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❖ Sampel



Gambar 4. Susu Merek X

❖ Penimbangan Natrium Tetraborat



Gambar 5. Penimbangan Natrium Tetraborat 1



Gambar 6. Penimbangan Natrium Tetraborat 2



Gambar 7. Penimbangan Natrium Tetraborat 3

❖ **Penimbangan Bahan**

Gambar 8. Penimbangan KI

Gambar 9. Penimbangan KIO_3 Gambar 10. Penimbangan SeO_2 Gambar 11. Penimbangan $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ Gambar 12. Penimbangan K_2SO_4

❖ Standarisasi $\text{Na}_2\text{S}_2\text{O}_3$ 0,1 N

Gambar 13. Volume titrasi laktosa 1

Gambar 14. Penambahan KI 10% + H_2SO_4 2N laktosa 1

Gambar 15. Penambahan amilum 1% laktosa 1



Gambar 16. Volume titrasi laktosa 2

Gambar 17. Penambahan KI 10% + H_2SO_4 2N laktosa 2

Gambar 18. Penambahan amilum 1% laktosa 2



Gambar 19. Volume titrasi laktosa 3

Gambar 20. Penambahan KI 10% + H_2SO_4 2N laktosa 3

Gambar 21. Penambahan amilum 1% laktosa 3

❖ **Standarisasi HCl 0,1 N**

Gambar 22. Volume titrasi protein 1



Gambar 23. Hasil titrasi 1



Gambar 24. Volume titrasi protein 2



Gambar 25. Hasil titrasi 2



Gambar 26. Volume titrasi protein 3



Gambar 27. Hasil titrasi 3

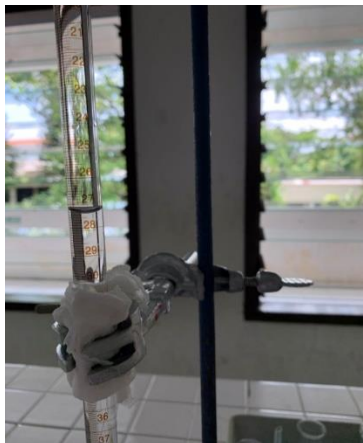
❖ Blanko



Gambar 28. Volume Blanko Protein



Gambar 29. Hasil Blanko Protein



Gambar 30. Volume Blanko Laktosa



Gambar 31. Hasil Blanko Laktosa

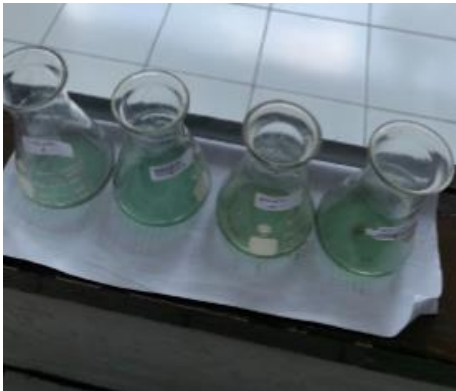
❖ Proses Metode Kjeldahl



Gambar 32. Tahap Destruksi Metode Kjeldahl



Gambar 33. Tahap Destilasi Metode Kjeldahl



Gambar 34. Hasil Destilasi



Gambar 35. Hasil Titrasi

❖ Proses Metode luff school



Gambar 36. Proses pemanasan

Gambar 37. Ditambahkan H_2SO_4
 $6n + \text{KI}20\%$ 

Gambar 38. Hasil Titrasi

❖ **Penimbangan Baku Casein**

No	Presisi (10 mg)	No	Katalisator	TAT
1	Kertas kosong : 0,2924 g Kertas + baku : 0,3027 g Kertas + sisa : 0,2934 g Baku : 0,0093 g	1	Kertas kosong : 0,2973 g Kertas + baku : 1,2985 g Kertas + sisa : 0,2988 g Baku : 0,9997 g	41,50 ml
2	Kertas kosong : 0,2819 g Kertas + baku : 0,2922 g Kertas + sisa : 0,2820 g Baku : 0,0102 g	2	Kertas kosong : 0,2986 g Kertas + baku : 1,2899 g Kertas + sisa : 0,2977 g Baku : 0,9926 g	44,30 ml
3	Kertas kosong : 0,2766 g Kertas + baku : 0,2869 g Kertas + sisa : 0,2781 g Baku : 0,0088 g	3	Kertas kosong : 0,2800 g Kertas + baku : 1,2801 g Kertas + sisa : 0,2889 g Baku : 0,9912 g	40,80 ml
4	Kertas kosong : 0,2786 g Kertas + baku : 0,2889 g Kertas + sisa : 0,2790 g Baku : 0,0099 g	4	Kertas kosong : 0,2918 g Kertas + baku : 1,2921 g Kertas + sisa : 0,2922 g Baku : 0,9999 g	42,40 ml

