

7. LAMPIRAN

7.1. Hasil Uji SPSS

7.1.1. Uji Normalitas

Lampiran 1. Uji Normalitas Kadar air dan Aktivitas Air

| | | Tests of Normality | | | | | |
|-------------------|-----------------|---------------------------------|----|-------|--------------|----|------|
| perlakuan | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| kadarair_sebelum | af_kontrol | .180 | 9 | .200* | .959 | 9 | .785 |
| | af_asamsitrat05 | .185 | 9 | .200* | .869 | 9 | .121 |
| | af_asamsitrat1 | .223 | 9 | .200* | .900 | 9 | .253 |
| | af_nametabi015 | .134 | 9 | .200* | .946 | 9 | .644 |
| | af_nametabi03 | .177 | 9 | .200* | .938 | 9 | .559 |
| aw_sebelum | af_kontrol | .222 | 9 | .200* | .890 | 9 | .199 |
| | af_asamsitrat05 | .184 | 9 | .200* | .909 | 9 | .310 |
| | af_asamsitrat1 | .212 | 9 | .200* | .864 | 9 | .107 |
| | af_nametabi015 | .210 | 9 | .200* | .877 | 9 | .147 |
| | af_nametabi03 | .177 | 9 | .200* | .893 | 9 | .215 |
| kadar_air_setelah | af_kontrol | .268 | 9 | .062 | .909 | 9 | .309 |
| | af_asamsitrat05 | .233 | 9 | .174 | .830 | 9 | .045 |
| | af_asamsitrat1 | .204 | 9 | .200* | .871 | 9 | .128 |
| | af_nametabi015 | .204 | 9 | .200* | .871 | 9 | .127 |
| | af_nametabi03 | .251 | 9 | .107 | .838 | 9 | .054 |
| aw_setelah | af_kontrol | .263 | 9 | .072 | .826 | 9 | .040 |
| | af_asamsitrat05 | .181 | 9 | .200* | .947 | 9 | .661 |
| | af_asamsitrat1 | .258 | 9 | .086 | .810 | 9 | .026 |
| | af_nametabi015 | .265 | 9 | .068 | .833 | 9 | .049 |
| | af_nametabi03 | .198 | 9 | .200* | .949 | 9 | .683 |

a. Lilliefors Significance Correction
 *. This is a lower bound of the true significance.

Lampiran 2. Uji Normalitas Warna

| | | Tests of Normality | | | | | |
|-----------|-----------------|---------------------------------|----|-------------------|--------------|----|------|
| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | perlakuan | Statistic | df | Sig. | Statistic | df | Sig. |
| L_setelah | af_kontrol | .141 | 9 | .200 [*] | .965 | 9 | .847 |
| | af_asamsitrat05 | .208 | 9 | .200 [*] | .860 | 9 | .096 |
| | af_asamsitrat1 | .213 | 9 | .200 [*] | .896 | 9 | .229 |
| | af_nametabi015 | .211 | 9 | .200 [*] | .880 | 9 | .158 |
| | af_nametabi03 | .182 | 9 | .200 [*] | .878 | 9 | .151 |
| a_setelah | af_kontrol | .232 | 9 | .178 | .879 | 9 | .153 |
| | af_asamsitrat05 | .152 | 9 | .200 [*] | .980 | 9 | .965 |
| | af_asamsitrat1 | .145 | 9 | .200 [*] | .906 | 9 | .289 |
| | af_nametabi015 | .155 | 9 | .200 [*] | .969 | 9 | .890 |
| | af_nametabi03 | .278 | 9 | .044 | .822 | 9 | .036 |
| b_setelah | af_kontrol | .202 | 9 | .200 [*] | .943 | 9 | .611 |
| | af_asamsitrat05 | .240 | 9 | .144 | .915 | 9 | .349 |
| | af_asamsitrat1 | .179 | 9 | .200 [*] | .945 | 9 | .636 |
| | af_nametabi015 | .187 | 9 | .200 [*] | .945 | 9 | .635 |
| | af_nametabi03 | .158 | 9 | .200 [*] | .951 | 9 | .706 |
| L_sebelum | af_kontrol | .157 | 9 | .200 [*] | .940 | 9 | .581 |
| | af_asamsitrat05 | .165 | 9 | .200 [*] | .972 | 9 | .911 |
| | af_asamsitrat1 | .156 | 9 | .200 [*] | .931 | 9 | .487 |
| | af_nametabi015 | .333 | 9 | .005 | .810 | 9 | .026 |
| | af_nametabi03 | .275 | 9 | .048 | .823 | 9 | .037 |
| a_sebelum | af_kontrol | .150 | 9 | .200 [*] | .978 | 9 | .952 |
| | af_asamsitrat05 | .159 | 9 | .200 [*] | .922 | 9 | .410 |
| | af_asamsitrat1 | .184 | 9 | .200 [*] | .921 | 9 | .398 |
| | af_nametabi015 | .154 | 9 | .200 [*] | .941 | 9 | .589 |
| | af_nametabi03 | .204 | 9 | .200 [*] | .917 | 9 | .367 |
| b_sebelum | af_kontrol | .204 | 9 | .200 [*] | .923 | 9 | .421 |
| | af_asamsitrat05 | .141 | 9 | .200 [*] | .970 | 9 | .894 |
| | af_asamsitrat1 | .198 | 9 | .200 [*] | .947 | 9 | .662 |
| | af_nametabi015 | .245 | 9 | .129 | .834 | 9 | .050 |
| | af_nametabi03 | .215 | 9 | .200 [*] | .874 | 9 | .135 |

