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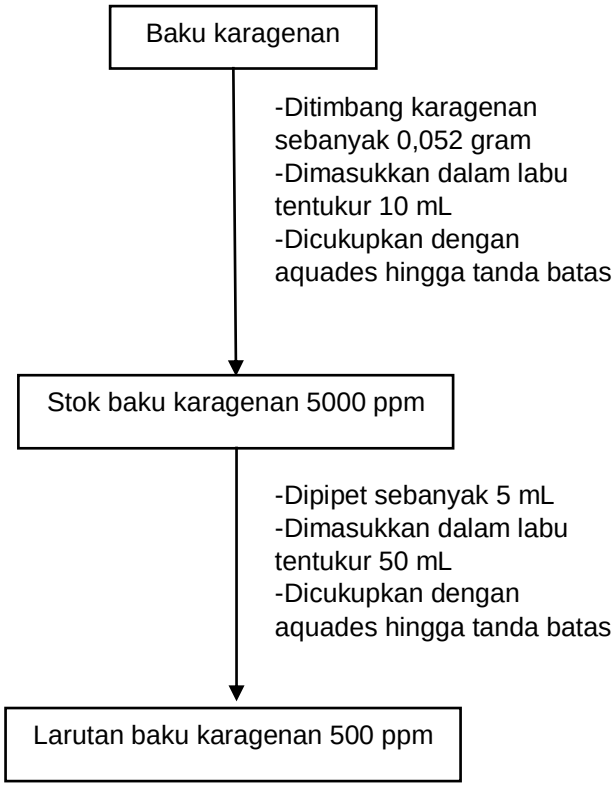
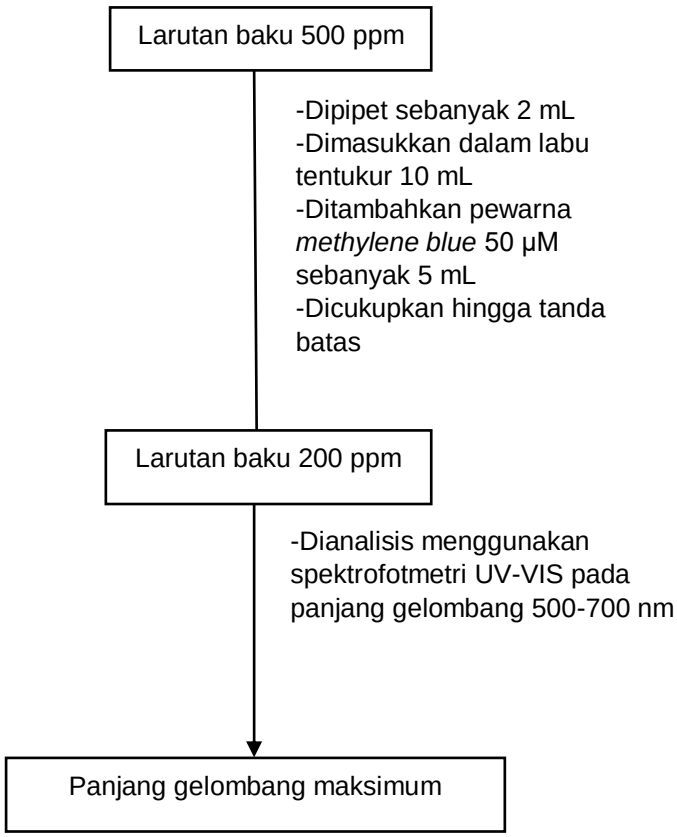
Lampiran 1. Skema kerja pembuatan larutan baku karagenan

