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LAMPIRAN

Lampiran 1. Tabel Rekapitulasi Hasil Penelitian *Cupping Test*

No.	Komponen	Kontrol	Perebusan 2 jam suhu 70°C	Perebusan 2 jam suhu 80°C	Perebusan 3,5 jam suhu 70°C
1	Kadar Kafein	2.04%	0.96%	1.04%	1.01%
2	pH	6.4	5.44	5.53	6.08
3	Total Padatan Terlarut	885	745	889	903
4	Cupping Test	84 (<i>Fine</i>)	80.25 (<i>Fine</i>)	79 (<i>Very Good</i>)	81.5 (<i>Fine</i>)

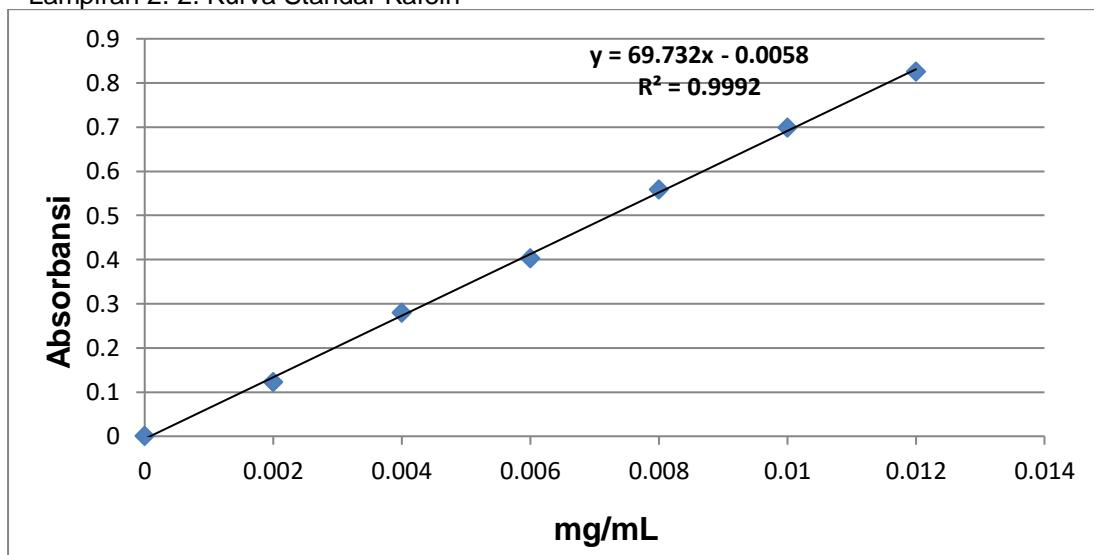
Lampiran 2. Data Hasil Pengujian Kadar Kafein pada *Green Bean* Dekafeinasi

Perlakuan	U1	U2	U3	Rata-rata kafein (%)
Perebusan 2 jam 70°C	0.91	0.81	1.15	0.96
Perebusan 2,5 jam 70°C	1.15	1.14	1.16	1.15
Perebusan 3 jam 70°C	1.17	1.13	1.13	1.14
Perebusan 3,5 jam 70°C	1.08	0.94	1.01	1.01
Perebusan 4 jam 70°C	1	1.05	1.22	1.09
Perebusan 5 jam 70°C	1.19	1.27	1.04	1.17
Perebusan 2 jam 80°C	1	1.03	1.08	1.04
Perebusan 2.5 jam 80°C	1.18	1.19	1.19	1.19
Perebusan 3 jam 80°C	1.23	1.16	1.23	1.21
Perebusan 3.5 jam 80°C	0.68	1.3	1.18	1.05
Perebusan 4 jam 80°C	1.14	1.04	1.03	1.07
Perebusan 5 jam 80°C	1.28	1.08	1.16	1.17
Perebusan 2 jam 89°C	1.02	1.35	0.94	1.10
Perebusan 2.5 jam 90°C	1.22	1.23	1.21	1.22
Perebusan 3 jam 90°C	0.98	1.21	1	1.13
Perebusan 3.5 jam 90°C	1.01	1.15	0.98	1.05
Perebusan 4 jam 90°C	1.72	0.73	0.76	1.07
Perebusan 5 jam 90°C	1.03	1.18	1.36	1.19

