7. LAMPIRAN

7.1. Analisa Data Uji Fisik Produk

7.1.1. Uji Warna Produk

Lampiran 1. Tabel Normalitas , Tabel Anova, dan Tabel Duncan Intensitas Warna Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Produk	Statistic	df	Sig.	Statistic	df	Sig.
Parameter_L	BPJA 0	.172	20	.125	.931	20	.164
	BPJA 3	.113	20	.200*	.972	20	.797
	BPJA 6	.132	20	.200*	.959	20	.526
	BPJA 9	.099	20	.200*	.985	20	.981
	BPJA 12	.101	20	.200*	.962	20	.584
Parameter_a	BPJA 0	.116	20	.200*	.957	20	.484
	BPJA 3	.152	20	.200*	.895	20	.033
	BPJA 6	.133	20	.200*	.939	20	.232
	BPJA 9	.151	20	.200*	.964	20	.624
	BPJA 12	.127	20	.200*	.952	20	.401
Parameter_b	BPJA 0	.134	20	.200*	.951	20	.386
	BPJA 3	.165	20	.155	.945	20	.303
	BPJA 6	.189	20	.059	.925	20	.121
	BPJA 9	.087	20	.200*	.969	20	.738
	BPJA 12	.094	20	.200*	.975	20	.861

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

a. Lilliefors Significance Correction

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Parameter_L	Between Groups	4435.744	4	1108.936	3115.624	.000
	Within Groups	33.813	95	.356		
	Total	4469.557	99			
Parameter_a	Between Groups	2545.342	4	636.336	7656.483	.000
	Within Groups	7.896	95	.083		
	Total	2553.238	99			
Parameter_b	Between Groups	60.981	4	15.245	256.800	.000
	Within Groups	5.640	95	.059		
	Total	66.621	99			

Parameter_L

Duncan[a]

Produk	N	Subset for alpha = .05				
		1	2	3	4	5
BPJA 12	20	64.5310				
BPJA 9	20		68.4915			
BPJA 6	20			69.3345		
BPJA 3	20				73.5935	
BPJA 0	20					84.0020
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 20.000.

Parameter_a

Duncan[a]

Produk	N	Subset for alpha = .05				
		1	2	3	4	5
BPJA 0	20	1.3150				
BPJA 3	20		9.3710			
BPJA 6	20			12.1515		
BPJA 9	20				13.9650	
BPJA 12	20					15.6860
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 20.000.

Parameter_b

Duncan[a]

Produk	N	Subset for alpha = .05				
		1	2	3	4	5
BPJA 3	20	9.4290				
BPJA 6	20		9.7470			
BPJA 9	20			10.1510		
BPJA 12	20				10.4930	
BPJA 0	20					11.6875
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 20.000.

7.1.2. Uji Rasio Pengembangan

Lampiran 2. Tabel Normalitas , Tabel Anova, dan Tabel Duncan Uji Rasio Pengembangan Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formulasi	Statistic	df	Sig.	Statistic	df	Sig.
Rasio_pengembangan	BPJA 0	.067	200	.031	.989	200	.132
	BPJA 3	.061	200	.072	.988	200	.089
	BPJA 6	.061	200	.063	.987	200	.071
	BPJA 9	.063	200	.049	.988	200	.091
	Formulasi E	.059	200	.092	.989	200	.133

a. Lilliefors Significance Correction

ANOVA

Rasio_pengembangan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	670869.6	4	167717.412	753.429	.000
Within Groups	221492.4	995	222.605		
Total	892362.1	999			

Rasio_pengembangan

Duncan[a]

		Subset for alpha = .05				
Formulasi	N	1	2	3	4	5
BPJA 0	200	282.5459				
BPJA 3	200		291.0455			
BPJA 6	200			299.2843		
BPJA 9	200				319.8181	
Formulasi E	200					355.0680
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 200.000.