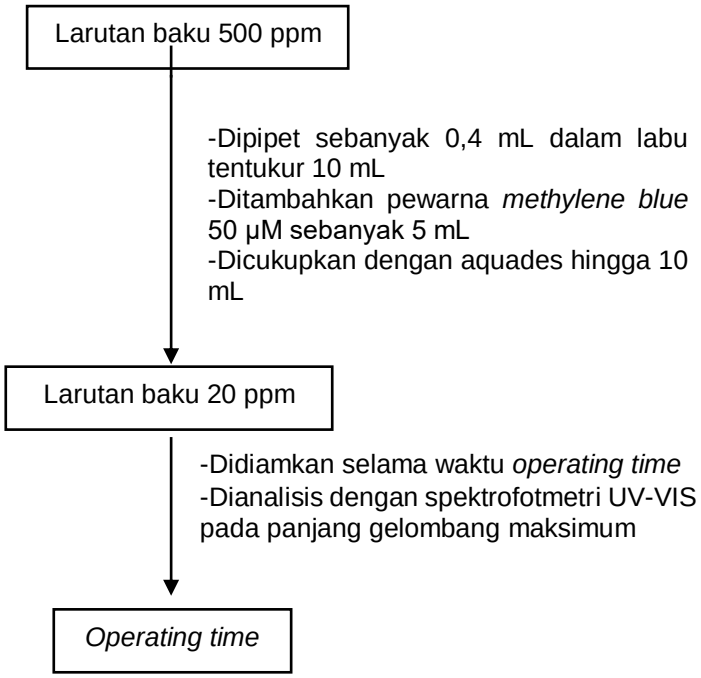


Lampiran 2. Skema kerja penentuan panjang gelombang maksimum

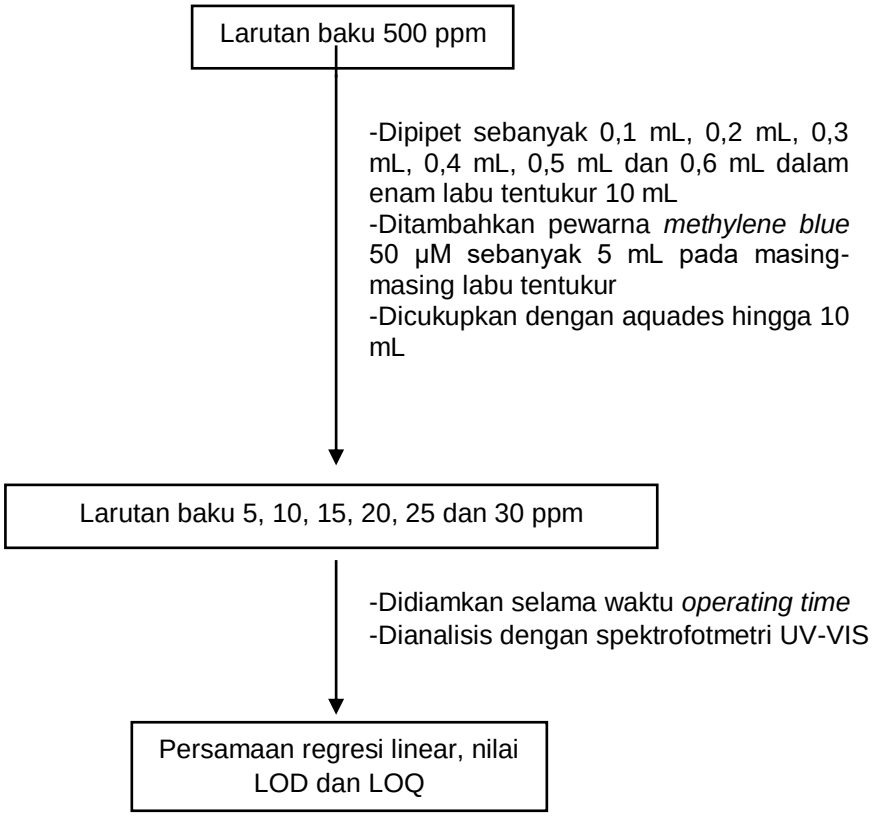


Lampiran 3. Skema kerja penetapan *operating time*

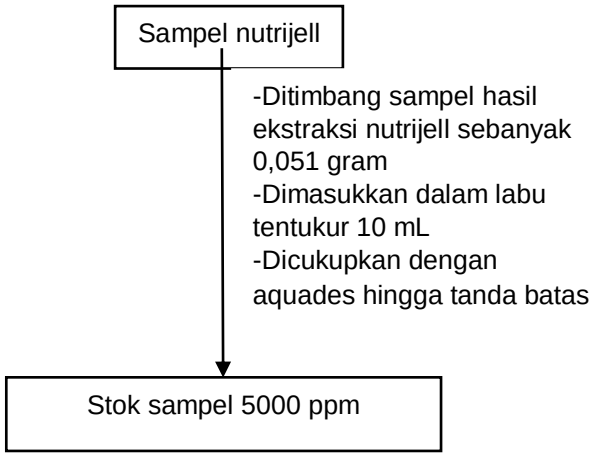
.