No	Akurasi (10 mg)	No	Katalisator	TAT
1	Kertas kosong : 0,2789 g Kertas + baku : 0,2892 g Kertas + sisa : 0,2795 g Baku : 0,0097 g	1	Kertas kosong : 0,2798 g Kertas + baku : 1,2786 g Kertas + sisa : 0,2803 g Baku : 0,9983 g	41,90 ml
2	Kertas kosong : 0,2467 g Kertas + baku : 0,2569 g Kertas + sisa : 0,2470 g Baku : 0,0099 g	2	Kertas kosong : 0,2454 g Kertas + baku : 1,2455 g Kertas + sisa : 0,2498 g Baku : 0,9957 g	42,30 ml
No	Akurasi (15 mg)	No	Katalisator	
1	Kertas kosong : 0,2503 g Kertas + baku : 0,2660 g Kertas + sisa : 0,2521 g Baku : 0,0139 g	1	Kertas kosong : 0,2508 g Kertas + baku : 1,2511 g Kertas + sisa : 0,2573 g Baku : 0,9933 g	45,50 ml
2	Kertas kosong : 0,2426 g Kertas + baku : 0,2575 g Kertas + sisa : 0,2442 g Baku : 0,0133 g	2	Kertas kosong : 0,2491 g Kertas + baku : 1,2496 g Kertas + sisa : 0,2513 g Baku : 0,9983 g	45,10 ml
No	Akurasi (20 mg)	No	Katalisator	
1	Kertas kosong : 0,2501 g Kertas + baku : 0,2707 g Kertas + sisa : 0,2503 g Baku : 0,0204 g	1	Kertas kosong : 0,2495 g Kertas + baku : 1,2498 g Kertas + sisa : 0,2501 g Baku : 0,9997 g	46, 70 ml
2	Kertas kosong : 0,2378 g Kertas + baku : 0,2581 g Kertas + sisa : 0,2280 g Baku : 0,0201 g	2	Kertas kosong : 0,2487 g Kertas + baku : 1,2492 g Kertas + sisa : 0,2490 g Baku : 1,0092 g	46, 20 ml

Lampiran 1. Standarisasi larutan HCl 0, 1 N

NO	Berat Natrium Tetraborat (gr)	Volume HCl (ml)	Selisih	
1	0, 2797	9, 90 ml	0,10	0,20
2	0, 2751	9, 80 ml		
3	0, 2792	10,10 ml	0,30	

Hasil volume titrasi didapatkan selisih 0, 10 ml sehingga N HCl bisa dirata-rata

$$N \text{ Larutan HCl} = \frac{\text{Berat Natrium tetraborat (mg)}}{\text{Volume HCl (ml)} \times \text{BE Natrium tetraborat}}$$

$$N_1 = \frac{279,7 \text{ (mg)}}{9,90 \text{ (ml)} \times 190,69} \\ = \mathbf{0,1481 \text{ N}}$$

$$N_2 = \frac{275,1 \text{ (mg)}}{9,90 \text{ (ml)} \times 190,69} \\ = \mathbf{0,1471 \text{ N}}$$

$$N_3 = \frac{279,5 \text{ (mg)}}{10,10 \text{ (ml)} \times 190,69} \\ = \mathbf{0,1451 \text{ N}}$$

X	Rata-rata X	d	Rata-rata d
0,1481	0,1476	0,0005	0,0005
0,1471		0,0005	

$$= \frac{X - \text{rata-rata } x}{d} \\ = \frac{0,1451 - 0,1476}{0,0005} \\ = \mathbf{5 < 2,5}$$

Normalitas HCl yang digunakan adalah 0,1476 N

Lampiran 3. Presisi Metode Kjeldahl

Penimbangan Baku (mg)	Volume titrasi Sampel+baku (ml)	Volume blanko (ml)	Kadar sampel+ baku (%)	Volume titrasi sampel (ml)	Kadar Sampel (%)
0,0093	41,50	38,30	4,221	40,10	2,374
0,0102	44,30		7,915		
0,0088	40,80		3,298		
0,0099	42,40		5,145		
Penimbangan Baku (mg)	Kadar Baku (%)	Rata-rata (%)	SD (%)	RSD (%)	
0,0093	1,847	2,77	1,99	1,39	
0,0102	5,540				
0,0088	0,923				
0,0099	2,770				

$$\text{Kadar protein (\%)} = \frac{\text{ml HCl (sampel- blanko)} \times \text{N HCl}}{\text{Berat sampel (ml)} \times 1000} \times 14,008 \times \text{fk} \times 100\%$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (41,50ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 4,221\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (44,30ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 7,915\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (40,80ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 3,298\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (42,40ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 5,145\% \end{aligned}$$