a. Lilliefors Significance Correction

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

Lampiran 3. Uji Normalitas Kurkumin

| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|------------------|-----------------|---------------------------------|----|-------|--------------|----|------|
| perlakuan | | Statistic | df | Sig. | Statistic | df | Sig. |
| kurkumin_setelah | af_kontrol | .267 | 9 | .063 | .895 | 9 | .224 |
| | af_asamsitrat05 | .205 | 9 | .200* | .920 | 9 | .396 |
| | af_asamsitrat1 | .334 | 9 | .005 | .762 | 9 | .007 |
| | af_nametabi015 | .184 | 9 | .200* | .931 | 9 | .493 |
| | af_nametabi03 | .196 | 9 | .200* | .878 | 9 | .148 |
| kadarair_sebelum | af_kontrol | .180 | 9 | .200* | .959 | 9 | .785 |
| | af_asamsitrat05 | .185 | 9 | .200* | .869 | 9 | .121 |
| | af_asamsitrat1 | .223 | 9 | .200* | .900 | 9 | .253 |
| | af_nametabi015 | .134 | 9 | .200* | .946 | 9 | .644 |
| | af_nametabi03 | .177 | 9 | .200* | .938 | 9 | .559 |

a. Lilliefors Significance Correction

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

Lampiran 4. Uji Normalitas Aktivitas Antioksidan Wet Basis

| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---------------------|-----------------|---------------------------------|----|-------|--------------|----|------|
| perlakuan | | Statistic | df | Sig. | Statistic | df | Sig. |
| antioksidan_sebelum | af_kontrol | .218 | 9 | .200* | .965 | 9 | .851 |
| | af_asamsitrat05 | .199 | 9 | .200* | .915 | 9 | .356 |
| | af_asamsitrat1 | .224 | 9 | .200* | .888 | 9 | .192 |
| | af_nametabi015 | .200 | 9 | .200* | .895 | 9 | .223 |
| | af_nametabi03 | .169 | 9 | .200* | .935 | 9 | .529 |
| antioksidan_setelah | af_kontrol | .255 | 9 | .095 | .845 | 9 | .066 |
| | af_asamsitrat05 | .157 | 9 | .200* | .904 | 9 | .274 |
| | af_asamsitrat1 | .107 | 9 | .200* | .987 | 9 | .991 |
| | af_nametabi015 | .232 | 9 | .180 | .911 | 9 | .321 |
| | af_nametabi03 | .170 | 9 | .200* | .937 | 9 | .547 |