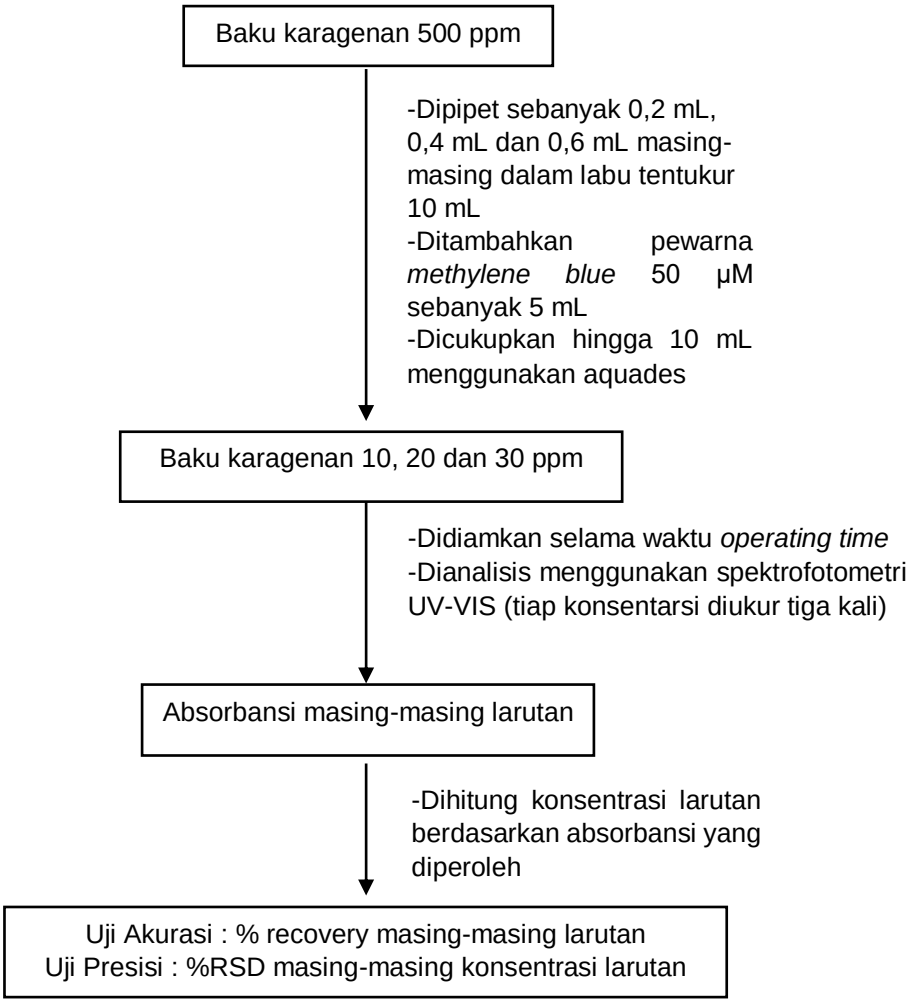
Lampiran 4. Skema kerja pembuatan kurva baku, uji linearitas, LOD & LOQ



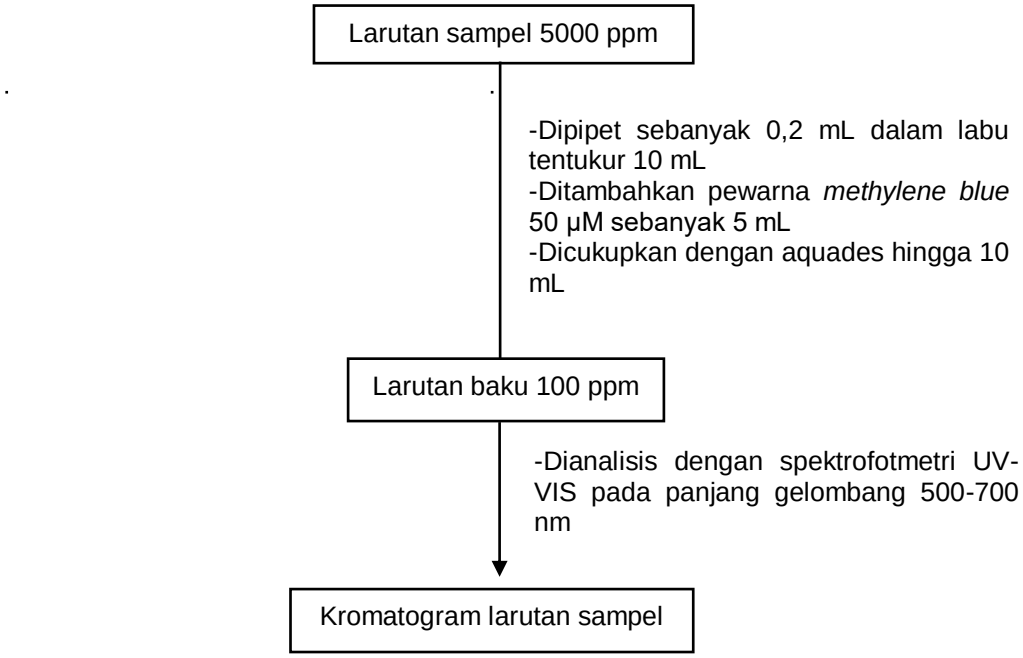
Lampiran 5. Skema kerja pembuatan larutan sampel