Lampiran 4. Akurasi Metode Kjeldahl

Penimbangan Baku (mg)	Volume titrasi sampel +baku (ml)	Volume titrasi sampel (ml)	Kadar sampel + baku (g/100g)	Kadar sampel (g/100g)	Volume titrasi baku (ml)	Kadar baku (%)
0,0097	41,90	40,10	4,749	2,374	1,8	2,374
0,0099	42,30		5,276		2,2	2,902
0,0139	45,50		9,498		5,4	7,123
0,0133	45,10		8,970		5	6,596
0,0204	46,70		11,081		6,6	8,706
0,0201	46,20		10,421		6,1	8,047

Penimbangan Baku (mg)	Kadar baku (%)	Kadar sebenarnya	% recovery	% Rata-rata	% Rata-rata total
0,0097	2,3740	2,374	99,989	99,99	99,99
0,0099	2,9020	2,902	99,991		
0,0139	7,1230	7,123	99,996	100,00	
0,0133	6,5960	6,596	99,996		
0,0204	8,7060	8,706	99,997	100,00	
0,0201	8,0470	8,047	99,997		

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (41,90ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 4,749\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (42,30ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 5,276\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (44,50ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 9,498\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (45,10ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 8,970\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (46,70ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 11,081\% \end{aligned}$$

$$\begin{aligned} \text{Baku 10 mg} &= \frac{\text{ml HCl (46,20ml - 38,30ml)} \times 0,1476 \text{ N}}{1 \text{ (ml)} \times 1000} \times 14,008 \times 6,38 \times 100\% \\ &= 10,421\% \end{aligned}$$

❖ **Penimbangan Baku Laktosa**

No	Presisi (10 mg)	TAT
1	Kertas kosong : 0,2897 g Kertas + baku : 0,2993 g Kertas + sisa : 0,2901 g Baku : 0,0092 g	25,70 ml
2	Kertas kosong : 0,2848 g Kertas + baku : 0,2982 g Kertas + sisa : 0,2859 g Baku : 0,0123 g	24,30 ml
3	Kertas kosong : 0,2884g Kertas + baku : 0,2984 g Kertas + sisa : 0,2893 g Baku : 0,0091 g	25,90 ml
4	Kertas kosong : 0,2927g Kertas + baku : 0,3028 g Kertas + sisa : 0,2947 g Baku : 0,0081 g	26,70 ml

No	Akurasi (10 mg)	TAT
1	Kertas kosong : 0,2504 g Kertas + baku : 0,2675 g Kertas + sisa : 0,2581 g Baku : 0,0094 g	25,90 ml
2	Kertas kosong : 0,2436 g Kertas + baku : 0,2536 g Kertas + sisa : 0,2437 g Baku : 0,0099 g	26,30 ml
No	Akurasi (15 mg)	
1	Kertas kosong : 0,2478 g Kertas + baku : 0,2632 g Kertas + sisa : 0,2487 g Baku : 0,0145 g	23,80 ml
2	Kertas kosong : 0,2568 g Kertas + baku : 0,2719 g Kertas + sisa : 0,2588 g Baku : 0,0131 g	24,40 ml
No	Akurasi (20 mg)	
1	Kertas kosong : 0,2427 g Kertas + baku : 0,2639 g Kertas + sisa : 0,2441 g Baku : 0,0198 g	22,80 ml
2	Kertas kosong : 0,2552 g Kertas + baku : 0,2795 g Kertas + sisa : 0,2593 g Baku : 0,0202 g	22,40 ml

Lampiran 6. Standarisasi larutan $\text{Na}_2\text{S}_2\text{O}_3$ 0,1 N

NO	KIO3 (ml)	Volume $\text{Na}_2\text{S}_2\text{O}_3$ (ml)	Selisih	
1	10	10, 40 ml	0,30	0,20
2		10, 70 ml		
3		10,20 ml	0,50	

