 2 | 0.1106 |
| 3 | t1w2 | 2,84g/140mL | 18.33 | 2 | 0.2239 | 0.2324 | 0.4647 | 2.29 |
| 4 | 0.2408 |
| 5 | t1w3 | 2,84g/140mL | 18.33 | 2 | 0.2329 | 0.2354 | 0.4708 | 2.32 |
| 6 | 0.2379 |
| 7 | t2w1 | 2,84g/140mL | 18.33 | 2 | 0.2886 | 0.2861 | 0.5722 | 2.82 |
| 8 | 0.2836 |
| 9 | t2w2 | 2,84g/140mL | 18.33 | 2 | 0.3581 | 0.3567 | 0.7133 | 3.52 |
| 10 | 0.3552 |
| 11 | t2w3 | 2,84g/140mL | 18.33 | 2 | 0.4426 | 0.4451 | 0.8902 | 4.39 |
| 12 | 0.4476 |
| 13 | t3w1 | 2,84g/140mL | 18.33 | 2 | 0.2587 | 0.2582 | 0.5164 | 2.55 |
| 14 | 0.2577 |
| 15 | t3w2 | 2,84g/140mL | 18.33 | 2 | 0.4218 | 0.4124 | 0.8247 | 4.06 |
| 16 | 0.4029 |
| 17 | t3w3 | 2,84g/140mL | 18.33 | 2 | 0.5470 | 0.5510 | 1.1020 | 5.43 |
| 18 | 0.5550 |

1. **Hasil Scan Panjang Gelombang Optimum untuk DPPH**



Position Height

516.0 0.713

1. **Penelitian Utama Penangkapan Radikal Bebas DPPH**

Nama Uji : Uji Aktivitas Antioksida

Metode : DPPH (1,1-diphenyl- 2- Picrilhydrazl)

Reagen : Larutan 1,1-Diphenyl-2-picrylhydrazyl (DPPH, Mr = 395,34) dengan konsentrasi akhir 2,0x10-4 M (Dibuat larutan stok pada konsentrasi 1,0x10-3 M)

Alat uji : Spektrofotomer UV

Nama Sampel : Teh Putih

Kode Sampel :

|  |  |  |
| --- | --- | --- |
| Suhu (0C) | Waktu (menit) | KODE PENGUJIAN |
| 55 | **3** | t1w1 |
| 55 | **6** | t1w2 |
| 55 | **9** | t1w3 |
| 75 | **3** | t2w1 |
| 75 | **6** | t2w2 |
| 75 | **9** | t2w2 |
| 95 | **3** | t3w1 |
| 95 | **6** | t3w2 |
| 95 | **9** | t3w3 |

Preparasi : Diseduh

 Penyeduh : Aquades

 Suhu : 95oC (suhu didih),75, dan 85.

 Kondisi : Muka tempat seduh di tutup

**Hasil Uji DPPH**

1. **Kode t1w1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t1w1**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| 0.855 |  |  |
| 0.276 | 162.2857 | 67.72 |
| 0.558 | 81.1429 | 34.74 |
| 0.705 | 40.5714 | 17.54 |
| 0.799 | 20.2857 | 6.55 |
| 0.828 | 5.0715 | 3.16 |

 |  |

**Contoh Perhitungan Inhibisi**

% Inhibisi =$\frac{A referece-A sample}{A reference}$

A reference = 0,855 A Sampel = 0,267

% Inhibisi = $\frac{0.855-0.267}{0.855}$x 100

 = 67.72

**EC50 = Persen Inhibisi 50%**

y = 50

y = 0,418x + 0,028

50 = 0,418x + 0,028

0,418x = 50 - 0,028

x = 49,972/0,418

= **119.5502 ppm**

1. **Kode t1w2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t1w2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |  |  |  |
| 0.862 |   |  |  |  |  |
| 0.429 | 81.1429 | 50.23 |  |  |  |
| 0.661 | 40.5714 | 23.32 |  |  |  |
| 0.761 | 20.2857 | 11.72 |  |  |  |
| 0.826 | 10.1429 | 4.18 |  |  |  |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y = 0,642x - 2,073