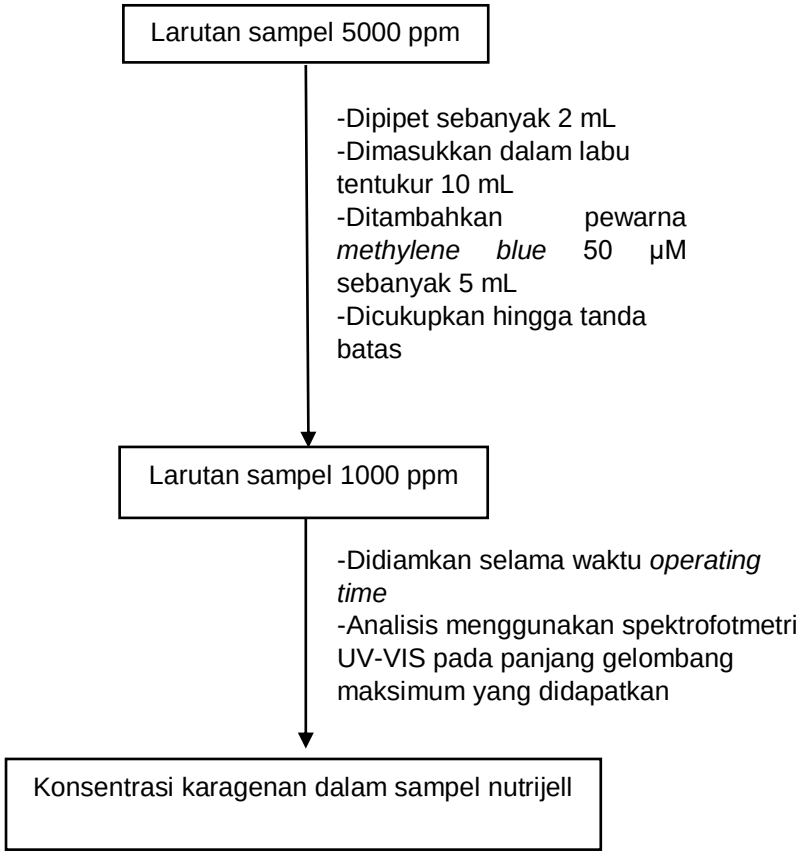
Lampiran 6. Skema kerja uji akurasi dan presisi



Lampiran 7. Skema kerja uji selektivitas



Lampiran 8. Skema kerja penetapan kadar karagenan dalam produk nutrijell



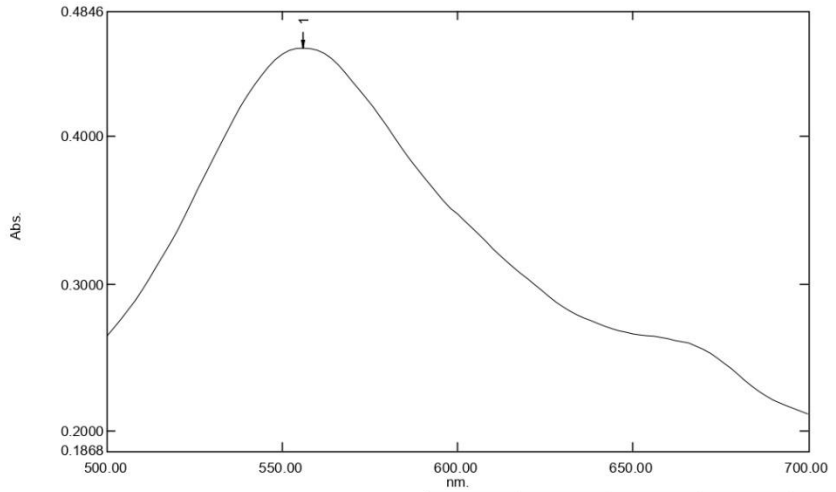
Lampiran 9. Hasil analisis spektrofotometri UV-VIS

a. Panjang gelombang maksimum

Spectrum Peak Pick Report

13/11/2023 16:07:26

Data Set: kur pip_160627 - RawData



No.	P/V	Wavelength	Abs.	Description
1		556.00	0.4598	

[Measurement Properties]
Wavelength Range (nm.): 500.00 to 700.00
Scan Speed: Medium
Sampling Interval: 2.0
Auto Sampling Interval: Disabled
Scan Mode: Auto

