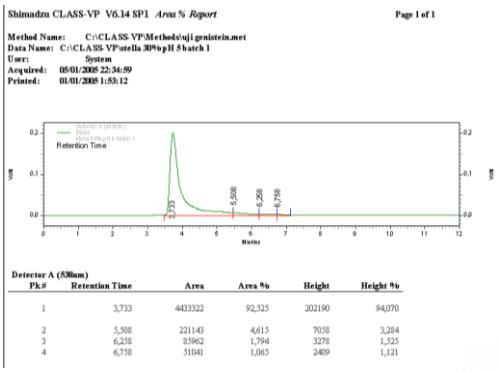
pH 5 Batch 1



Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

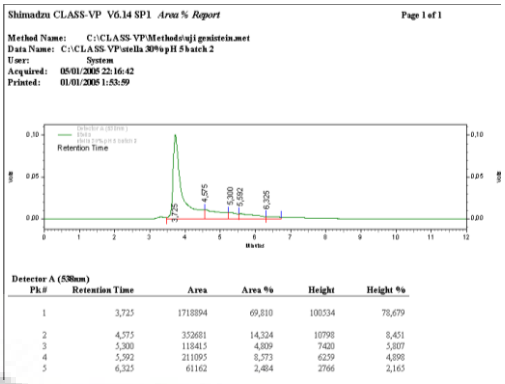
Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 30%pH 5 batch 1
User: System
Acquired: 05/01/2005 22:34:59
Printed: 01/01/2005 1:53:12

Retention Time

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,733	4433322	92,525	202190	94,070
2	5,508	221143	4,615	7058	3,284
3	6,258	85962	1,794	3278	1,525
4	6,758	31041	1,065	2409	1,121

pH 5 Batch 2



Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 30%pH 5 batch 2
User: System
Acquired: 05/01/2005 22:16:42
Printed: 01/01/2005 1:53:59

Retention Time

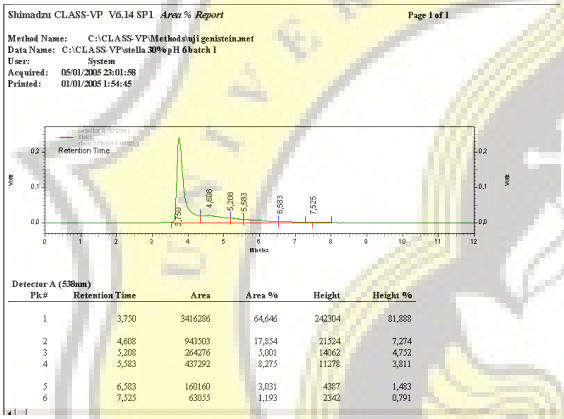
Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,725	1718894	69,810	100534	78,679
2	4,575	352681	14,324	10798	8,451
3	5,300	118415	4,809	7420	5,807
4	5,592	211095	8,573	6259	4,898
5	6,325	61162	2,484	2766	2,165

pH 6 Bacth 1

pH 6 Bacth 2

pH 6 Bacth 2



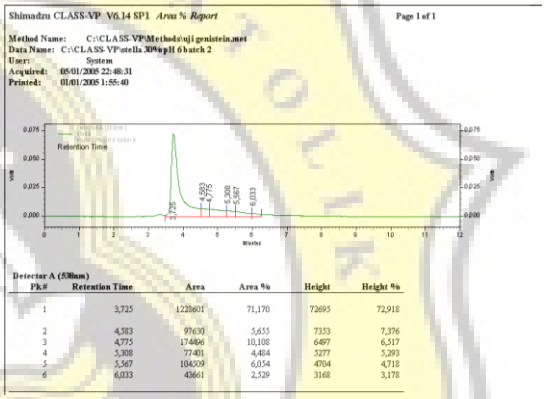
Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 30%pH 6 batch 1
User: System
Acquired: 05/01/2005 23:01:58
Printed: 01/01/2005 1:54:45

Retention Time

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,750	3416286	64,646	242304	81,888
2	4,608	943503	17,854	21524	7,274
3	5,208	264276	5,001	14062	4,752
4	5,583	437292	8,275	11278	3,811
5	6,583	160160	3,031	4387	1,483
6	7,525	63055	1,193	2342	0,791



Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 30%pH 6 batch 2
User: System
Acquired: 05/01/2005 22:46:31
Printed: 01/01/2005 1:55:40

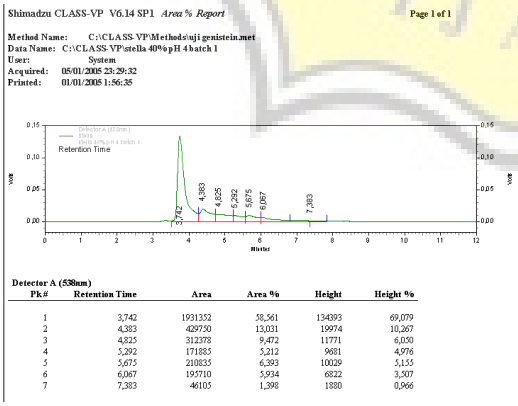
Retention Time

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,725	1228601	71,170	72695	72,918
2	4,583	97630	5,655	7353	7,376
3	4,775	174486	10,108	6497	6,517
4	5,308	77401	4,484	5277	5,293
5	5,567	104509	6,054	4704	4,718
6	6,033	43661	2,529	3168	3,178

Appendix 5. Chromatograms of betanin using 40% maltodextrin concentration

pH 4 Batch 1



Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

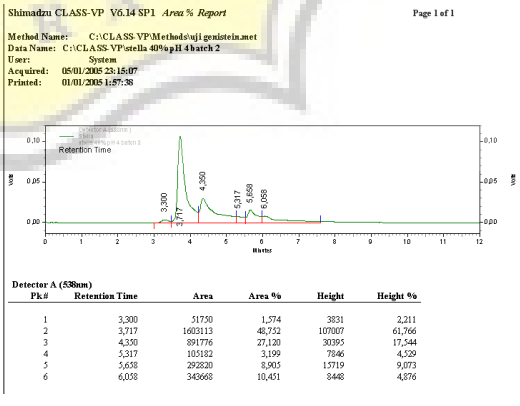
Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 40%pH 4 batch 1
User: System
Acquired: 05/01/2005 23:29:32
Printed: 01/01/2005 1:56:35

Retention Time

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,742	1931352	58,561	134393	69,079
2	4,383	429750	13,031	19974	10,267
3	4,825	312378	9,472	11771	6,050
4	5,292	171885	5,212	9681	4,976
5	5,675	210835	6,393	10029	5,155
6	6,067	195710	5,934	6822	3,507
7	7,383	46105	1,398	1880	0,966

pH 4 Batch 2



Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

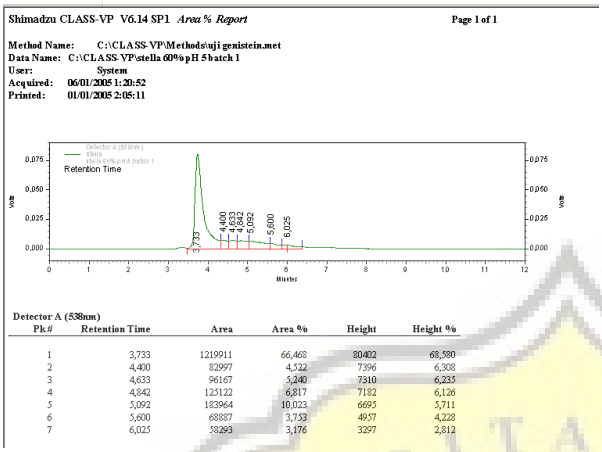
Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 40%pH 4 batch 2
User: System
Acquired: 05/01/2005 23:15:07
Printed: 01/01/2005 1:57:38