Hasil volume titrasi yang digunakan adalah volume 10, 40 → karena selisih titrasi dari ketiga tersebut lebih dari 0, 10 ml sehingga tidak bisa dirata-rata. Jadi volume yang digunakan adalah 10, 40 ml

- Penentuan Normalitas $\text{Na}_2\text{S}_2\text{O}_3$

$$V_1 \times N_1 = V_2 \times N_2$$

$$10 \text{ ml} \times 0,1054 = 10,40 \text{ ml} \times N_2$$

$$N_2 = 0,1013 \text{ N}$$

$$\frac{y-y_1}{y_2-y_1} = \frac{x-x_1}{x_2-x_1}$$

$$\frac{y-3,6}{7,6-3,6} = \frac{1,414-1}{2-1}$$

$$\frac{y-3,6}{3,7} = \frac{0,414}{1}$$

$$y-3,6 = 1,5318$$

$$y = 5,1318$$

$$\text{Kadar} = \frac{\text{volume pengenceran}}{\text{volume pipet}} \times \text{kadar laktosa dlm tabel} \times \frac{100}{\text{BZ}} \times \frac{1}{1000}$$

$$\text{Kadar} = \frac{250}{10} \times 5,1318 \times \frac{100}{10} \times \frac{1}{1000}$$

$$= 1,282 \text{ g/ 100 g}$$

$$\text{Replikasi 2} = \frac{V (\text{Blanko- sampel})}{0,1 \text{ N}} \times N \text{ Na}_2\text{S}_2\text{O}_3$$

$$= \frac{(27\text{ml} - 24,80\text{ml})}{0,1 \text{ N}} \times 0,1010 \text{ N}$$

$$= 2,222 \text{ ml} \rightarrow \text{lihat tabel (range 2-3)}$$

$$\frac{y-y_1}{y_2-y_1} = \frac{x-x_1}{x_2-x_1}$$

$$\frac{y-7,3}{11-7,3} = \frac{2,222-2}{3-2}$$

$$\frac{y-7,3}{3,7} = \frac{0,222}{1}$$

$$y-7,3 = 0,8214$$

$$y = 8,1214$$

$$\text{Kadar} = \frac{\text{volume pengenceran}}{\text{volume pipet}} \times \text{kadar laktosa dlm tabel} \times \frac{100}{\text{BZ}} \times \frac{1}{1000}$$

$$\text{Kadar} = \frac{250}{10} \times 8,1214 \times \frac{100}{10} \times \frac{1}{1000}$$

$$= 2,030 \text{ g/ } 100 \text{ g}$$

$$\text{Replikasi 3} = \frac{V(\text{Blanko- sampel})}{0,1 \text{ N}} \times N \text{ Na}_2\text{S}_2\text{O}_3$$

$$= \frac{(27\text{ml} - 25,80\text{ml})}{0,1 \text{ N}} \times 0,1010 \text{ N}$$

$$= 1,212 \text{ ml} \rightarrow \text{lihat tabel (range 1-2)}$$

$$\frac{y-y_1}{y_2-y_1} = \frac{x-x_1}{x_2-x_1}$$

$$\frac{y-3,6}{7,3-3,6} = \frac{1,212-1}{2-1}$$

$$\frac{y-3,6}{3,7} = \frac{0,212}{1}$$

$$y-3,6 = 0,7844$$

$$y = 4,3844$$

$$\text{Kadar} = \frac{\text{volume pengenceran}}{\text{volume pipet}} \times \text{kadar laktosa dlm tabel} \times \frac{100}{\text{BZ}} \times \frac{1}{1000}$$

$$\text{Kadar} = \frac{250}{10} \times 4,3844 \times \frac{100}{10} \times \frac{1}{1000}$$

$$= 1,096 \text{ g/ } 100 \text{ g}$$

$$\text{Replikasi 4} = \frac{V(\text{Blanko- sampel})}{0,1 \text{ N}} \times N \text{ Na}_2\text{S}_2\text{O}_3$$

$$= \frac{(27\text{ml} - 25,50\text{ml})}{0,1 \text{ N}} \times 0,1010 \text{ N}$$