50 = 0,642x - 2,073

0,642 x = 50 + 2,073

x = 52,073 / 0,642

= **88,111 ppm**

1. **Kode t1w3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t1w3**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.862** |   |  |
| **0.418** | 81.1429 | 51.51 |
| **0.616** | 40.5714 | 28.54 |
| **0.769** | 20.2857 | 10.79 |
| **0.812** | 10.1429 | 5.80 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y = 0,655x – 0.781

50 = 0,655x – 0.781

0.655x = 50+0,781

x = 50,781 /0,655

= **88,111 ppm**

Ec50 **T1w3 = 88,111 ppm**

1. **Kode t2w1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t2w1**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.822** |   |  |
| **0.353** | 81.1429 | 57.06 |
| **0.559** | 40.5714 | 32.00 |
| **0.723** | 20.2857 | 12.04 |
| **0.749** | 10.1429 | 8.88 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y = 0,703x + 0,765

50 = 0,703x + 0,765

0.703x = 50-0,765

x = 49,235/0,703

= **70.048 ppm**

Ec50 **T2w1 = 70.048 ppm**

1. **Kode T2w2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t2w2**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.828** |  |  |
| **0.179** | 81.1429 | 78.38 |
| **0.469** | 40.5714 | 43.36 |
| **0.673** | 20.2857 | 18.72 |
| **0.745** | 10.1429 | 10.02 |
| **0.792** | 5.0715 | 4.35 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y = 0,981x + 0,120

50 = 0,981x + 0,120

0.981x = 50-0,120

x = 49,880 /0,981

= **49.877 ppm**

Ec50 **T2w2 = 49.877 ppm**

1. **Kode t2w3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t2w3**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.823** |   |  |
| **0.129** | 81.1429 | 84.33 |
| **0.446** | 40.5714 | 45.81 |
| **0.637** | 20.2857 | 22.60 |
| **0.727** | 10.1429 | 11.66 |
| **0.784** | 5.0715 | 4.74 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y = 1,144x - 0,565

50 = 1,144x - 0,565

1.144x = 50 + 0,565

x = 50,565 /1,144

= **44,200 ppm**

Ec50 **T2w3 = 44,200 ppm**

1. **Kode t3w1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t3w1**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.844** |   |  |
| **0.407** | 162.2857 | 51.78 |
| **0.398** | 81.1429 | 52.84 |
| **0.624** | 40.5714 | 26.07 |
| **0.753** | 20.2857 | 10.78 |
| **0.800** | 10.1429 | 5.21 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y =0,678x - 2,086

50 =0,678x - 2,086

0,678x = 50 + 2,086

x = 52,086 /1,144

= **76,755 ppm**

Ec50 **T3w1 = 76,755 ppm**

1. **Kode t3w2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t3w2**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.840** |   |  |
| **0.163** | 81.1429 | 80.60 |
| **0.476** | 40.5714 | 43.33 |
| **0.669** | 20.2857 | 20.36 |
| **0.754** | 10.1429 | 10.24 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y =0,993x + 0,859

50 =0,993x + 0,859

0,993x = 50 - 0,859

x = 49,141 /0,993

= **49,482 ppm**

Ec50 **T3w2 = 49,482 ppm**

1. **Kode t3w3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tabel Absorbansi Kode t2w3**

|  |  |  |
| --- | --- | --- |
| **Absorbansi rata-rata** | **C sampel (ppm)** | **% Inhibisi** |
| **0.838** |   |  |
| **0.074** | 81.1429 | 91.17 |
| **0.365** | 40.5714 | 56.44 |
| **0.581** | 20.2857 | 30.67 |
| **0.681** | 10.1429 | 18.74 |
| **0.752** | 5.0715 | 10.26 |