[Instrument Properties]
Instrument Type: UV-1780 Series
Measuring Mode: Absorbance
Slit Width: 1.0 nm
Light Source Change Wavelength: 340.8 nm
S/R Exchange: Normal

[Attachment Properties]
Attachment: None

[Operation]
Threshold: 0.0010000
Points: 4
InterPolate: Disabled
Average: Disabled

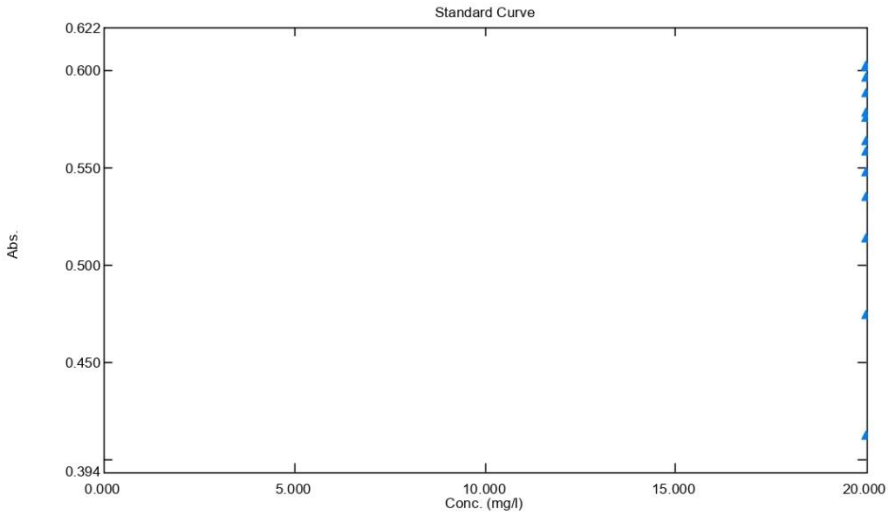
[Sample Preparation Properties]
Weight:
Volume:
Dilution:
Path Length:
Additional Information: DNA

b. Penetapan *operating time*

Standard Table Report

27/11/2023 17:58:21

File Name: C:\Users\user\Documents\PENELITIAN S1\001-KF-FFUH\operating time 6.pho



Standard Table

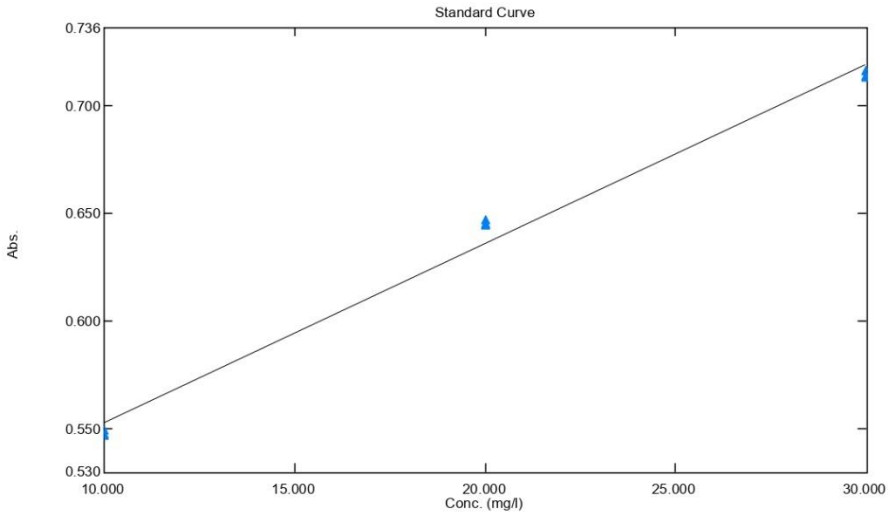
	Sample ID	Type	Ex	Conc	WL556.0	Wgt.Factor	Comments
1	10min	Standard		20.000	0.413	1.000	
2	20min	Standard		20.000	0.475	1.000	
3	30min	Standard		20.000	0.515	1.000	
4	40	Standard		20.000	0.535	1.000	
5	50	Standard		20.000	0.548	1.000	
6	60	Standard		20.000	0.559	1.000	
7	70	Standard		20.000	0.564	1.000	
8	80	Standard		20.000	0.576	1.000	
9	90	Standard		20.000	0.579	1.000	
10	100	Standard		20.000	0.589	1.000	
11	110	Standard		20.000	0.597	1.000	
12	120	Standard		20.000	0.603	1.000	
13	130	Standard		20.000	0.603	1.000	
14	140	Standard		20.000	0.602	1.000	
15							