= 1, 515 ml → lihat tabel (range 1-2)

$$\frac{y-y_1}{y_2-y_1} = \frac{x-x_1}{x_2-x_1}$$

$$\frac{y-3,6}{7,3-3,6} = \frac{1,515-1}{2-1}$$

$$\frac{y-3,6}{3,7} = \frac{0,515}{1}$$

$$y-3,6 = 1,9055$$

$$y = 5,5055$$

$$\text{Kadar} = \frac{\text{volume pengenceran}}{\text{volume pipet}} \times \text{kadar laktosa dlm tabel} \times \frac{100}{\text{BZ}} \times \frac{1}{1000}$$

$$\text{Kadar} = \frac{250}{10} \times 5,5055 \times \frac{100}{10} \times \frac{1}{1000}$$

$$= 1,376 \text{ g/ 100 g}$$

$$\text{Replikasi 5} = \frac{V (\text{Blanko- sampel})}{0,1 \text{ N}} \times N \text{ Na}_2\text{S}_2\text{O}_3$$

$$= \frac{(27\text{ml}- 25,90\text{ml})}{0,1 \text{ N}}$$

= 1, 111 ml → lihat tabel (range 1-2)

$$\frac{y-y_1}{y_2-y_1} = \frac{x-x_1}{x_2-x_1}$$

$$\frac{y-3,6}{7,3-3,6} = \frac{1,111-1}{2-1}$$

$$\frac{y-3,6}{3,7} = \frac{0,111}{1}$$

$$y-3,6 = 0,4107$$

$$y = 4,0107$$

$$\text{Kadar} = \frac{\text{volume pengenceran}}{\text{volume pipet}} \times \text{kadar laktosa dlm tabel} \times \frac{100}{\text{BZ}} \times \frac{1}{1000}$$

$$\text{Kadar} = \frac{250}{10} \times 4,0107 \times \frac{100}{10} \times \frac{1}{1000}$$

$$= 1,002 \text{ g/ 100 g}$$

Lampiran 11.. Statistik UJI-T Kadar Protein

Notes

Output Created	22-DEC-2022 19:42:49	
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Input	Active Dataset	DataSet0
	Filter	<none>
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	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax	EXAMINE VARIABLES=protein /PLOT BOXPLOT STEMLEAF NPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.	
Resources	Processor Time	00:00:04,52
	Elapsed Time	00:00:07,63

Case Processing Summary

	Cases		Missing		Total	
	Valid N	Percent	N	Percent	N	Percent
protein	5	100.0%	0	0.0%	5	100.0%

Descriptives

		Statistic	Std. Error	
protein	Mean	2.6140	.12520	
	95% Confidence Interval for Mean	Lower Bound	2.2664	
		Upper Bound	2.9616	
	5% Trimmed Mean	2.6078		
	Median	2.6200		
	Variance	.078		
	Std. Deviation	.27996		
	Minimum	2.30		
	Maximum	3.04		
	Range	.74		
	Interquartile Range	.48		
	Skewness	.783	.913	
	Kurtosis	.867	2.000	

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
protein	.221	5	.200*	.956	5	.777