Lampiran 2. 1. Data Absorbansi Larutan Standar

Konsentrasi (mg/ml)	Absorbansi Kafein
0	0
0.002	0.123
0.004	0.280
0.006	0.403
0.008	0.558
0.01	0.669
0.012	0.825

Lampiran 2. 2. Kurva Standar Kafein



Lampiran 2. 3. Hasil Analisa Sidik Ragam (ANOVA) Kadar Kafein *Green Bean* yang Terdekafeinasi dengan Perlakuan Suhu dan Waktu

Suhu * Waktu

Dependent Variable: Kafein

Suhu	Waktu	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
2 jam	Suhu 70	2.040	.067	1.904	2.176
	Suhu 80	.957	.067	.820	1.093
	Suhu 90	1.037	.067	.900	1.173
2.5 jam	Suhu 70	1.103	.067	.967	1.240
	Suhu 80	2.040	.067	1.904	2.176
	Suhu 90	1.150	.067	1.014	1.286
3 jam	Suhu 70	1.187	.067	1.050	1.323
	Suhu 80	1.220	.067	1.084	1.356
	Suhu 90	2.040	.067	1.904	2.176
3.5 jam	Suhu 70	1.143	.067	1.007	1.280
	Suhu 80	1.170	.067	1.034	1.306
	Suhu 90	1.127	.067	.990	1.263
4 jam	Suhu 70	2.040	.067	1.904	2.176
	Suhu 80	1.010	.067	.874	1.146
	Suhu 90	1.053	.067	.917	1.190
5 jam	Suhu 70	1.047	.067	.910	1.183
	Suhu 80	2.040	.067	1.904	2.176
	Suhu 90	1.090	.067	.954	1.226

Lampiran 3. Data Hasil Pengujian pH pada Green Bean yang Terdekafeinasi dengan Perlakuan Suhu dan Waktu

Perlakuan	pH	Rata-Rata
Kontrol	6.33	6.40
Kontrol	6.39	
Kontrol	6.47	
Perebusan 2 jam suhu 70°C	5.33	5.44
Perebusan 2 jam suhu 70°C	5.55	
Perebusan 2 jam suhu 70°C	5.43	
Perebusan 2 jam suhu 80°C	5.54	5.53
Perebusan 2 jam suhu 80°C	5.4	
Perebusan 2 jam suhu 80°C	5.64	
Perebusan 3,5 jam suhu 70°C	6.09	6.08
Perebusan 3,5 jam suhu 70°C	6.02	
Perebusan 3,5 jam suhu 70°C	6.12	

Lampiran 3. 1. Hasil Analisa Sidik Ragam (ANOVA) Nilai pH *Green Bean* yang Terdekafeinasi dengan Perlakuan Suhu dan Waktu

ANOVA

pH

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.876	3	.625	73.060	.000
Within Groups	.068	8	.009		
Total	1.944	11			

Lampiran 3. 2. Hasil Uji Lanjut Nilai pH pada *Green Bean* yang Terdekafeinasi dengan Perlakuan Suhu Dan Waktu

pH

Duncan^a

		Subset for alpHa = 0.05		
Kontrol	N	1	2	3
A1	3	5.4367		
B1	3	5.5267		
C1	3		6.0767	
Kontrol	3			6.3967
Sig.		.268	1.000	1.000

Lampiran 4. Data Hasil Pengujian Total Padatan Terlarut Pada *Green Bean* yang Terdekafeinasi dengan Perlakuan Suhu dan Waktu