7.1.3. Pengembanan Axial

Lampiran 3. Tabel Normalitas , Tabel Anova, dan Tabel Duncan Uji Pengembangan *Axial* Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formulasi	Statistic	df	Sig.	Statistic	df	Sig.
Axial	Formulasi A	.048	200	.200*	.987	200	.056
	Formulasi B	.059	200	.082	.987	200	.054
	Formulasi C	.063	200	.051	.987	200	.060
	Formulasi D	.055	200	.200*	.989	200	.140
	Formulasi E	.050	200	.200*	.990	200	.170

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

a. Lilliefors Significance Correction

ANOVA

Axial

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.132	4	6.783	745.841	.000
Within Groups	9.049	995	.009		
Total	36.181	999			

Axial

Duncan[a]

		Subset for alpha = .05				
Formulasi	N	1	2	3	4	5
BPJA 12	200	3.3494				
BPJA 9	200		3.5339			
BPJA 6	200			3.6150		
BPJA 3	200				3.7165	
BPJA 0	200					3.8349
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 200.000.

7.1.4. Pengembangan Radial

Lampiran 4. Tabel Normalitas, Tabel Anova dan Tabel Duncan Pengembangan Radial Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formulasi	Statistic	df	Sig.	Statistic	df	Sig.
Radial	BPJA 0	.066	200	.034	.989	200	.132
	BPJA 3	.060	200	.072	.988	200	.090
	BPJA 6	.062	200	.063	.987	200	.071
	BPJA 9	.063	200	.050	.988	200	.091
	BPJA 12	.059	200	.093	.989	200	.133

a. Lilliefors Significance Correction

ANOVA

Radial

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.993	4	3.248	753.750	.000
Within Groups	4.288	995	.004		
Total	17.281	999			

Radial

Duncan[a]

		Subset for alpha = .05				
Formulasi	N	1	2	3	4	5
BPJA 0	200	1.2431				
BPJA 3	200		1.2806			
BPJA 6	200			1.3169		
BPJA 9	200				1.4072	
BPJA 12	200					1.5623
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 200.000.

7.1.5. Uji Hardness

Lampiran 5. Tabel Normalitas, Tabel Anova dan Tabel Duncan Uji *Hardness* Sampel Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formulasi	Statistic	df	Sig.	Statistic	df	Sig.
Hardness	BPJA 0	.133	10	.200*	.959	10	.774
	BPJA 3	.151	10	.200*	.943	10	.592
	BPJA 6	.221	10	.183	.872	10	.105
	BPJA 9	.221	10	.183	.885	10	.148
	BPJA 12	.250	10	.078	.864	10	.084

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

a. Lilliefors Significance Correction

ANOVA

Hardness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3123526	4	780881.470	205.341	.000
Within Groups	171128.6	45	3802.857		
Total	3294654	49			

Hardness

Duncan[a]

		Subset for alpha = .05				
Formulasi	N	1	2	3	4	5
BPJA 12	10	732.4600				
BPJA 9	10		911.5550			
BPJA 6	10			1,037.8100		
BPJA 3	10				1,197.6060	
BPJA 0	10					1,464.9700
Sig.		1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10.000.

7.1.6. Uji Bulk Density

Lampiran 6. Tabel Normalitas, Tabel Anova dan Tabel Duncan Uji *Bulk Density* Sampel Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Produk	Statistic	df	Sig.	Statistic	df	Sig.
Bulk_density	BPJA 0	.141	20	.200*	.938	20	.223
	BPJA 3	.094	20	.200*	.965	20	.648
	BPJA 6	.100	20	.200*	.971	20	.767
	BPJA 9	.146	20	.200*	.941	20	.248
	BPJA 12	.113	20	.200*	.950	20	.369

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

a. Lilliefors Significance Correction

ANOVA

Bulk_density

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.001	4	.000	173.403	.000
Within Groups	.000	95	.000		
Total	.001	99			

Bulk_density

Duncan[a]