a. Lilliefors Significance Correction

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

7.1.2. Uji Post Hoc Duncan *Oneway Anova* Lampiran 5. Uji *Oneway Anova* Warna

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|-----------|----------------|----------------|----|-------------|--------|------|
| L_setelah | Between Groups | 242.645 | 4 | 60.661 | 17.758 | .000 |
| | Within Groups | 136.643 | 40 | 3.416 | | |
| | Total | 379.287 | 44 | | | |
| a_setelah | Between Groups | 61.642 | 4 | 15.410 | 17.685 | .000 |
| | Within Groups | 34.856 | 40 | .871 | | |
| | Total | 96.498 | 44 | | | |
| b_setelah | Between Groups | 999.259 | 4 | 249.815 | 33.267 | .000 |
| | Within Groups | 300.379 | 40 | 7.509 | | |
| | Total | 1299.638 | 44 | | | |
| L_sebelum | Between Groups | 348.694 | 4 | 87.174 | 9.415 | .000 |
| | Within Groups | 370.380 | 40 | 9.259 | | |
| | Total | 719.074 | 44 | | | |
| a_sebelum | Between Groups | 142.052 | 4 | 35.513 | 1.835 | .141 |
| | Within Groups | 774.210 | 40 | 19.355 | | |
| | Total | 916.262 | 44 | | | |
| b_sebelum | Between Groups | 945.785 | 4 | 236.446 | 3.634 | .013 |
| | Within Groups | 2602.534 | 40 | 65.063 | | |
| | Total | 3548.319 | 44 | | | |

L_setelah

Duncan^a

| perlakuan | N | Subset for alpha = 0.05 | | | |
|-----------------|---|-------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| af_kontrol | 9 | 57.5911 | | | |
| af_nametabi03 | 9 | | 60.5111 | | |
| af_nametabi015 | 9 | | | 62.5444 | |
| af_asamsitrat1 | 9 | | | 62.5589 | |
| af_asamsitrat05 | 9 | | | | 64.4144 |
| Sig. | | 1.000 | 1.000 | .987 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

a_setelah

Duncan^a

| perlakuan | N | Subset for alpha = 0.05 | |
|-----------------|---|-------------------------|---------|
| | | 1 | 2 |
| af_kontrol | 9 | 12.9622 | |
| af_nametabi015 | 9 | 13.0389 | |
| af_nametabi03 | 9 | 13.4700 | |
| af_asamsitrat1 | 9 | | 15.4678 |
| af_asamsitrat05 | 9 | | 15.5700 |
| Sig. | | .284 | .817 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

b_setelahDuncan^a

| perlakuan | N | Subset for alpha = 0.05 | | | |
|-----------------|---|-------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| af_kontrol | 9 | 33.4900 | | | |
| af_nametabi03 | 9 | | 36.5500 | | |
| af_nametabi015 | 9 | | 38.7511 | | |
| af_asamsitrat1 | 9 | | | 42.8689 | |
| af_asamsitrat05 | 9 | | | | 46.8833 |
| Sig. | | 1.000 | .096 | 1.000 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

L_sebelumDuncan^a

| perlakuan | N | Subset for alpha = 0.05 | | |
|-----------------|---|-------------------------|---------|---------|
| | | 1 | 2 | 3 |
| af_kontrol | 9 | 54.9744 | | |
| af_nametabi03 | 9 | 57.8444 | 57.8444 | |
| af_nametabi015 | 9 | | 59.9756 | 59.9756 |
| af_asamsitrat05 | 9 | | | 61.7133 |
| af_asamsitrat1 | 9 | | | 62.7267 |
| Sig. | | .052 | .145 | .076 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

a_sebelumDuncan^a

| perlakuan | N | Subset for alpha = 0.05 |
|-----------------|---|-------------------------|
| | | 1 |
| af_nametabi015 | 9 | 17.9044 |
| af_kontrol | 9 | 17.9122 |
| af_nametabi03 | 9 | 21.1956 |
| af_asamsitrat1 | 9 | 21.5989 |
| af_asamsitrat05 | 9 | 21.7533 |
| Sig. | | .105 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

b_sebelumDuncan^a

| perlakuan | N | Subset for alpha = 0.05 | |
|-----------------|---|-------------------------|---------|
| | | 1 | 2 |
| af_kontrol | 9 | 41.8378 | |
| af_nametabi03 | 9 | | 49.5911 |
| af_nametabi015 | 9 | | 50.9678 |
| af_asamsitrat1 | 9 | | 54.1577 |
| af_asamsitrat05 | 9 | | 54.5056 |
| Sig. | | 1.000 | .247 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