Perlakuan	TDS	Rata-Rata
Kontrol	848	885.67
Kontrol	917	
Kontrol	892	
Perebusan 2 jam suhu 70°C	673	745.00
Perebusan 2 jam suhu 70°C	817	
Perebusan 2 jam suhu 70°C	745	
Perebusan 2 jam suhu 80°C	883	889.67
Perebusan 2 jam suhu 80°C	897	
Perebusan 2 jam suhu 80°C	889	
Perebusan 3,5 jam suhu 70°C	901	903.00
Perebusan 3,5 jam suhu 70°C	910	
Perebusan 3,5 jam suhu 70°C	898	

Lampiran 4. 1. sil Analisa Sidik Ragam (ANOVA) Nilai Total Padatan Terlarut pada *Green Bean* yang Terdekafeinasi dengan Perlakuan Suhu dan Waktu

ANOVA

TDS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49630.333	3	16543.444	10.192	.004
Within Groups	12985.333	8	1623.167		
Total	62615.667	11			

Lampiran 4. 2. Hasil Uji Lanjut Nilai Total Padatan Terlarut pada Green Bean yang Terdekafeinasi dengan Perlakuan Suhu dan Waktu

TDS

Duncan^a

		Subset for alpHa = 0.05	
Kontrol	N	1	2
A1	3	745.0000	
Kontrol	3		885.6667
B1	3		889.6667
C1	3		903.0000
Sig.		1.000	.627

Lampiran 5. Hasil *Cupping Test/Uji Citarasa* pada Green Bean yang Terdekafeinasi Dengan Perlakuan Suhu dan Waktu Terbaik

Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*	Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*
Fragrance/Aroma	7.50	Uniform Cups	10.00
Flavor	7.50	Balance	7.50
Aftertaste	7.00	Clean Cups	10.00
Salt/Acid	7.50	Overall	7.00
Bitter/Sweet	7.50	Taints-Faults	0.00
Mouthfeel/Body	7.50	Final Score**	79.00
Notes: Chocolaty, Strawy, Woody, Rather Earthy.			
* Keterangan skor: 6.00 - 6.75= Good; 7.00 - 7.75= Very good; 8.00 - 8.75= Excellent; 9.00 - 9.75= Outstanding (Score notation)			
** Final Score notation: Nilai minimum untuk (Minimum Value for) Specialty Grade = 80			
Catatan (Notes): Hasil analisis ini hanya menerangkan atribut mutu berdasarkan contoh yang diuji BUKAN menerangkan atribut nama, jenis atau asal contoh (This result explains only the attribute of the quality based on the sample tested, NOT explains attributes of name, type and origin of the sample). Hasil analisis ini hanya berlaku selama 3 bulan (This results valid within 3 months).			
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Ariza Budhi Tanjung Sari, S.TP, M.Si
Manajer Teknis

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**LABORATORIUM PENGUJI
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(Indonesia Coffee And Cocoa Research Institute)

"LP PUSLITKOKA"

**LAPORAN HASIL UJI CITARASA
(Report of Cup Testing)**

No. 02.22.1.0153 - C

FR-LP. 5.10.01.02.01-C3

Nomer Contoh (Sample Number) : 02.22.1.0153

Barcode: 0 2 . 2 2 . 1 0 1 5 3

Tanggal Penerimaan Contoh (Sample received) : 01-07-2022

Tanggal Pengujian (Date of testing) : 04-07-2022 — 04-07-2022

Jenis Contoh (Kind of sample) : Biji kopi/green beans Robusta D^P

Identitas Contoh: Kopi Robusta Bawakaraeng Sulawesi Selatan suhu perebusan 70 derajat celcius selama 3 jam 30 menit, Dekafeinasi Proses.

Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*	Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*
Fragrance/Aroma	7.25	Uniform Cups	10.00
Flavor	7.50	Balance	7.75
Aftertaste	7.50	Clean Cups	10.00
Salt/Acid	8.00	Overall	7.50
Bitter/Sweet	8.00	Taints-Faults	0.00
Mouthfeel/Body	8.00	Final Score**	81.50

Notes: Chocolaty, Spicy, Acidy, Rather Woody.