Retention Time

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,300	51750	1,574	3831	2,211
2	3,717	1603113	48,752	107007	61,766
3	4,350	891776	27,120	30395	17,544
4	5,317	105182	3,199	7846	4,529
5	5,658	292820	8,905	15719	9,073
6	6,058	343668	10,451	8448	4,876

pH 5 Batch 1



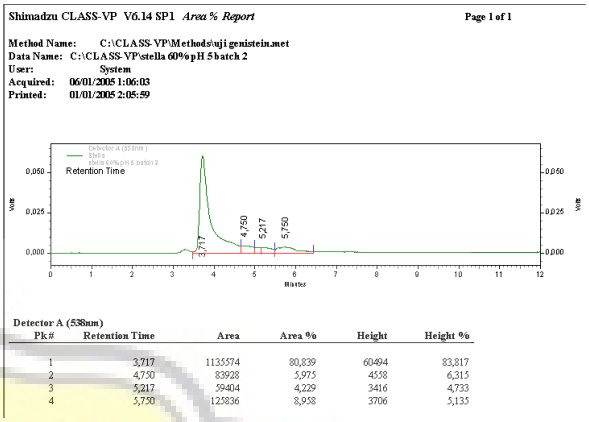
Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 60% pH 5 batch 1
User: System
Acquired: 06/01/2005 1:20:52
Printed: 01/01/2005 2:05:11

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,733	1219911	66,468	80402	68,580
2	4,400	82997	4,522	7396	6,308
3	4,633	96167	5,240	7310	6,235
4	4,842	125122	6,817	7182	6,126
5	5,092	183964	10,023	6695	5,711
6	5,600	68887	3,753	4957	4,228
7	6,025	58293	3,176	3297	2,812

pH 5 Batch 2



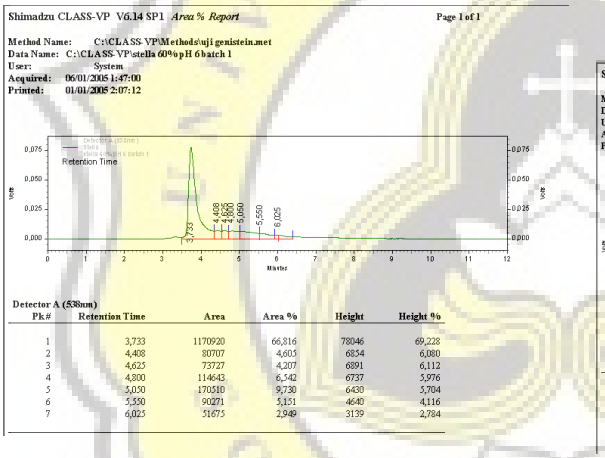
Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 60% pH 5 batch 2
User: System
Acquired: 06/01/2005 1:06:03
Printed: 01/01/2005 2:05:59

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,717	1135574	80,839	60494	83,817
2	4,750	83928	5,975	4558	6,315
3	5,217	59404	4,229	3416	4,733
4	5,750	125836	8,958	3706	5,135

pH 6 Batch 1



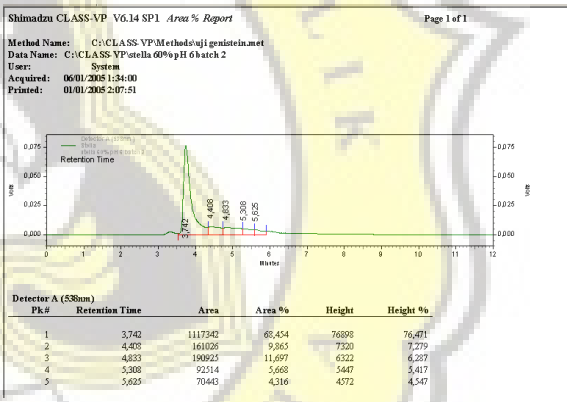
Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 60% pH 6 batch 1
User: System
Acquired: 06/01/2005 1:47:00
Printed: 01/01/2005 2:07:12

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,733	1170920	66,816	78046	69,228
2	4,408	80707	4,605	6854	6,080
3	4,625	73727	4,207	6891	6,112
4	4,800	114643	6,542	6737	5,976
5	5,050	170510	9,730	6430	5,704
6	5,550	90271	5,151	4640	4,116
7	6,025	51675	2,949	3139	2,784

pH 6 Batch 2



Shimadzu CLASS-VP V6.14 SP1 *Area % Report* Page 1 of 1

Method Name: C:\CLASS-VP\Methods\uji genistein.met
Data Name: C:\CLASS-VP\stella 60% pH 6 batch 2
User: System
Acquired: 06/01/2005 1:34:00
Printed: 01/01/2005 2:07:51

