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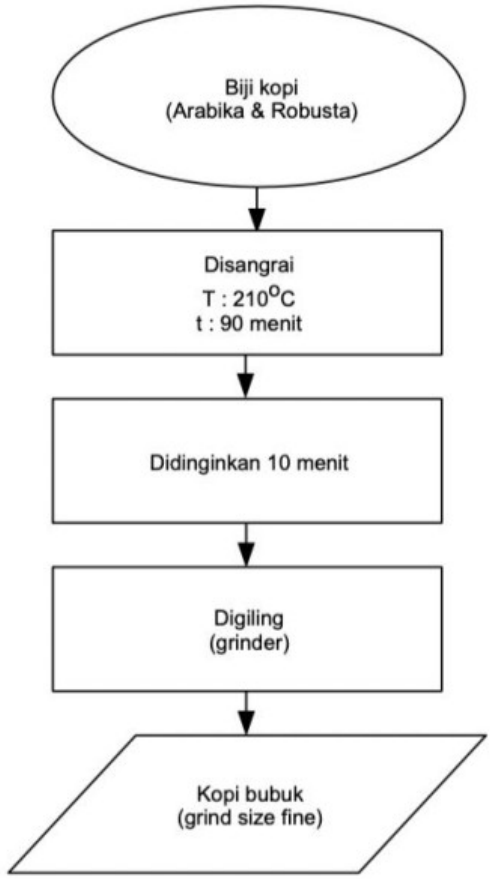
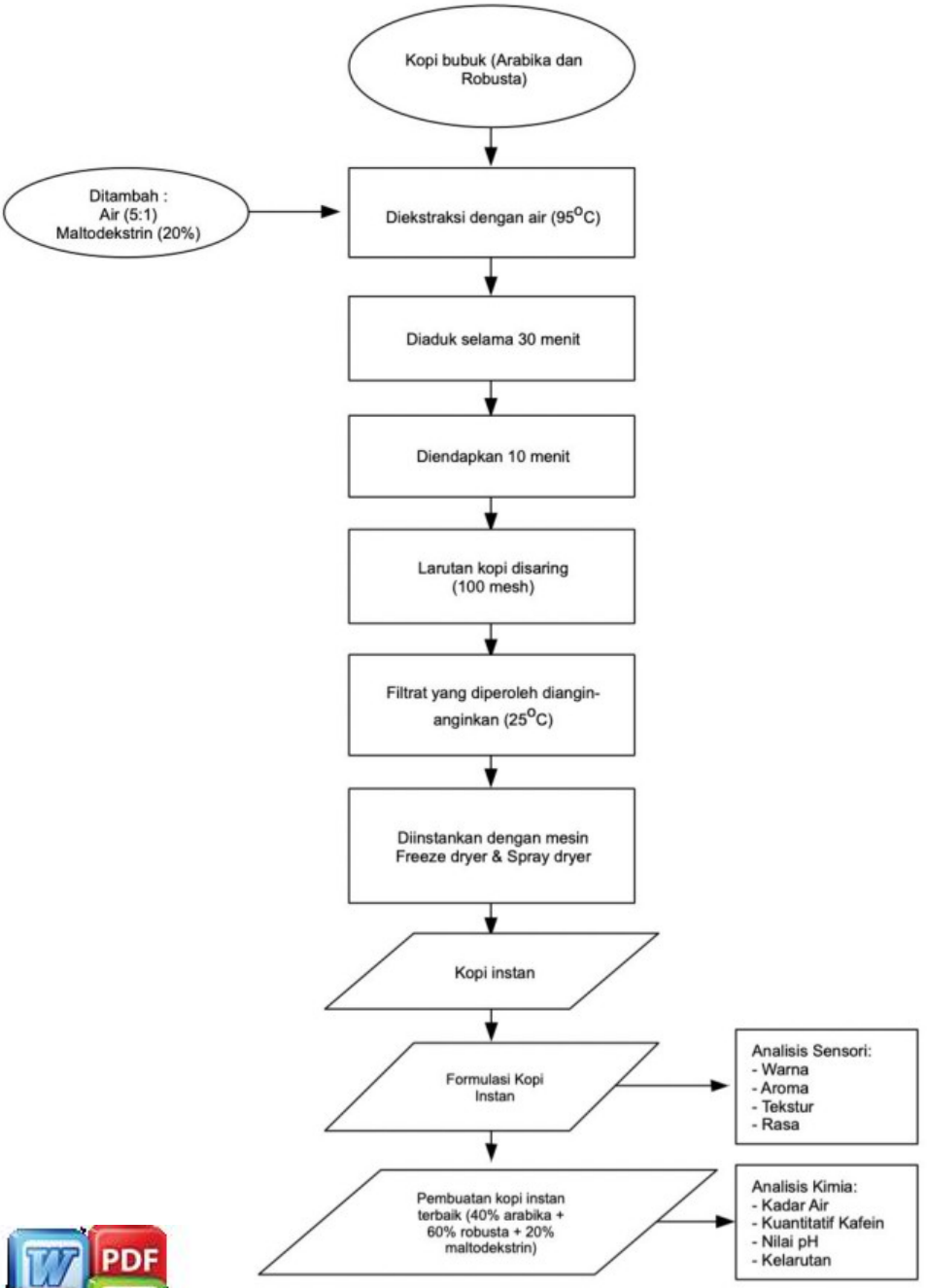
LAMPIRAN