		Subset for alpha = .05				
Produk	N	1	2	3	4	5
BPJA 12	20	.0291330				
BPJA 9	20		.0329355			
BPJA 6	20			.0337300		
BPJA 3	20				.0352215	
BPJA 0	20					.0371950
Sig.		1.000	1.000	1.000	1.000	1.000

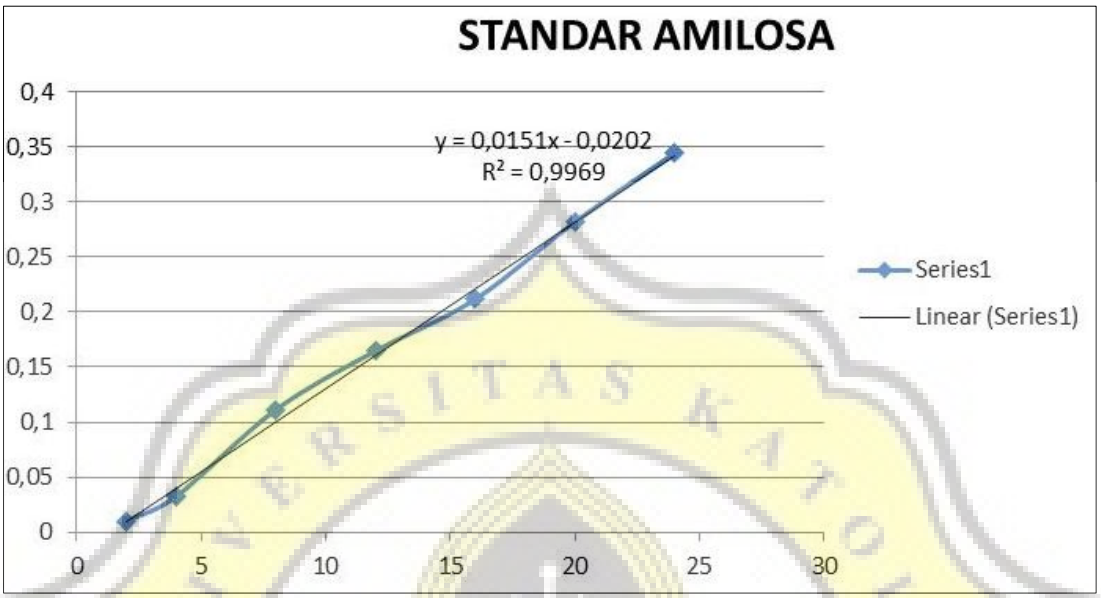
Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 20.000.

7.2. Analisa Data Uji Kimia Bahan Baku

7.2.1. Uji Amilosa Bahan Baku

Kurva Standar Amilosa



Gambar 11. Kurva Standar Amilosa

Lampiran 7. Tabel Normalitas Analisa Amilosa Bahan Baku

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Bahan Baku	Statistic	df	Sig.	Statistic	df	Sig.
Kandungan_amilosa	Angkak	.213	9	.200*	.878	9	.149
	Beras Putih	.201	9	.200*	.911	9	.321
	Jewawut	.227	9	.199	.952	9	.708

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

a. Lilliefors Significance Correction

7.2.2. Uji Kadar Air Bahan Baku

Lampiran 8. Tabel Normalitas Analisa Kadar Air Bahan Baku

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Bahan_baku	Statistic	df	Sig.	Statistic	df	Sig.
Kadar_air	1.00	.220	6	.200*	.913	6	.454
	2.00	.158	6	.200*	.947	6	.715
	3.00	.148	6	.200*	.970	6	.891

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

a. Lilliefors Significance Correction

7.2.3. Uji Protein Bahan Baku

Lampiran 9. Tabel Normalitas Analisa Protein Bahan Baku

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Bahan baku	Statistic	df	Sig.	Statistic	df	Sig.
Kadar_protein	Angkak	.121	6	.200*	.983	6	.964
	Beras Putih	.238	6	.200*	.950	6	.737
	Jewawut	.205	6	.200*	.961	6	.830