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

a. Lilliefors Significance Correction

protein

protein Stem-and-Leaf Plot

Frequency Stem & Leaf

1,00 23 . 0

1,00 24 . 4

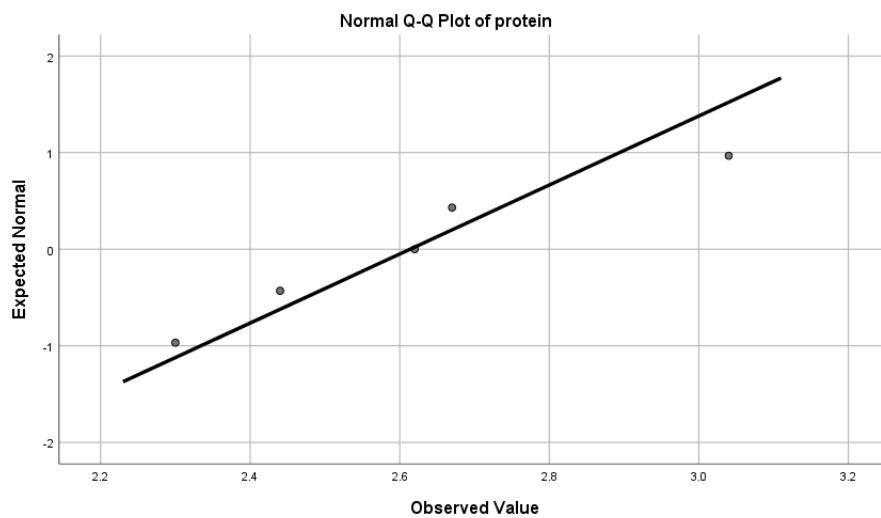
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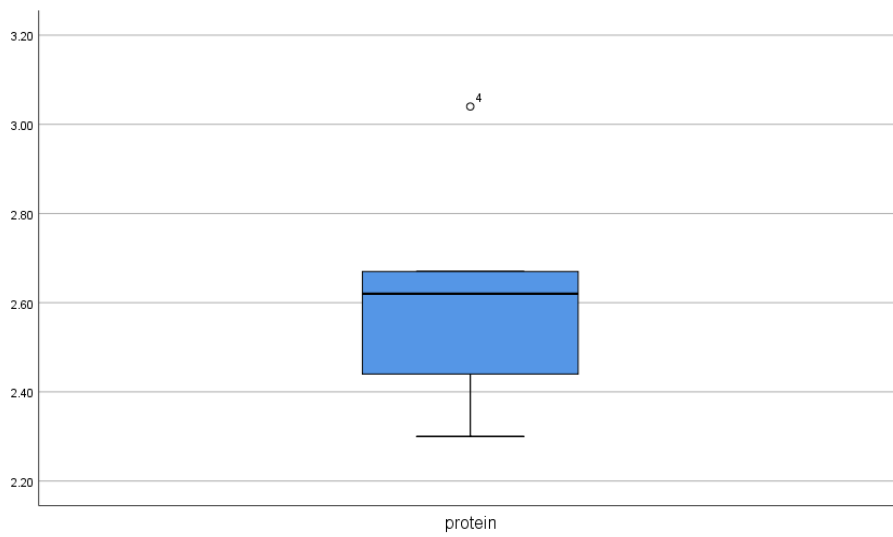
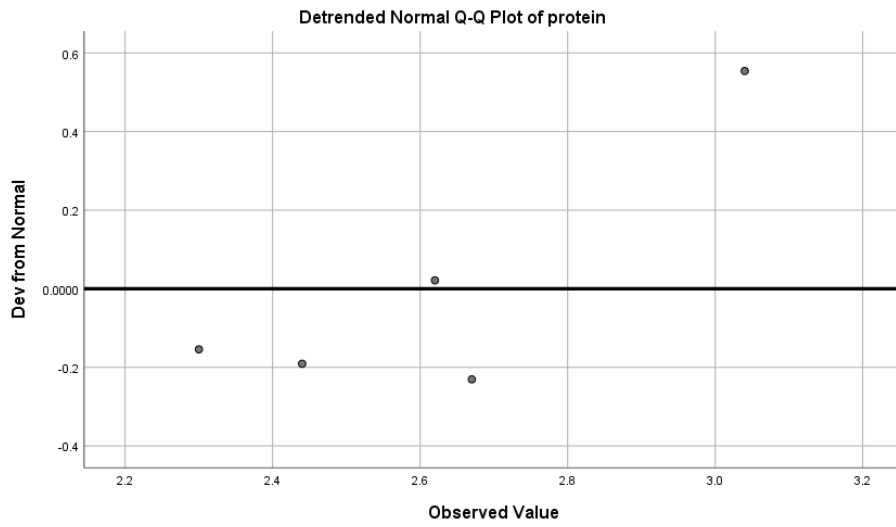
2,00 26 . 27

1,00 Extremes (>=3,04)

Stem width: ,10

Each leaf: 1 case(s)





T-TEST
/TESTVAL=2.70
/MISSING=ANALYSIS
/VARIABLES=protein
/CRITERIA=CI(.95).

T-Test**Notes**

Output Created		22-DEC-2022 19:43:23
Comments		
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	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST /TESTVAL=2.70 /MISSING=ANALYSIS /VARIABLES=protein /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00,00
	Elapsed Time	00:00:00,04

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
protein	5	2.6140	.27996	.12520

One-Sample Test

Test Value = 2.70

	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
protein	-.687	5	.530	-.08600	-.4336	.2616

Lampiran 12. Statistik UJI-T Kadar Laktosa**Explore**

		Notes	05-DEC-2022 15:47:43
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Comments			
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	N of Rows in Working Data File		5
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.	
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.	
Syntax		EXAMINE VARIABLES=Kadar /PLOT BOXPLOT STEMLEAF NPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.	
Resources	Processor Time		00:00:05,52
	Elapsed Time		00:00:12,15

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Kadar	5	100.0%	0	0.0%	5	100.0%

Descriptives

		Statistic	Std. Error	
Kadar	Mean	1.35320	.183227	
	95% Confidence Interval for Mean	Lower Bound	.84448	
		Upper Bound	1.86192	
	5% Trimmed Mean	1.33461		
	Median	1.27500		
	Variance	.168		
	Std. Deviation	.409709		
	Minimum	1.005		
	Maximum	2.036		
	Range	1.031		
	Interquartile Range	.666		
	Skewness	1.540	.913	
	Kurtosis	2.562	2.000	