Lampiran 1. Diagram Alir Pembuatan Kopi Bubuk



Lampiran 2. Diagram Alir Pembuatan Kopi Instan



Lampiran 3. Data Hasil Pengujian Organoleptik Warna Produk Kopi Instan

Panelis	A1BC1			A2BC1			A3BC1			A4BC2			A5BC2			A6BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3
P1	3	3	4	4	3	4	4	4	3	4	4	5	5	4	4	5	5	4
P2	3	4	4	4	2	3	4	4	3	4	4	4	4	4	3	4	4	4
P3	4	3	3	3	4	4	5	3	4	5	3	3	4	4	4	5	5	4
P4	4	4	3	4	3	4	4	3	3	3	4	4	2	3	3	1	3	2
P5	4	3	4	4	3	4	4	4	4	4	4	4	4	4	4	3	4	4
P6	3	3	3	3	3	3	3	3	3	4	4	4	4	4	5	4	4	5
P7	4	4	4	4	4	5	3	4	4	4	4	5	4	4	5	4	4	4
P8	3	3	3	4	3	4	4	4	4	4	4	3	4	3	5	4	3	5
P9	3	4	4	3	3	5	3	3	3	3	4	4	3	5	5	3	4	3
P10	4	3	3	4	3	3	4	4	4	3	4	4	4	4	5	4	4	4
P11	4	3	3	4	3	3	3	4	4	4	4	4	5	3	3	3	4	4
P12	3	4	4	4	4	3	3	3	4	4	3	3	5	4	4	3	4	5
P13	3	3	5	3	4	4	4	4	3	4	5	4	4	4	4	5	4	5
P14	3	4	4	2	3	3	4	3	4	4	4	4	4	3	4	4	4	4
P15	3	3	4	3	3	3	4	3	3	3	4	4	4	3	4	5	3	4
Rata-	**3.**	**3.4**	**3.6**	**3.53**	**3.20**	**3.67**	**3.73**	**3.53**	**3.53**	**3.80**	**3.93**	**3.93**	**4.00**	**3.73**	**4.13**	**3.80**	**3.93**	**4.07**
				3.47			**3.60**			**3.89**			**3.96**			**3.93**		

Lampiran 4. Data Hasil Pengujian Organoleptik Tekstur Produk Kopi Instan

Panelis	A1BC1			A2BC1			A3BC1			A4BC2			A5BC2			A6BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3
P1	3	4	4	5	5	4	4	3	4	4	3	3	4	4	3	4	4	4
P2	4	3	4	4	4	4	5	4	5	4	4	4	4	4	4	4	4	3
P3	4	3	4	5	3	4	5	3	4	4	4	4	4	3	4	3	4	4
P4	4	4	4	4	4	3	4	3	4	4	4	4	3	4	4	4	4	3
P5	3	4	3	3	3	4	4	4	4	3	5	5	4	4	3	3	3	4
P6	4	3	4	4	4	4	3	4	4	4	3	3	5	4	4	4	4	4
P7	4	4	3	3	5	4	4	4	4	4	3	4	4	4	3	4	4	3
P8	4	3	4	4	3	4	4	4	4	4	4	3	4	5	4	4	4	3
P9	3	3	4	4	4	3	3	3	3	3	3	3	3	4	4	5	4	4
P10	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	3	4
P11	3	3	3	4	4	4	4	4	3	3	4	3	3	4	3	4	3	4
P12	5	5	3	4	4	4	4	5	4	4	4	4	3	3	3	3	4	4
P13	4	3	4	5	4	4	3	4	3	3	3	4	5	4	4	3	3	4
P14	4	3	3	3	4	4	5	4	4	4	5	5	4	5	4	4	4	3
P15	5	4	4	4	5	5	4	5	4	3	4	4	3	4	4	3	3	3
Rata-	**3.**	**3.5**	**3.6**	**4.000**	**4.000**	**3.933**	**4.000**	**3.887**	**3.887**	**3.667**	**3.800**	**3.800**	**3.887**	**4.000**	**3.667**	**3.733**	**3.667**	**3.60**
				3.98			**3.91**			**3.76**			**3.84**			**3.67**		