Lampiran 6. Uji *Oneway Anova* Kurkumin

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------------------|----------------|----------------|----|-------------|--------|------|
| kurkumin_setelah | Between Groups | 7.451E8 | 4 | 1.863E8 | 15.967 | .000 |
| | Within Groups | 4.666E8 | 40 | 11666005.97 | | |
| | Total | 1.212E9 | 44 | | | |
| kurkumin_sebelum | Between Groups | 3.833E8 | 4 | 95828228.46 | 1.802 | .147 |
| | Within Groups | 2.127E9 | 40 | 53178602.02 | | |
| | Total | 2.510E9 | 44 | | | |

kurkumin_setelah

Duncan^a

| perlakuan | N | Subset for alpha = 0.05 | | |
|-----------------|---|-------------------------|-------------|-------------|
| | | 1 | 2 | 3 |
| af_kontrol | 9 | 43635.16544 | | |
| af_nametabi03 | 9 | | 50708.42888 | |
| af_nametabi015 | 9 | | 50801.31786 | |
| af_asamsitrat05 | 9 | | | 54422.22870 |
| af_asamsitrat1 | 9 | | | 55090.77483 |
| Sig. | | 1.000 | .954 | .680 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

kurkumin_sebelum

Duncan^a

| perlakuan | N | Subset for alpha = 0.05 | |
|-----------------|---|-------------------------|------------|
| | | 1 | 2 |
| af_kontrol | 9 | 62654.8899 | |
| af_nametabi015 | 9 | 66496.5408 | 66496.5408 |
| af_nametabi03 | 9 | 67731.8632 | 67731.8632 |
| af_asamsitrat1 | 9 | 69914.3162 | 69914.3162 |
| af_asamsitrat05 | 9 | | 70999.0310 |
| Sig. | | .059 | .241 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

Lampiran 7. Uji *Oneway Anova* Antioksidan *Wet Basis*

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---------------------|----------------|----------------|----|-------------|--------|------|
| antioksidan_sebelum | Between Groups | 112.466 | 4 | 28.116 | 17.697 | .000 |
| | Within Groups | 63.552 | 40 | 1.589 | | |
| | Total | 176.017 | 44 | | | |
| antioksidan_setelah | Between Groups | 122.131 | 4 | 30.533 | 9.000 | .000 |
| | Within Groups | 135.697 | 40 | 3.392 | | |
| | Total | 257.829 | 44 | | | |

antioksidan_sebelumDuncan^a

| perlakuan | N | Subset for alpha = 0.05 | |
|-----------------|---|-------------------------|---------|
| | | 1 | 2 |
| af_kontrol | 9 | 87.0057 | |
| af_asamsitrat05 | 9 | | 90.6792 |
| af_nametabi015 | 9 | | 90.7541 |
| af_asamsitrat1 | 9 | | 90.8867 |
| af_nametabi03 | 9 | | 91.3429 |
| Sig. | | 1.000 | .317 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

antioksidan_setelahDuncan^a

| perlakuan | N | Subset for alpha = 0.05 | | |
|-----------------|---|-------------------------|---------|---------|
| | | 1 | 2 | 3 |
| af_kontrol | 9 | 84.8906 | | |
| af_nametabi015 | 9 | 85.0680 | | |
| af_nametabi03 | 9 | | 86.9181 | |
| af_asamsitrat1 | 9 | | 88.0947 | 88.0947 |
| af_asamsitrat05 | 9 | | | 89.0880 |
| Sig. | | .839 | .183 | .259 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9.000.