Detector A (538nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	3,742	1117342	68,454	76898	76,471
2	4,408	161026	9,865	7320	7,279
3	4,833	190925	11,697	6322	6,287
4	5,308	92514	5,668	5447	5,417
5	5,625	70443	4,316	4572	4,547

Appendix 7. Output of Test of Normality on Betanin with Maltodextrin Treatments

Tests of Normality

	konsentrasimalto	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
betanincontent	0%	.239	18	.008	.830	18	.004
	20%	.249	18	.004	.877	18	.024
	30%	.224	18	.017	.854	18	.010
	40%	.240	18	.008	.866	18	.015
	60%	.294	18	.000	.738	18	.000

a. Lilliefors Significance Correction

Appendix 8. Output of Post Hoc One Way Anova on Betanin with Maltodextrin Treatments

betanincontent

Duncan

konsentrasi...	N	Subset for alpha = 0.05		
		1	2	3
60%	18	4.2107E3		
40%	18	5.0935E3		
30%	18		1.0737E4	
20%	18		1.1218E4	
0%	18			2.2787E4
Sig.		.465	.690	1.000

Means for groups in homogeneous subsets are displayed.

Appendix 9. Output of Test of Normality on Betanin with pH Variation

Tests of Normality

	pH	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
betanincontent	pH 4	.407	6	.002	.640	6	.001
	pH 5	.407	6	.002	.640	6	.001
	pH 6	.407	6	.002	.640	6	.001

a. Lilliefors Significance Correction

Appendix 10. Output of Post Hoc One Way Anova on Betanin with pH Variation

betanincontent

Duncan

pH	N	Subset for alpha = 0.05	
		1	2
pH 6	6	8.1179E3	
pH 5	6	9.2934E3	
pH 4	6		1.6243E4
Sig.		.286	1.000

Means for groups in homogeneous subsets are displayed.

Appendix 11. Output of Test of Normality on Betaxanthin with Maltodextrin Treatments

Tests of Normality

	konsentrasimalto	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
betaxanthin	0%	.258	18	.003	.714	18	.000
	20%	.160	18	.200*	.911	18	.090
	30%	.253	18	.004	.804	18	.002
	40%	.122	18	.200*	.947	18	.376
	60%	.216	18	.026	.867	18	.016

a. Lilliefors Significance Correction

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

Appendix 12. Output of Post Hoc One Way Anova on Betaxanthin with Maltodextrin Treatments

betaxanthin

Duncan

konsentrasi...	N	Subset for alpha = 0.05			
		1	2	3	4
60%	18	4.7165E2			
40%	18	4.9719E2			
30%	18		6.9614E2		
20%	18			9.9827E2	
0%	18				1.9071E3
Sig.		.603	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Appendix 13. Output of Test of Normality on Betaxanthin with pH Variation

Tests of Normality

	pH	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
betaxanthin	pH 4	.191	6	.200*	.963	6	.841
	pH 5	.302	6	.093	.730	6	.013
	pH 6	.263	6	.200*	.858	6	.183

a. Lilliefors Significance Correction

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

Appendix 14. Output of Post Hoc One Way Anova on Betaxanthin with pH Variation

betaxanthin

Duncan

pH	N	Subset for alpha = 0.05	
		1	2
pH 6	6	1.7668E3	
pH 4	6	1.8858E3	1.8858E3
pH 5	6		2.0686E3
Sig.		.327	.140

Means for groups in homogeneous subsets are displayed.

Appendix 15. Output of Test of Normality on Betacyanin with Maltodextrin Treatments

Tests of Normality

	konsentrasimalto	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
betasianin	0%	.251	18	.004	.829	18	.004
	20%	.248	18	.005	.873	18	.020
	30%	.247	18	.005	.852	18	.009
	40%	.231	18	.012	.828	18	.004
	60%	.198	18	.059	.917	18	.117

a. Lilliefors Significance Correction

Appendix 16. Output of Post Hoc One Way Anova on Betacyanin with Maltodextrin Treatments

inhibition

Duncan

konsentrasi...	N	Subset for alpha = 0.05	
		1	2
40%	17	23.3059	
60%	19	30.2279	
30%	18	31.9250	
20%	18		58.6356
0%	18		65.3067
Sig.		.243	.335

Means for groups in homogeneous subsets are displayed.