c. Akurasi dan presisi

Standard Table Report

01/12/2023 15:38:34

File Name: C:\Users\user\Documents\PENELITIAN S1\001-KF-FFUH\akurasi presisi.pho



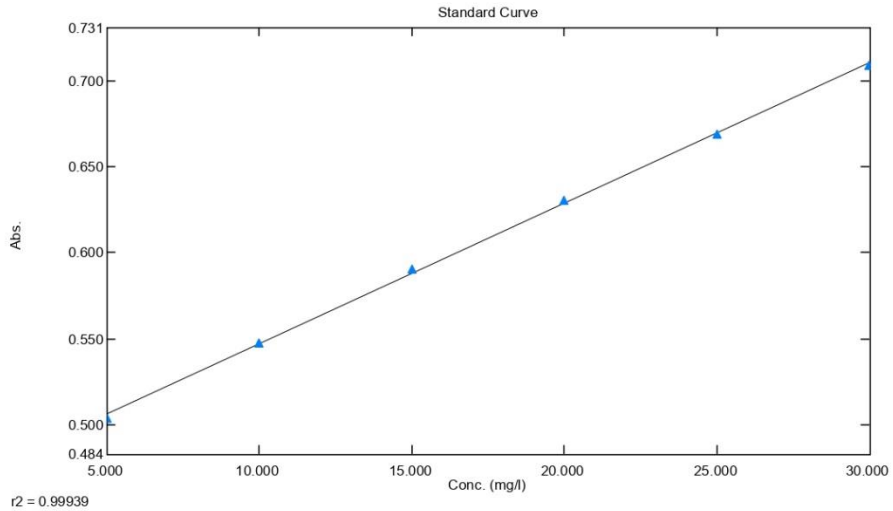
Standard Table

	Sample ID	Type	Ex	Conc	WL556.0	Wgt.Factor	Comments
1	baku11	Standard		10.000	0.548	1.000	
2	baku13	Standard		10.000	0.548	1.000	
3	baku12.	Standard		10.000	0.550	1.000	
4	baku23.	Standard		20.000	0.644	1.000	
5	baku22.	Standard		20.000	0.645	1.000	
6	baku21.	Standard		20.000	0.647	1.000	
7	baku32.	Standard		30.000	0.716	1.000	
8	baku33.	Standard		30.000	0.713	1.000	
9	baku31.	Standard		30.000	0.713	1.000	
10							