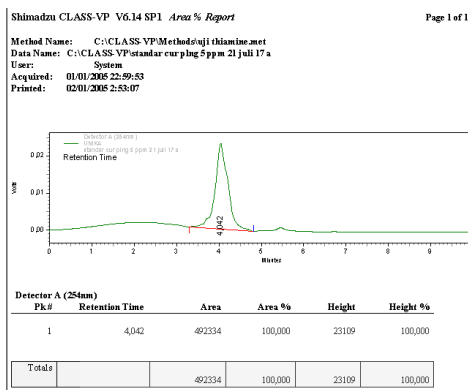
7.1.3. Uji Korelasi**Lampiran 8. Uji Korelasi Antar Warna, Kadar Kurkumin dan Aktivitas Antioksidan****Correlations**

| | | L_setelah | a_setelah | b_setelah | kurkumin_setelah | antiok_db_stlh |
|------------------|---------------------|-----------|-----------|-----------|------------------|----------------|
| L_setelah | Pearson Correlation | 1 | .445** | .718** | .623** | .368* |
| | Sig. (2-tailed) | | .002 | .000 | .000 | .013 |
| | N | 45 | 45 | 45 | 45 | 45 |
| a_setelah | Pearson Correlation | .445** | 1 | .724** | .493** | .459** |
| | Sig. (2-tailed) | .002 | | .000 | .001 | .002 |
| | N | 45 | 45 | 45 | 45 | 45 |
| b_setelah | Pearson Correlation | .718** | .724** | 1 | .583** | .469** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .001 |
| | N | 45 | 45 | 45 | 45 | 45 |
| kurkumin_setelah | Pearson Correlation | .623** | .493** | .583** | 1 | .622** |
| | Sig. (2-tailed) | .000 | .001 | .000 | | .000 |
| | N | 45 | 45 | 45 | 45 | 45 |
| antiok_db_stlh | Pearson Correlation | .368* | .459** | .469** | .622** | 1 |
| | Sig. (2-tailed) | .013 | .002 | .001 | .000 | |
| | N | 45 | 45 | 45 | 45 | 45 |

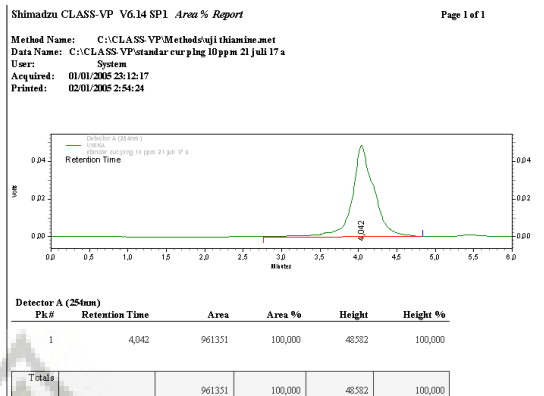
** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

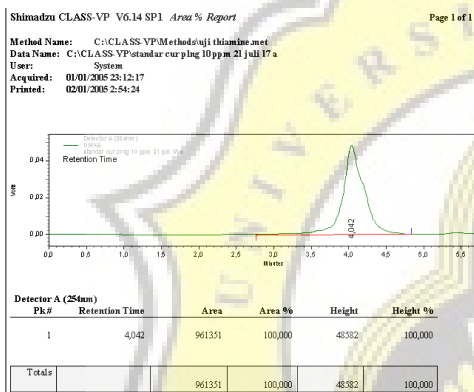
7.2.Grafik HPLC Lampiran 9. Kromatogram Standar Kurkumin