* Keterangan skor: 6.00 - 6.75 = Good; 7.00 - 7.75 = Very good; 8.00 - 8.75 = Excellent; 9.00 - 9.75 = Outstanding. (Score notation)

** Final Score notation: Nilai minimum untuk (Minimum Value for) Specialty Grade = 80

Jember, 04-07-2022

Catatan (Notes): Hasil analisis ini hanya berlaku selama 3 bulan (This results valid within 3 months).

Manajer Teknis
Ariza Budi Tumang Sarli, S.TP, M.Si

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LAPORAN HASIL UJI CITARASA
(*Report of Cup Testing*)

FR-LP. 5.10.01.02.01-C3 - ENEL
No. 02.22.1.0151 - C

Nomer Contoh (Sample Number) : 02.22.1.0151

Tanggal Penerimaan Contoh (Sample received) USA : 01-07-2022

Tanggal Pengujian (Date of testing) : 04-07-2022 — 04-07-2022

Jenis Contoh (Kind of sample) : Biji kopi/green beans Robusta DP

Identitas Contoh: Kopi Robusta Bawakaraeng Sulawesi Selatan suhu perebusan 70 derajat celcius selama 2 jam, Dekafeinasi Proses.

Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*	Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*
Fragrance/Aroma	7.50	Uniform Cups	10.00
Flavor	7.50	Balance	7.50
Aftertaste	7.50	Clean Cups	10.00
Salt/Acid	7.50	Overall	7.50
Bitter/Sweet	7.50	Taints-Faults	0.00
Mouthfeel/Body	7.75	Final Score**	80.25

Notes: Chocolaty, Coffee Pulp.

* Keterangan skor: 6.00 - 6.75= Good; 7.00 - 7.75= Very good; 8.00 - 8.75= Excellent; 9.00 - 9.75= Outstanding (Score notation)

** Final Score notation: Nilai minimum untuk (Minimum Value for) Specialty Grade = 80

Catatan (Notes): Jember, 04-07-2022 Manager Teknis

Hasil analisis ini hanya menerangkan atribut mutu berdasarkan contoh yang diuji BUKAN menerangkan atribut mutu nama, jenis atau asal contoh (This result explains only the attribute of quality based on the sample tested, NOT explains attributes of name, type and origin of the sample).

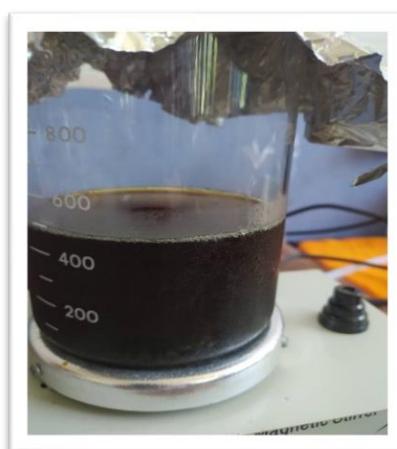
Hasil analisis ini hanya berlaku selama 3 bulan (This results valid within 3 months).

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 LABORATORIUM PENGUJI (Laboratory for Testing) PUSAT PENELITIAN KOPI DAN KAKAO INDONESIA <i>(Indonesia Coffee And Cocoa Research Institute)</i> "LP PUSLITKOKA"																															
LAPORAN HASIL UJI CITARASA (Report of Cup Testing)																															
No. 02.22.1.0150 - C																															
																															