Lampiran 5. Data Hasil Pengujian Organoleptik Rasa Produk Kopi Instan

Panelis	A1BC1			A2BC1			A3BC1			A4BC2			A5BC2			A6BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3
P1	4	4	2	5	4	4	5	4	5	5	4	4	4	4	4	4	3	3
P2	4	3	3	5	3	4	4	4	4	5	3	3	4	4	4	4	2	4
P3	2	3	3	4	3	3	5	3	3	5	4	3	4	5	4	3	3	3
P4	3	4	3	4	4	3	4	3	2	3	3	4	3	5	4	2	3	3
P5	2	3	3	4	4	4	4	4	4	2	4	4	4	3	3	4	4	4
P6	3	4	4	3	3	3	3	3	3	4	4	3	4	4	4	3	2	2
P7	2	4	3	4	4	4	4	4	3	4	3	4	4	5	5	2	3	2
P8	4	4	3	3	3	4	2	3	3	2	4	3	4	4	4	2	3	3
P9	3	4	4	3	4	3	1	2	1	4	4	2	5	4	5	3	4	4
P10	3	4	4	4	4	3	2	4	3	3	4	4	4	4	4	3	3	3
P11	3	3	3	4	4	4	2	3	3	3	3	4	5	4	5	3	4	3
P12	3	5	3	3	3	4	3	4	3	4	4	4	4	3	4	3	3	4
P13	2	4	3	4	4	5	2	4	3	4	4	3	5	4	4	1	3	2
P14	3	2	3	4	3	4	4	4	4	4	3	3	4	4	4	3	4	4
P15	3	3	3	4	4	4	4	3	3	3	4	4	5	4	4	2	4	4
Rata-	**2.**	**3.6**	**3.1**	**3.87**	**3.60**	**3.73**	**3.27**	**3.47**	**3.13**	**3.67**	**3.67**	**3.47**	**4.20**	**4.07**	**4.13**	**2.80**	**3.20**	**3.20**
				3.73			**3.29**			**3.60**			**4.13**			**3.07**		

Lampiran 6. Data Hasil Pengujian Organoleptik Aroma Produk Kopi Instan

Panelis	A1BC1			A2BC1			A3BC1			A4BC2			A5BC2			A6BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3	U1	U2	U3
P1	4	3	3	5	4	4	5	3	3	5	4	4	5	4	4	4	3	3
P2	5	3	4	5	3	4	4	3	5	4	3	4	4	4	4	4	3	3
P3	5	4	5	3	4	3	5	4	3	5	4	4	4	3	4	2	3	3
P4	4	3	3	2	4	4	4	3	3	4	3	4	5	5	4	1	2	2
P5	4	4	2	4	4	4	4	4	4	4	4	4	4	4	3	3	4	3
P6	2	3	2	4	3	3	3	4	4	4	5	4	4	4	5	4	3	4
P7	4	3	3	4	3	4	4	4	4	4	3	3	3	4	5	4	4	4
P8	4	3	3	4	4	4	5	3	4	3	3	4	5	4	4	3	3	4
P9	3	3	2	4	3	3	2	3	4	3	4	3	3	5	3	3	4	4
P10	2	2	3	2	4	4	2	4	2	2	4	3	3	4	4	2	3	3
P11	3	3	3	4	4	4	4	2	3	4	4	4	4	4	4	4	3	4
P12	3	4	3	4	3	4	5	3	3	5	4	4	4	3	4	3	2	2
P13	2	3	3	3	4	4	3	4	4	3	5	4	5	5	3	3	4	3
P14	4	3	5	5	3	4	3	5	4	3	4	5	3	4	4	4	3	3
P15	3	4	3	4	4	4	4	4	3	4	5	4	4	5	4	5	4	4
Rata-	**3.**	**3.**	**3.1**	**3.800**	**3.600**	**3.800**	**3.800**	**3.533**	**3.533**	**3.800**	**3.933**	**3.887**	**4.000**	**4.133**	**3.933**	**3.227**	**3.200**	**3.27**
				3.73			**3.62**			**3.87**			**4.02**			**3.24**		