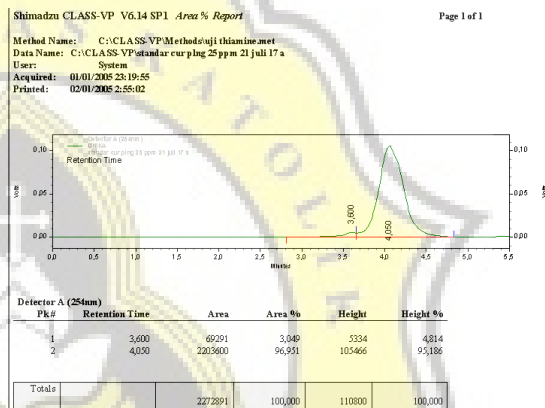
5 ppm



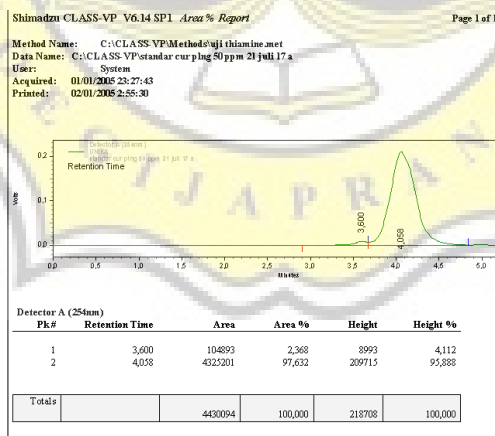
10 ppm



25 ppm

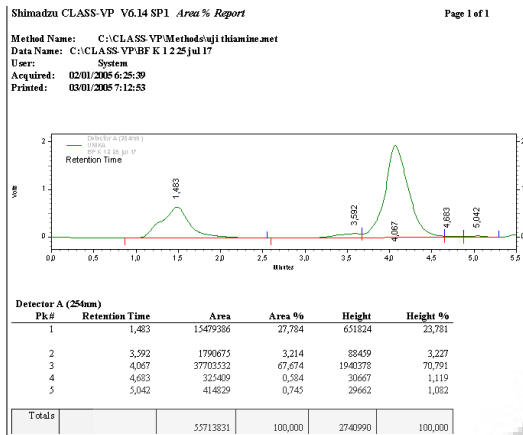


50 ppm

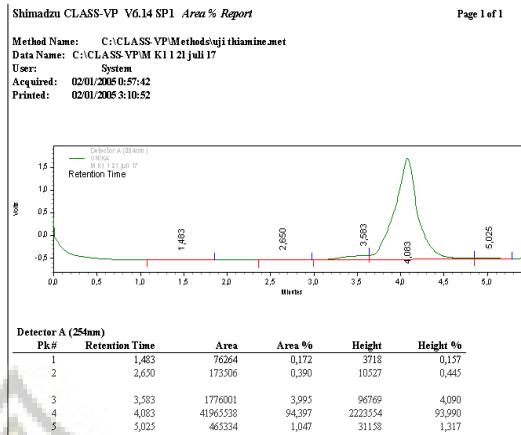


100 ppm

Lampiran 10. Kromatogram Kurkumin Kunyit Pretreatment Tanpa Perendaman

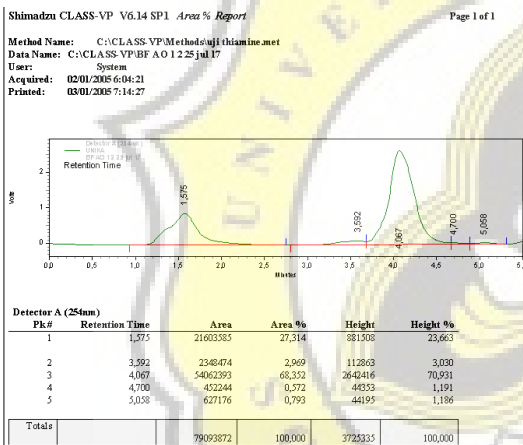


Sebelum Pengeringan

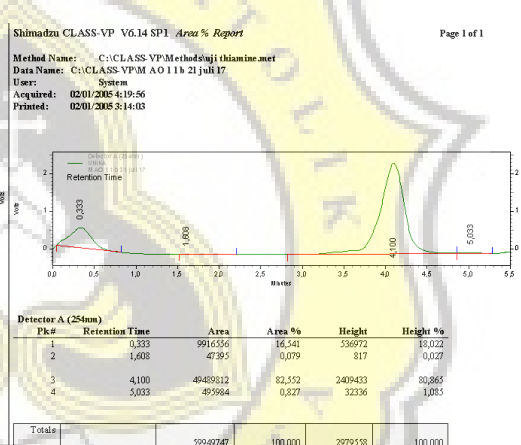


Setelah Pengeringan

Lampiran 11. Kromatogram Kurkumin Kunyit Pretreatment Perendaman Asam Sitrat 0,5%