Nomer Contoh (Sample Number) : 02.22.1.0150																															
Tanggal Penerimaan Contoh (Sample received) : 01-07-2022																															
Tanggal Pengujian (Date of testing) : 04-07-2022																															
Jenis Contoh (Kind of sample) : Biji kopi/green bean Robusta DP																															
Identitas Contoh: Kopi Robusta Bawakaraeng Sulawesi Selatan																															
(Kontrol/Tanpa Perilaku) Dekafeinasi Proses.																															
<table border="1"> <thead> <tr> <th>Karakteristik (Characteristic)</th> <th>Skor Citarasa (Cup testing Score)*</th> <th>Karakteristik (Characteristic)</th> <th>Skor Citarasa (Cup testing Score)*</th> </tr> </thead> <tbody> <tr> <td>Fragrance/Aroma</td> <td>8.00</td> <td>Uniform Cups</td> <td>10.00</td> </tr> <tr> <td>Flavor</td> <td>8.00</td> <td>Balance</td> <td>8.00</td> </tr> <tr> <td>Aftertaste</td> <td>8.00</td> <td>Clean Cups</td> <td>10.00</td> </tr> <tr> <td>Salt/Acid</td> <td>8.00</td> <td>Overall</td> <td>8.00</td> </tr> <tr> <td>Bitter/Sweet</td> <td>8.00</td> <td>Taints-Faults</td> <td>0.00</td> </tr> <tr> <td>Mouthfeel/Body</td> <td>8.00</td> <td>Final Score**</td> <td>84.00</td> </tr> </tbody> </table>				Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*	Karakteristik (Characteristic)	Skor Citarasa (Cup testing Score)*	Fragrance/Aroma	8.00	Uniform Cups	10.00	Flavor	8.00	Balance	8.00	Aftertaste	8.00	Clean Cups	10.00	Salt/Acid	8.00	Overall	8.00	Bitter/Sweet	8.00	Taints-Faults	0.00	Mouthfeel/Body	8.00	Final Score**	84.00
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Mouthfeel/Body	8.00	Final Score**	84.00																												
Notes: Chocolaty, Strawy, Acidy, Vanilla, Sweet Aftertaste																															
* Keterangan skor: 6.00 - 6.75= Good; 7.00 - 7.75= Very good; 8.00 - 8.75= Excellent; 9.00 - 9.75= Outstanding (Score notation)																															
** Final Score notation: Nilai minimum untuk (Minimum Value for) Specialty Grade = 80																															
Catatan (Notes):																															
Hasil analisis ini hanya menerangkan atribut mutu berdasarkan contoh yang diuji BUKAN menerangkan atribut nama, jenis atau asal contoh (This result explains only the attribute of the quality based on the sample tested, NOT explains attributes of name, type and origin of the sample).																															
Ariza Budi Tungung Sari, S.TP, M.Si																															
Jember, 04-07-2022																															
Manajer Teknis																															
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Lampiran 6. Dokumentasi Penelitian