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

a. Lilliefors Significance Correction

7.3. Analisa Kimia Produk Jadi

7.3.1. Analisa Data Uji Kimia Antioksidan Produk Jadi

Lampiran 10. Tabel Normalitas, Tabel Anova dan Tabel Duncan Uji Antioksidan Ekstrudat

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Produk	Statistic	df	Sig.	Statistic	df	Sig.
Kadar_Antioksidan	BPJA 0	.250	6	.200*	.896	6	.353
	BPJA 3	.167	6	.200*	.944	6	.690
	BPJA 6	.126	6	.200*	.980	6	.953
	BPJA 9	.184	6	.200*	.930	6	.578
	BPJA 12	.269	6	.199	.833	6	.115
	Bahan Baku Angkak	.187	6	.200*	.939	6	.650

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

a. Lilliefors Significance Correction

ANOVA

Kadar_Antioksidan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13174.270	5	2634.854	202.364	.000
Within Groups	390.610	30	13.020		
Total	13564.880	35			

Kadar_Antioksidan

Duncan[a]

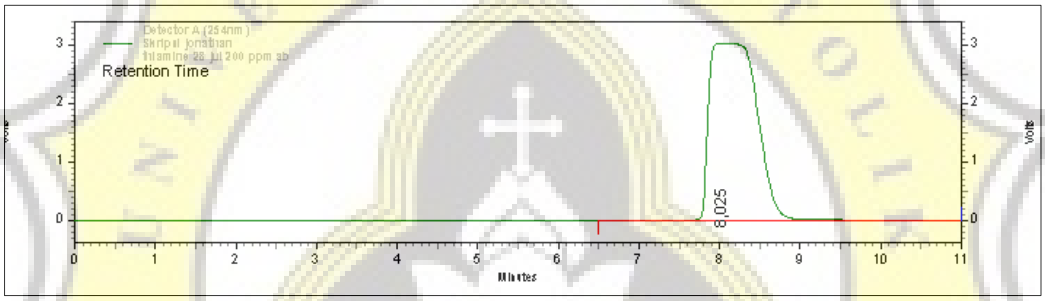
Produk	N	Subset for alpha = .05					
		1	2	3	4	5	6
BPJA 0	6	10.7342					
BPJA 3	6		25.6357				
BPJA 6	6			35.1990			
BPJA 9	6				40.1327		
BPJA 12	6					48.5387	
Bahan Baku Angkak	6						72.3432
Sig.		1.000	1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

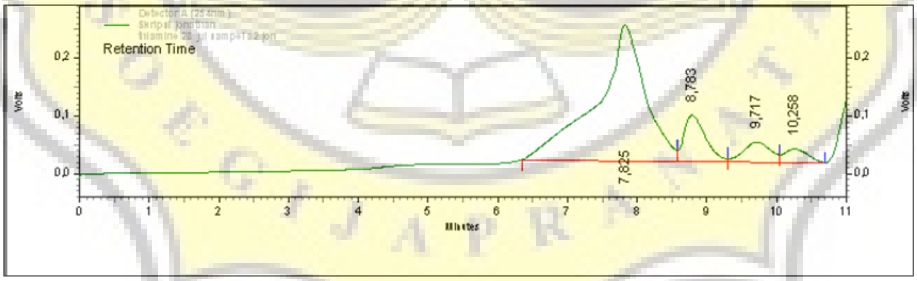
a. Uses Harmonic Mean Sample Size = 6.000.