Lampiran 7. Data Hasil Rata-Rata Pengujian Organoleptik Produk Kopi Instan

PARAMETER	A1BC1	A2BC1	A3BC1	A4BC2	A5BC2	A6BC2
Warna	3.49	3.47	3.6	3.89	3.96	3.93
Aroma	3.27	3.73	3.62	3.87	4.02	3.24
Rasa	3.22	3.73	3.29	3.6	4.13	3.07
Tekstur	3.69	3.98	3.91	3.76	3.84	3.67
TOTAL	**3.42**	**3.73**	**3.61**	**3.78**	**3.99**	**3.48**

Lampiran 8. Hasil Analisa Sidik Ragam Pengujian Organoleptik Warna

ANOVA

Warna

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.780	5	.156	5.801	.006
Within Groups	.323	12	.027		
Total	1.103	17			

Lampiran 9. Hasil Uji Lanjut Duncan Pengujian Organoleptik Warna

Warna

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A2B1	3	3.4667		
A1B1	3	3.4900		
A3B1	3	3.5967	3.5967	
A1B2	3		3.8867	3.8867
A3B2	3			3.9333
A2B2	3			3.9533
Sig.		.374	.051	.645

for groups in homogeneous subsets are
ed.

ses Harmonic Mean Sample Size = 3.000.

Lampiran 10. Hasil Analisa Sidik Ragam Pengujian Organoleptik Tekstur

ANOVA

Tekstur

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.233	5	.047	3.775	.028
Within Groups	.148	12	.012		
Total	.381	17			

Lampiran 11. Hasil Uji Lanjut Duncan Pengujian Organoleptik Tekstur

Tekstur

Duncan[a]

		Subset for alpha = 0.05		
Perlakuan	N	1	2	3
A3B2	3	3.6667		
A1B1	3	3.6900		
A1B2	3	3.7567	3.7567	
A2B2	3	3.8467	3.8467	3.8467
A3B1	3		3.9133	3.9133
A2B1	3			3.9767
Sig.		.090	.125	.197

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 12. Hasil Analisa Sidik Ragam Pengujian Organoleptik Rasa

ANOVA

Rasa

Sum of Squares	df	Mean Square	F	Sig.
2.328	5	.466	11.808	.000
.473	12	.039		
2.802	17			

Lampiran 13. Hasil Uji Lanjut Duncan Pengujian Organoleptik Rasa

Rasa

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
A3B2	3	3.0667			
A1B1	3	3.2200			
A3B1	3	3.2900	3.2900		
A1B2	3		3.6033	3.6033	
A2B1	3			3.7333	
A2B2	3				4.1333
Sig.		.214	.077	.438	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 14. Hasil Analisa Sidik Ragam Pengujian Organoleptik Aroma

ANOVA

Aroma

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.493	5	.299	20.827	.000
Within Groups	.172	12	.014		
Total	1.665	17			

Lampiran 15. Hasil Uji Lanjut Duncan Pengujian Organoleptik Aroma

Aroma

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
A3B2	3	3.2467			
A1B1	3	3.2667			
A3B1	3		3.6200		
	3		3.7333	3.7333	
	3			3.8667	3.8667
	3				4.0200
		.841	.269	.198	.143

groups in homogeneous subsets are displayed.

Harmonic Mean Sample Size = 3.000.