Lampiran 7. Diagram Alir

Diagram Alir Pembuatan Air Jenuh

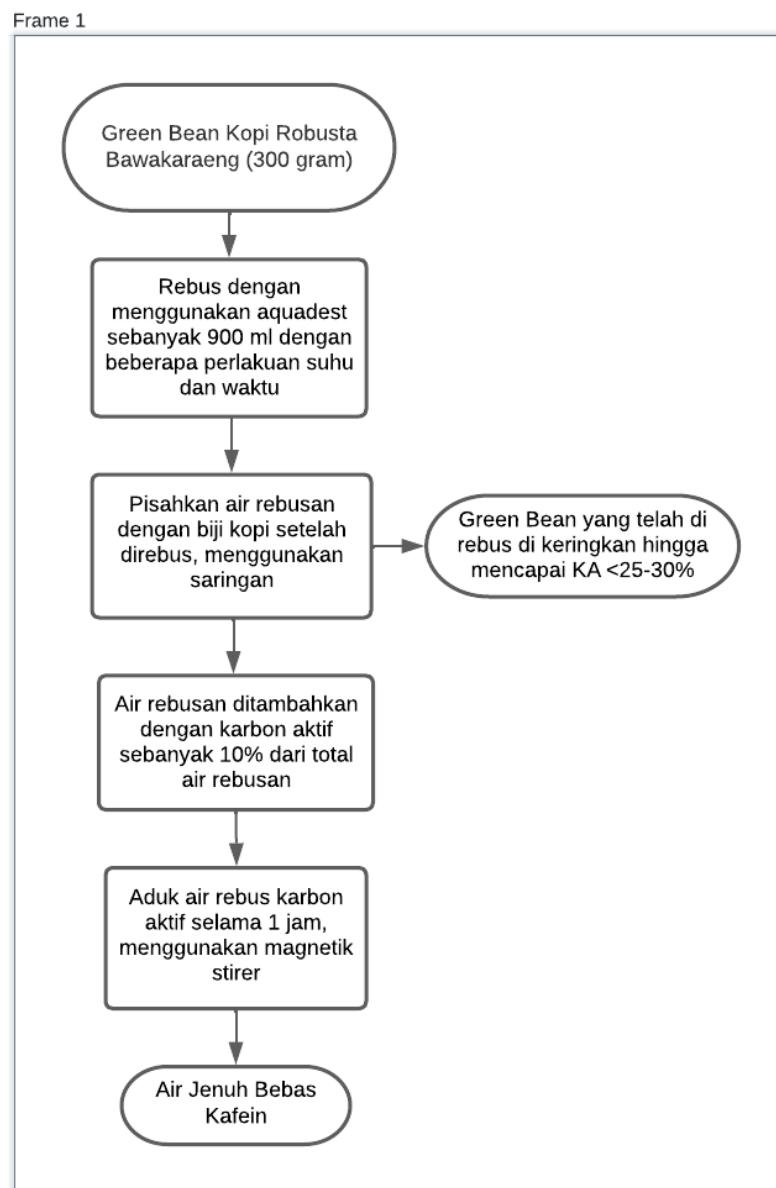


Diagram Alir Dekafeinasi

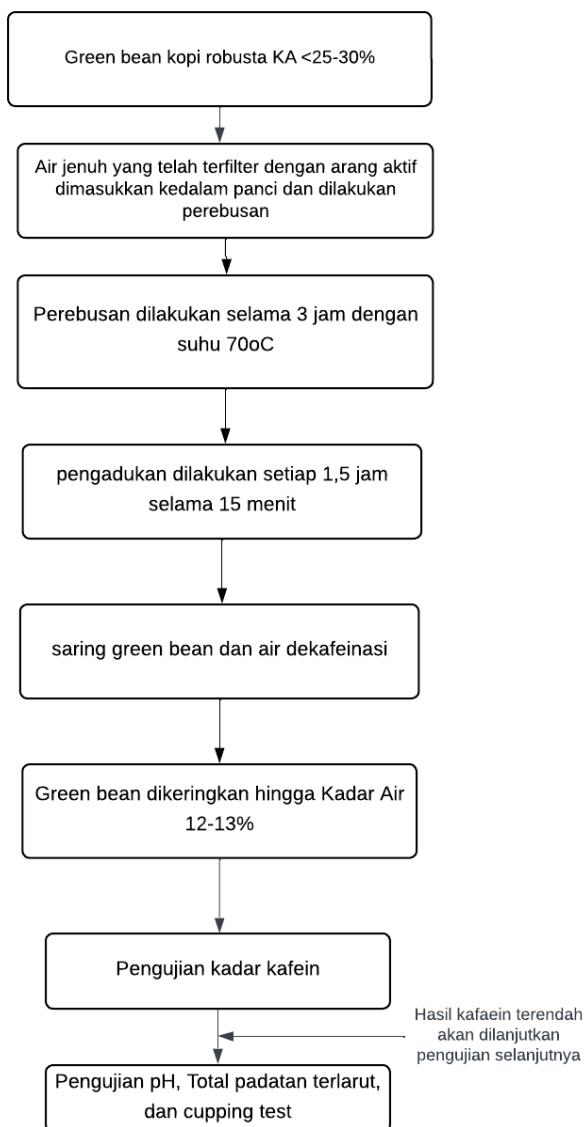


Diagram Alir Pembuatan Kopi Mix Espresso