 |  |

**EC50 = Persen Inhibisi 50%**

y = 50

y =1,279x + 4,695

50 =1,279x + 4,695

1,279x = 50 - 4,695

x = 49,141 /1,279

= **35,411 ppm**

Ec50 **T3w1 = 35,411 ppm**

**LAMPIRAN -3 ANALISIS DATA**

1. **Analisis Polifenol Total**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **X1** | **X­2** | **Y** |
| 1 | 55 | 3 | 1.27 |
| 2 | 55 | 6 | 2.54 |
| 3 | 55 | 9 | 2.57 |
| 4 | 75 | 3 | 3.12 |
| 5 | 75 | 6 | 3.89 |
| 6 | 75 | 9 | 4.86 |
| 7 | 95 | 3 | 2.82 |
| 8 | 95 | 6 | 4.5 |
| 9 | 95 | 9 | 6.01 |

Keterangan :

X1 = Suhupenyeduhan (oC)

X2 = Lama Penyeduhan (menit)

Y = % Polifenol Total

| **Statistik Deskrivtif** |
| --- |
|  | Mean | Std. Deviation | N |
| Polifenol\_Total | 3.5089 | 1.44340 | 9 |
| suhu | 75.0000 | 17.32051 | 9 |
| waktu | 6.0000 | 2.59808 | 9 |

| **Korelasi Parsial** |
| --- |
|  |  | Polifenol\_Total | suhu | waktu |
| Pearson Correlation | Polifenol\_Total | 1.000 | .695 | .623 |
| suhu | .695 | 1.000 | .000 |
| waktu | .623 | .000 | 1.000 |
| Sig. (1-tailed) | Polifenol\_Total | . | .019 | .037 |
| suhu | .019 | . | .500 |
| waktu | .037 | .500 | . |
| N | Polifenol\_Total | 9 | 9 | 9 |
| suhu | 9 | 9 | 9 |
| waktu | 9 | 9 | 9 |

| **Variables Entered/Removedb** |
| --- |
| Model | Variables Entered | Variables Removed | Method |
| 1 | waktu, suhua | . | Enter |
| a. All requested variables entered. |  |
| b. Dependent Variable: Polifenol\_Total |

| **Model Summaryb** |
| --- |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .933a | .871 | .828 | .59834 |
| a. Predictors: (Constant), waktu, suhu |  |
| b. Dependent Variable: Polifenol\_Total |  |

| **ANOVAb** |
| --- |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 14.519 | 2 | 7.260 | 20.278 | .002a |
| Residual | 2.148 | 6 | .358 |  |  |
| Total | 16.667 | 8 |  |  |  |
| a. Predictors: (Constant), waktu, suhu |  |  |  |
| b. Dependent Variable: Polifenol\_Total |  |  |  |

| **Coefficientsa** |
| --- |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | -2.912 | 1.057 |  | -2.754 | .033 |
| suhu | .058 | .012 | .695 | 4.742 | .003 |
| waktu | .346 | .081 | .623 | 4.251 | .005 |
| a. Dependent Variable: Polifenol\_Total |  |  |  |

1. **Analisis Penangkapan DPPH**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **X1** | **X2** | **Y** |
| 1 | 55 | 3 | 119.55 |
| 2 | 55 | 6 | 81.11 |
| 3 | 55 | 9 | 77.53 |
| 4 | 75 | 3 | 70.05 |
| 5 | 75 | 6 | 49.88 |
| 6 | 75 | 9 | 44.2 |
| 7 | 95 | 3 | 76.76 |
| 8 | 95 | 6 | 49.48 |
| 9 | 95 | 9 | 35.41 |

Keterangan :

X1 = Suhupenyeduhan (oC)

X2 = Lama Penyeduhan (menit)