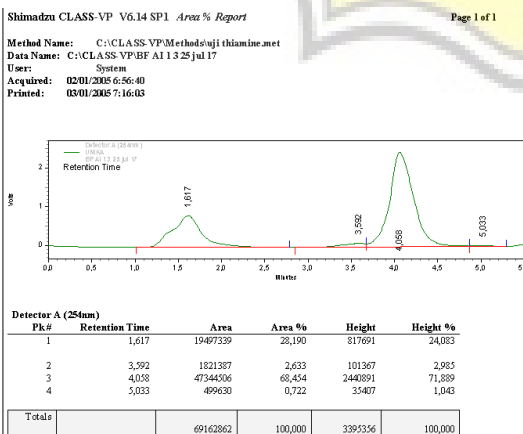


Sebelum Pengeringan

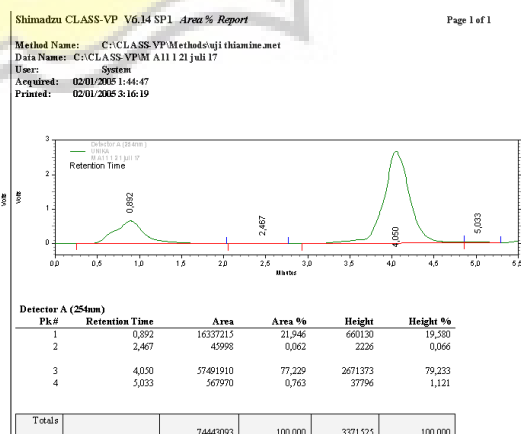


Setelah Pengeringan

Lampiran 12. Kromatogram Kurkumin Kunyit Pretreatment Perendaman Asam Sitrat 1%

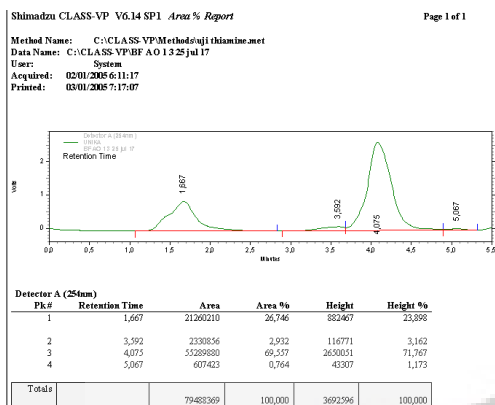


Sebelum Pengeringan

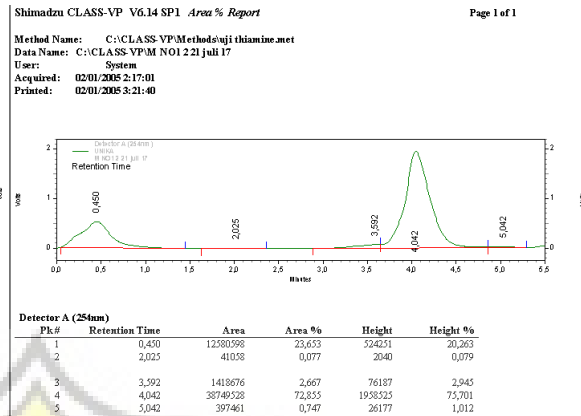


Setelah Pengeringan

Lampiran 13. Kromatogram Kurkumin Kunyit *Pretreatment* Perendaman $\text{Na}_2\text{S}_2\text{O}_5$ 0,15%