d. Linearitas, LOD dan LOQ

Standard Table Report 30/11/2023 13:38:15

File Name: C:\Users\user\Documents\PENELITIAN S1\001-KF-FFUH\kurva baku3.pho

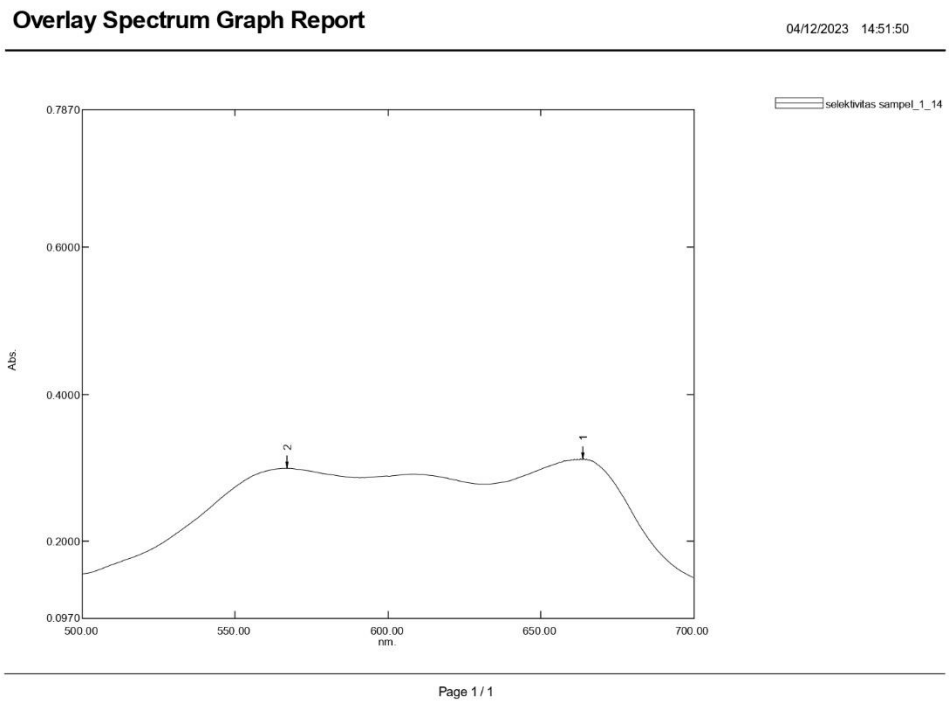


r2 = 0.99939

Standard Table

	Sample ID	Type	Ex	Conc	WL556.0	Wgt.Factor	Comments
1	baku2	Standard		10.000	0.548	1.000	
2	baku1	Standard		5.000	0.504	1.000	
3	baku5.	Standard		25.000	0.669	1.000	
4	baku6.	Standard		30.000	0.709	1.000	
5	baku3..	Standard		15.000	0.591	1.000	
6	baku4..	Standard		20.000	0.631	1.000	
7							

e. Selektivitas sampel



f. Penetapan kadar karagenan dalam produk nutrijell

Sample Table Report 04/12/2023 14:52:51

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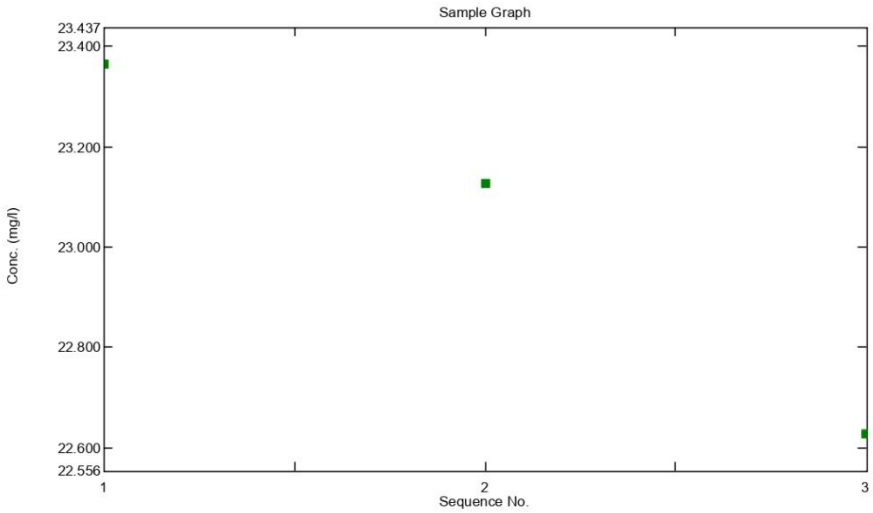


Sample Table

	Sample ID	Type	Ex	Conc	WL556.0	Comments
1	sampel5	Unknown		23.364	0.656	
2	52	Unknown		23.128	0.654	
3	53	Unknown		22.629	0.650	
4						

Lampiran 10. Perhitungan

a. Akurasi

Konsentrasi 10 ppm

Replikasi 1

$$\text{Konsentrasi} = \frac{(0{,}548-0{,}4659)}{0{,}0082} = 10{,}01 \text{ ppm}$$

$$\%recovery = \frac{10{,}01}{10} \times 100\% = 100\%$$

Replikasi 2

$$\text{Konsentrasi} = \frac{(0{,}550-0{,}4659)}{0{,}0082} = 10{,}26 \text{ ppm}$$

$$\%recovery = \frac{10{,}26}{10} \times 100\% = 103\%$$

Replikasi 3

$$\text{Konsentrasi} = \frac{(0{,}548-0{,}4659)}{0{,}0082} = 10{,}01 \text{ ppm}$$

$$\%recovery = \frac{10{,}01}{10} \times 100\% = 100\%$$

$$\text{Rata} - \text{rata\% recovery} = \frac{100\%+103\%+100\%}{3} = 101\%$$

Konsentrasi 20 ppm

Replikasi 1

$$\text{Konsentrasi} = \frac{(0{,}644-0{,}4659)}{0{,}0082} = 21{,}72 \text{ ppm}$$

$$\%recovery = \frac{21{,}72}{20} \times 100\% = 109\%$$

Replikasi 2

$$\text{Konsentrasi} = \frac{(0{,}647-0{,}4659)}{0{,}0082} = 22{,}09 \text{ ppm}$$

$$\%recovery = \frac{22{,}09}{20} \times 100\% = 110\%$$

Replikasi 3

$$\text{Konsentrasi} = \frac{(0{,}645-0{,}4659)}{0{,}0082} = 21{,}84 \text{ ppm}$$