Y = EC­50 DPPH

| **Descriptive Statistics** |
| --- |
|  | Mean | Std. Deviation | N |
| DPPH | 67.1078 | 25.72388 | 9 |
| suhu | 80.0000 | 17.32051 | 9 |
| waktu | 6.0000 | 2.59808 | 9 |

| **Correlations** |
| --- |
|  |  | DPPH | suhu | waktu |
| Pearson Correlation | DPPH | 1.000 | -.654 | -.613 |
| suhu | -.654 | 1.000 | .000 |
| waktu | -.613 | .000 | 1.000 |
| Sig. (1-tailed) | DPPH | . | .028 | .040 |
| suhu | .028 | . | .500 |
| waktu | .040 | .500 | . |
| N | DPPH | 9 | 9 | 9 |
| suhu | 9 | 9 | 9 |
| waktu | 9 | 9 | 9 |

| **Variables Entered/Removedb** |
| --- |
| Model | Variables Entered | Variables Removed | Method |
| 1 | waktu, suhua | . | Enter |
| a. All requested variables entered. |  |
| b. Dependent Variable: DPPH |  |

| **Model Summaryb** |
| --- |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .896a | .803 | .738 | 13.17814 |
| a. Predictors: (Constant), waktu, suhu |  |
| b. Dependent Variable: DPPH |  |

| **ANOVAb** |
| --- |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 4251.763 | 2 | 2125.882 | 12.241 | .008a |
| Residual | 1041.981 | 6 | 173.663 |  |  |
| Total | 5293.744 | 8 |  |  |  |
| a. Predictors: (Constant), waktu, suhu |  |  |  |
| b. Dependent Variable: DPPH |  |  |  |  |

| **Coefficientsa** |
| --- |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 181.208 | 24.458 |  | 7.409 | .000 |
| suhu | -.971 | .269 | -.654 | -3.610 | .011 |
| waktu | -6.068 | 1.793 | -.613 | -3.384 | .015 |
| a. Dependent Variable: DPPH |  |  |  |  |

1. **Korelasi Plifenol Total dan Penengkapan Radikal Bebas DPPH**

|  |  |  |
| --- | --- | --- |
| **No.** | **Y** | **X** |
| 1 | 119.55 | 1.27 |
| 2 | 81.11 | 2.54 |
| 3 | 77.53 | 2.57 |
| 4 | 70.05 | 3.12 |
| 5 | 49.88 | 3.89 |
| 6 | 44.2 | 4.86 |
| 7 | 76.76 | 2.82 |
| 8 | 49.48 | 4.5 |
| 9 | 35.41 | 6.01 |

Keterangan :

Y = EC50 DPPH

X = Polifenol total

| **Descriptive Statistics** |
| --- |
|  | Mean | Std. Deviation | N |
| DPPH | 67.1078 | 25.72388 | 9 |
| Polifenol\_Total | 3.5089 | 1.44340 | 9 |

| **Correlations** |
| --- |
|  |  | DPPH | Polifenol\_Total |
| Pearson Correlation | DPPH | 1.000 | -.952 |
| Polifenol\_Total | -.952 | 1.000 |
| Sig. (1-tailed) | DPPH | . | .000 |
| Polifenol\_Total | .000 | . |
| N | DPPH | 9 | 9 |
| Polifenol\_Total | 9 | 9 |

| **Variables Entered/Removedb** |
| --- |
| Model | Variables Entered | Variables Removed | Method |
| 1 | Polifenol\_Totala | . | Enter |
| a. All requested variables entered. |  |
| b. Dependent Variable: DPPH |  |

| **Model Summaryb** |
| --- |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .952a | .907 | .893 | 8.40510 |
| a. Predictors: (Constant), Polifenol\_Total |  |
| b. Dependent Variable: DPPH |  |

| **ANOVAb** |
| --- |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 4799.224 | 1 | 4799.224 | 67.934 | .000a |
| Residual | 494.520 | 7 | 70.646 |  |  |
| Total | 5293.744 | 8 |  |  |  |
| a. Predictors: (Constant), Polifenol\_Total |  |  |  |
| b. Dependent Variable: DPPH |  |  |  |  |

| **Coefficientsa** |
| --- |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 126.650 | 7.748 |  | 16.345 | .000 |
| Polifenol\_Total | -16.969 | 2.059 | -.952 | -8.242 | .000 |
| a. Dependent Variable: DPPH |  |  |  |  |