Lampiran 16. Hasil Pengujian Kadar Air Kopi Instan

Kadar Air	A0B0			A2BC1			A5BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3
	7.73	7.87	7.6	6.19	6.18	6.21	6.31	6.31	6.33
Total	7.73			6.19			6.32		

Lampiran 17. Hasil Pengujian Nilai Keasaman (pH) Kopi Instan

pH	A0B0			A2BC1			A5BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3
	5.25	5.28	5.23	5.29	5.3	5.29	5.28	5.26	5.32
Total	5.25			5.29			5.29		

Lampiran 18. Hasil Pengujian Kuantitatif Kafein Kopi Instan

Kafein	A0B0			A2BC1			A5BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3
	0.77	0.74	0.8	0.98	1	1.02	0.92	0.95	0.88
Total	0.77			1.00			0.92		

Lampiran 19. Hasil Pengujian Nilai Kelarutan Kopi Instan

Kelarutan	A0B0			A2BC1			A5BC2		
	U1	U2	U3	U1	U2	U3	U1	U2	U3
	28.5	29.7	27.3	75.44	75.16	74.89	60.9	62.42	63.94
Total	28.50			75.16			62.42		

Lampiran 20. Hasil Analisa Sidik Ragam Kadar Air Kopi Instan

ANOVA

Kadar_Air

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.394	2	2.197	354.335	.000
	.037	6	.006		
	4.431	8			

Lampiran 21. Hasil Uji Lanjut Duncan Kadar Air Kopi Instan

Kadar_Air

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A2BC1	3	6.1933	
A5BC2	3	6.3167	
A0B0	3		7.7333
Sig.		.104	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 22. Hasil Analisa Sidik Ragam Nilai Keasaman (pH) Kopi Instan

ANOVA

Ph

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.003	2	.001	2.583	.155
Within Groups	.003	6	.001		
Total	.006	8			

Lampiran 23. Hasil Uji Lanjut Duncan Nilai Keasaman (pH) Kopi Instan

Nilai_pH

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05
		1
A0B0	3	5.2533
A5BC2	3	5.2867
A2BC1	3	5.2933
Sig.		.086

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 24. Hasil Analisa Sidik Ragam Kuantitatif Kafein Kopi Instan

ANOVA

ein

	Sum of Squares	df	Mean Square	F	Sig.
s	.081	2	.041	48.171	.000
	.005	6	.001		
	.086	8			

Lampiran 25. Hasil Uji Lanjut Duncan Kuantitatif Kafein Kopi Instan

Kuantitatif_Kafein

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A0B0	3	.7700		
A5BC2	3		.9167	
A2BC1	3			1.0000
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 26. Hasil Analisa Sidik Ragam Nilai Kelarutan Kopi Instan

ANOVA

Nilai_Kelarutan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3490.426	2	1745.213	1368.425	.000
Within Groups	7.652	6	1.275		
Total	3498.078	8			

Lampiran 27. Hasil Uji Lanjut Duncan Nilai Kelarutan Kopi Instan

Nilai_Kelarutan

Duncan[a]

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A0B0	3	28.5000		
A5BC2	3		62.4200	
A2BC1	3			75.1633
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 28. Dokumentasi Penelitian Pembuatan Kopi Instan

Biji kopi Arrusta disangrai

Biji kopi Arrusta digiling

Kopi bubuk Arabika & Robusta

(*Grind size fine*)

Proses Ekstraksi Pembuatan Kopi Instan

Proses Penambahan Bahan Pengisi Maltodekstrin

Hasil Ekstraksi Kopi

Penginstanan Kopi Metode *Spray Drying*

Penginstanan Kopi Metode *Freeze Drying*

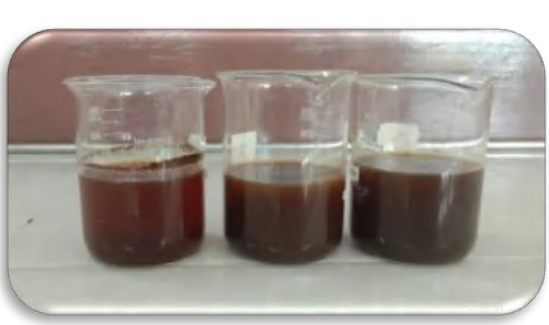
Kopi Instan

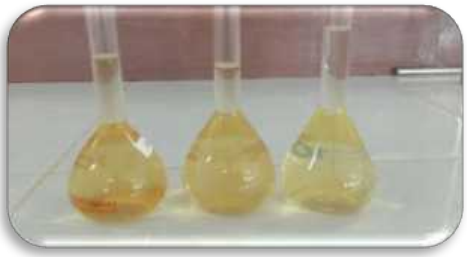
Lampiran 29. Dokumentasi Pengujian Kopi Instan

Pengujian Organoleptik Kopi Instan

Pengujian Kadar Air

Pengujian Nilai pH



Pengujian Kuantitatif Kafein



Pengujian Kecepatan Kelarutan Kopi Arrusta