$$\%recovery = \frac{21{,}84}{20} \times 100\% = 109\%$$

$$\text{Rata} - \text{rata\% recovery} = \frac{109\%+110\%+109\%}{3} = 109\%$$

Konsentrasi 30 ppm

Replikasi 1

$\text{Konsentrasi} = \frac{(0{,}713-0{,}4659)}{0{,}0082} = 30{,}13 \text{ ppm}$

$\%recovery = \frac{30{,}13}{30} \times 100\% = 100\%$

Replikasi 2

$\text{Konsentrasi} = \frac{(0{,}716-0{,}4659)}{0{,}0082} = 30{,}50 \text{ ppm}$

$\%recovery = \frac{30{,}50}{30} \times 100\% = 102\%$

Replikasi 3

$\text{Konsentrasi} = \frac{(0{,}713-0{,}4659)}{0{,}0082} = 30{,}13 \text{ ppm}$

$\%recovery = \frac{30{,}13}{30} \times 100\% = 100\%$

$\text{Rata} - \text{rata\% recovery} = \frac{100\%+102\%+100\%}{3} = 101\%$

b. Presisi

Konsentrasi 10 ppm

Replikasi 1

$\text{Konsentrasi} = \frac{(0{,}548-0{,}4659)}{0{,}0082} = 10{,}01 \text{ ppm}$

Replikasi 2

$\text{Konsentrasi} = \frac{(0{,}550-0{,}4659)}{0{,}0082} = 10{,}26 \text{ ppm}$

Replikasi 3

$\text{Konsentrasi} = \frac{(0{,}548-0{,}4659)}{0{,}0082} = 10{,}01 \text{ ppm}$

$\text{Rata} - \text{rata konsentrasi} = \frac{10{,}01+10{,}26+10{,}01}{3} = 10{,}09$

SD = 0,14

$\%RSD = \frac{0{,}14}{10{,}09} \times 100\% = 1{,}40\%$

Konsentrasi 20 ppm

Replikasi 1

$\text{Konsentrasi} = \frac{(0{,}644-0{,}4659)}{0{,}0082} = 21{,}72 \text{ ppm}$

Replikasi 2

$$\text{Konsentrasi} = \frac{(0{,}647-0{,}4659)}{0{,}0082} = 22{,}09 \text{ ppm}$$

Replikasi 3

$$\text{Konsentrasi} = \frac{(0{,}645-0{,}4659)}{0{,}0082} = 21{,}84 \text{ ppm}$$

$$\text{Rata} - \text{rata konsentrasi} = \frac{21{,}72+22{,}09+21{,}84}{3} = 21{,}88$$

SD = 0,19

$$\%RSD = \frac{0{,}19}{21{,}88} \times 100\% = 0{,}85\%$$

Konsentrasi 30 ppm

Replikasi 1

$$\text{Konsentrasi} = \frac{(0{,}713-0{,}4659)}{0{,}0082} = 30{,}13 \text{ ppm}$$

Replikasi 2

$$\text{Konsentrasi} = \frac{(0{,}716-0{,}4659)}{0{,}0082} = 30{,}50 \text{ ppm}$$

Replikasi 3

$$\text{Konsentrasi} = \frac{(0{,}713-0{,}4659)}{0{,}0082} = 30{,}13 \text{ ppm}$$

$$\text{Rata} - \text{rata konsentrasi} = \frac{30{,}13+30{,}50+30{,}13}{3} = 30{,}26$$

SD = 0,21

$$\%RSD = \frac{0{,}21}{30{,}26} \times 100\% = 0{,}70\%$$

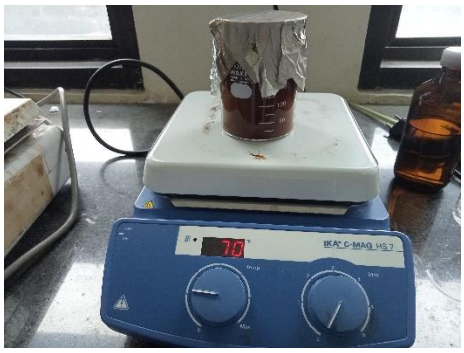
Lampiran 11. Dokumentasi

Gambar 13. Penimbangan *methylene blue*

Gambar 14. Pembuatan larutan baku

Gambar 15. Uji akurasi & presisi

Gambar 16. Penyiapan larutan sampel



Gambar 17. Ekstraksi sampel

Gambar 18. Penguapan pelarut