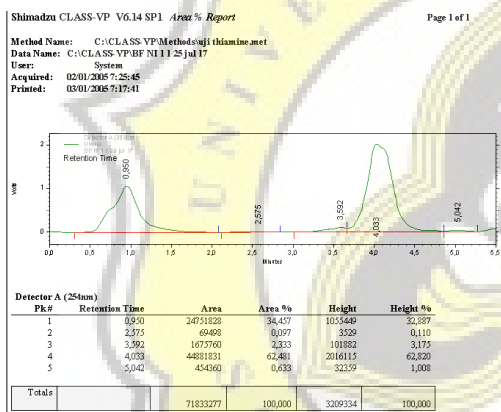


Sebelum pengeringan

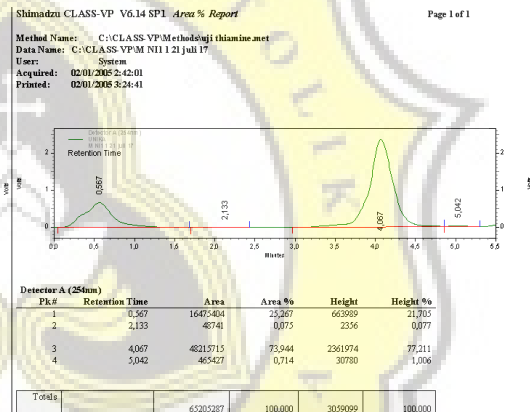


Setelah Pengeringan

Lampiran 14. Kromatogram Kurkumin Kunyit *Pretreatment* Perendaman $\text{Na}_2\text{S}_2\text{O}_5$ 0,3%



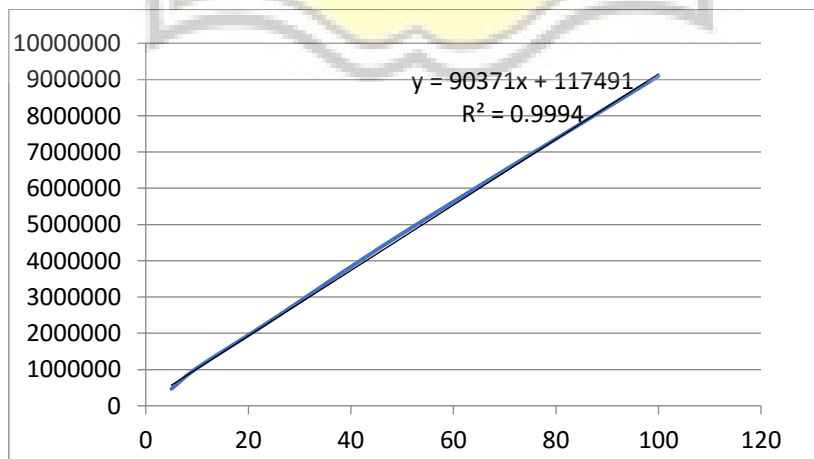
Sebelum Pengeringan



Setelah Pengeringan

7.3. Kurva Standar Kurkumin

Lampiran 15. Kurva Standar Kurkumin



Gambar 9. Kurva Standar Kurkumin

7.4. Gambar Simplisia Kunyit

Lampiran 16. Gambar Simplisia Kunyit pada Berbagai Perlakuan

| Perlakuan | Gambar |
|--|--|
| Simplisia Kunyit Perlakuan Kontrol |  |
| Simplisia Kunyit Perlakuan Perendaman Larutan Asam Sitrat 0,5% |  |
| Simplisia Kunyit Perlakuan Perendaman Larutan Asam Sitrat 1% |  |
| Simplisia Kunyit Perlakuan Perendaman Larutan Natrium Metabisulfit 0,15% |  |
| Simplisia Kunyit Perlakuan Perendaman Larutan Natrium Metabisulfit 0,3% |  |

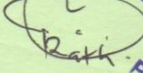
FORMULIR SCAN ANTI PLAGIARISME

4,3%

Nama : Susilowati
 Alamat email : priskillaSusilowati@yahoo.com
 Fak. / Prodi : T. Pertanian / T. Pangan NIM : 13.70.0078
 berupa (TESIS, TUGAS AKHIR, SKRIPSI, SUMMARY, LAPORAN KERJA PRAKTEK)

dengan judul : Pengaruh Perendam larutan Asam Sitrat dan Natrium
 Metabisulfat terhadap Kualitas Kunyit (*Curcuma longa L*) yang
 dikeringkan dengan sinar Tunnel dryer yang dimodifikasi

Semarang :
 Petugas, Yang Menyerahkan, Dosen Pembimbing,





Susilowati

Dr. V. Kristina Ananingih ST. MSc

NB. Laporan hasil Scan terlampir

untuk Yang bersangkutan *