Appendix 17. Output of Test of Normality on on Betacyanin Analysis with pH Variation

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	pH	Statistic	df	Sig.	Statistic	df	Sig.
betasianin	pH 4	.289	6	.128	.847	6	.149
	pH 5	.316	6	.063	.718	6	.010
	pH 6	.302	6	.094	.769	6	.030

a. Lilliefors Significance Correction

Appendix 18. Output of Post Hoc One Way Anova on Betacyanin with pH Variation

betasianin

Duncan

pH	N	Subset for alpha = 0.05
		1
pH 6	6	2823.7933
pH 4	6	2846.3733
pH 5	6	2886.9783
Sig.		.715

Means for groups in homogeneous subsets are displayed.

Appendix 19. Output of Test of Normality on Antioxidant Activity with Maltodextrin Treatments

Tests of Normality

	konsentrasimalto	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
inhibition	0%	.206	18	.043	.834	18	.005
	20%	.308	18	.000	.771	18	.001
	30%	.291	18	.000	.855	18	.010
	40%	.275	17	.001	.825	17	.005
	60%	.222	19	.015	.824	19	.003

a. Lilliefors Significance Correction

Appendix 20. Output of Post Hoc One Way Anova on Antioxidant Activity with Maltodextrin Treatments

inhibition

Duncan

konsentrasi...	N	Subset for alpha = 0.05	
		1	2
40%	17	23.3059	
60%	19	30.2279	
30%	18	31.9250	
20%	18		58.6356
0%	18		65.3067
Sig.		.243	.335

Means for groups in homogeneous subsets are displayed.

Appendix 21. Output of Test of Normality on Antioxidant Activity Analysis with pH Variation

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	pH	Statistic	df	Sig.	Statistic	df	Sig.
inhibition	pH 4	.250	6	.200*	.887	6	.303
	pH 5	.306	6	.083	.790	6	.048
	pH 6	.301	6	.095	.770	6	.031

a. Lilliefors Significance Correction

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

Appendix 22. Output of Post Hoc One Way Anova on Antioxidant Activity s with pH Variation

inhibition

Duncan

		Subset for alpha = 0.05	
pH	N	1	2
pH 6	6	35.7533	
pH 5	6		73.7633
pH 4	6		86.4033
Sig.		1.000	.178

Means for groups in homogeneous subsets are displayed.

Appendix 23. Output of Pearson Correlation between Antioxidan Activity with Betalain Content in Red Beet Powder

Correlations

		konsentrasimalto	pH	betaxanthin	betasianin	antioksidan	Betanin
konsentrasimalto	Pearson Correlation	1	.010	-.864**	-.898**	-.568**	-.818**
	Sig. (2-tailed)		.929	.000	.000	.000	.000
	N	90	90	90	90	90	90
pH	Pearson Correlation	.010	1	-.005	.059	-.131	-.132
	Sig. (2-tailed)	.929		.965	.583	.219	.217
	N	90	90	90	90	90	90
betaxanthin	Pearson Correlation	-.864**	-.005	1	.935**	.565**	.850**
	Sig. (2-tailed)	.000	.965		.000	.000	.000
	N	90	90	90	90	90	90
betasianin	Pearson Correlation	-.898**	.059	.935**	1	.575**	.805**
	Sig. (2-tailed)	.000	.583	.000		.000	.000
	N	90	90	90	90	90	90
antioksidan	Pearson Correlation	-.568**	-.131	.565**	.575**	1	.651**
	Sig. (2-tailed)	.000	.219	.000	.000		.000
	N	90	90	90	90	90	90
Betanin	Pearson Correlation	-.818**	-.132	.850**	.805**	.651**	1
	Sig. (2-tailed)	.000	.217	.000	.000	.000	
	N	90	90	90	90	90	90

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