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Kadar	.279	5	.200*	.855	5	.211

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

a. Lilliefors Significance Correction

Kadar

Kadar Stem-and-Leaf Plot

Frequency Stem & Leaf

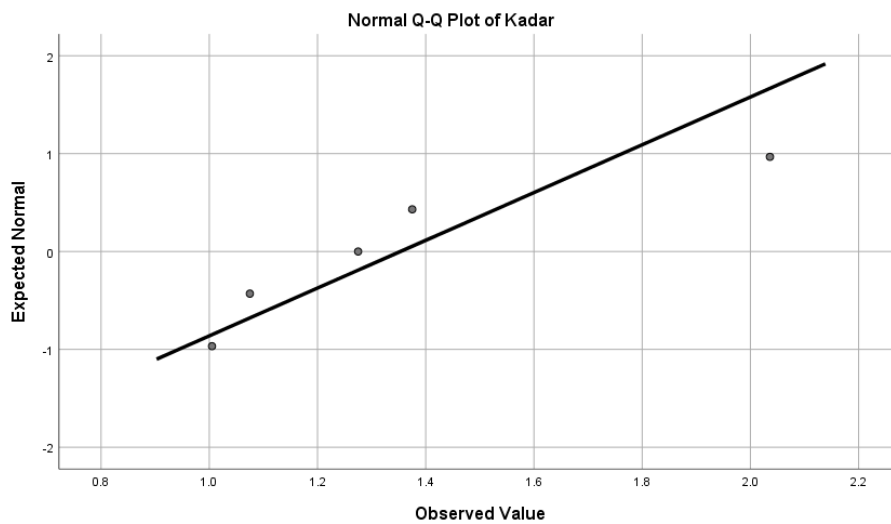
```

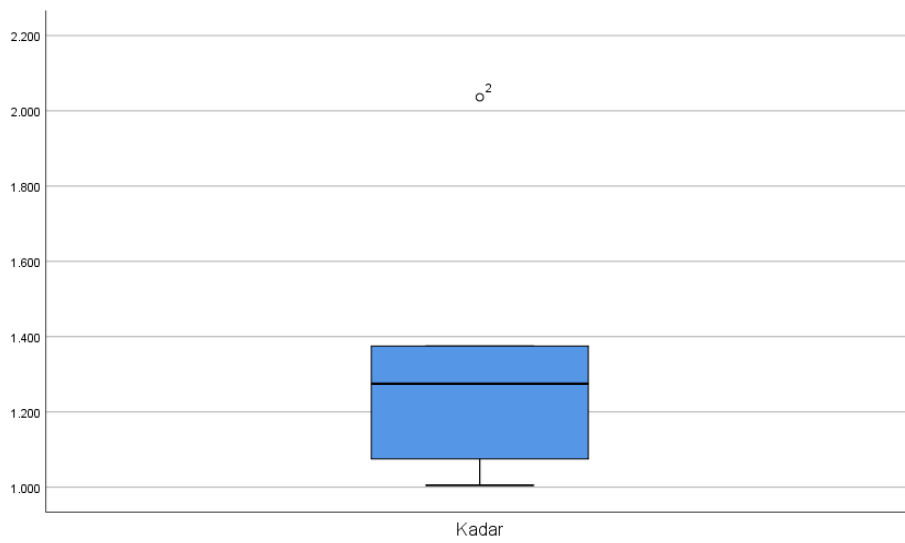
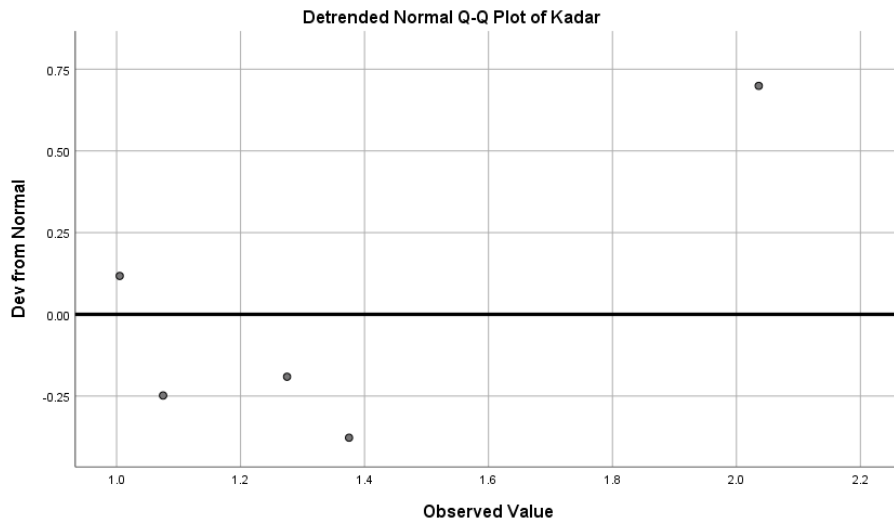
2,00  10 . 07
,00   11 .
1,00  12 . 7
1,00  13 . 7
1,00 Extremes (>=2,04)