7.3.2. Analisa HPLC *Thiamine* Produk Jadi

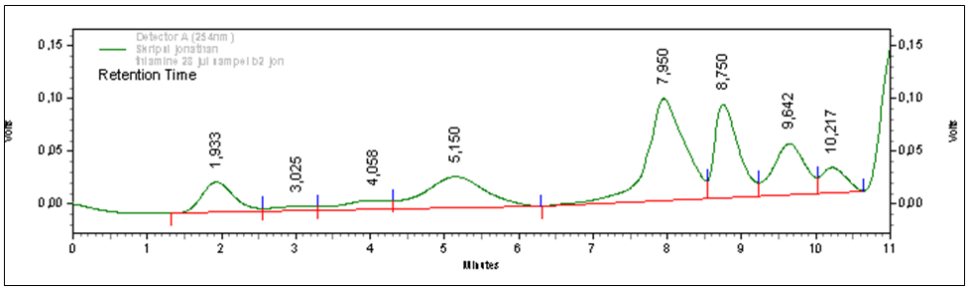
Lampiran 11. *Profile Peak Thiamine* Sampel



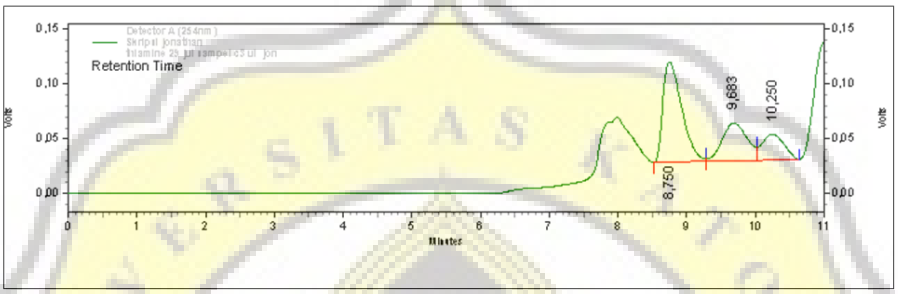
Gambar 12. Standar Thiamine 200 ppm



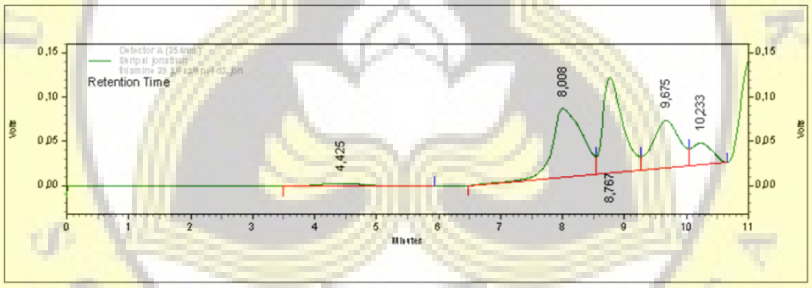
Gambar 13. *Profile peak Thiamine* pada Sampel Formulasi BPJA 0



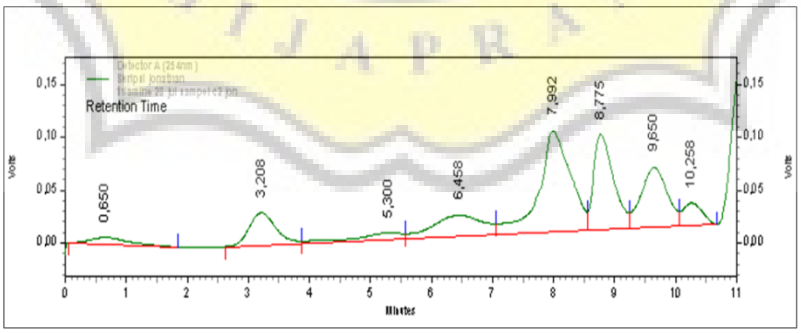
Gambar 14. *Profile Peak Thiamine* Sampel Formulasi BPJA 3



Gambar 15. *Profile Peak Thiamine* Sampel Formulasi BPJA 6



Gambar 16. *Profile Peak Thiamine* Sampel Formulasi BPJA 9



Gambar 17. *Profile Peak Thiamine* Sampel Formulasi BPJA 12