```

Stem width: ,100

Each leaf: 1 case(s)





T-TEST

/TESTVAL=4.8

/MISSING=ANALYSIS

/VARIABLES=Kadar

/CRITERIA=CI(.95).

T-Test

		Notes
Output Created		05-DEC-2022 15:48:55
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	5
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST /TESTVAL=4.8 /MISSING=ANALYSIS /VARIABLES=Kadar /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00,00
	Elapsed Time	00:00:00,04

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Kadar	5	1.35320	.409709	.183227

One-Sample Test

Test Value = 4.8

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Kadar	-18.812	5	.000	-3.446800	-3.95552	-2.93808

Lampiran 13. SNI - 3951:2018 (Susu Pasteurisasi)

SNI 3951:2018

6 Syarat mutu

Syarat mutu susu pasteurisasi sesuai Tabel 1.

Tabel 1 – Syarat mutu susu pasteurisasi

No.	Kriteria uji	Satuan	Persyaratan		
			berlemak (<i>full cream milk</i>)	rendah lemak (<i>low fat milk</i>)	bebas lemak (<i>non fat milk</i>)
1	Keadaan				
1.1	Bau	-	khas, normal	khas, normal	khas, normal
1.2	Rasa	-	normal	normal	normal
1.3	Warna	-	normal	normal	normal
2	Protein (N x 6,38)	fraksi massa, %	min. 2,7/ min. 2,0 ¹⁾	min. 2,7/ min. 2,0 ¹⁾	min. 2,7/ min. 2,0 ¹⁾
3	Lemak	fraksi massa, %	min.3,0 / min.2,0 ¹⁾	0,6 – 2,9 / 0,6 – 1,9 ¹⁾	maks. 0,5 / maks.0,5 ¹⁾
4	Total padatan tanpa lemak	fraksi massa, %	min. 7,8	min. 7,8	min. 7,8
5	Cemaran logam ²⁾				
5.1	Timbal (Pb)	mg/kg	maks. 0,02	maks. 0,02	maks. 0,02
5.2	Kadmium (Cd)	mg/kg	maks. 0,05	maks. 0,05	maks. 0,05
5.3	Timah (Sn)	mg/kg	maks. 40,0/ maks. 250 ³⁾	maks. 40,0/ maks. 250 ³⁾	maks. 40,0/ maks. 250 ³⁾
5.4	Merkuri (Hg)	mg/kg	maks. 0,02	maks. 0,02	maks. 0,02
6	Cemaran arsen (As)	mg/kg	maks. 0,10	maks. 0,10	maks. 0,10
7	Cemaran mikroba		Lihat Tabel 2 dan 3		
8	Aflatoksin M ₁	µg/kg	maks. 0,5	maks. 0,5	maks. 0,5

CATATAN
¹⁾ Untuk susu berperisa
²⁾ Dihitung terhadap produk yang siap dikonsumsi
³⁾ Untuk produk yang dikemas dalam kaleng

Hak cipta Badan Standardisasi Nasional. Salinan standar ini dibuat oleh BSN untuk Neneeng Putri Ristiana | Universitas Setia Budi Surakarta | neneengputri29@gmail.com

Tabel 2 – Kriteria mikrobiologi susu pasteurisasi *plain*

No	Jenis cemaran mikroba	n	c	m	M
1	Angka Lempeng Total	5	1	10 ⁴ koloni/ml	10 ⁵ koloni/ml
2	Enterobacteriaceae	5	2	<1 APM/ml	5 APM/ml
3	<i>Salmonella</i>	5	0	negatif/25ml	NA

CATATAN
n adalah jumlah sampel yang diambil dan dianalisis
c adalah jumlah maksimum sampel yang boleh melampaui batas mikroba
m, M adalah batas mikroba
NA adalah *Not applicable*