

Lampiran 10 Data dan Analisa ragam serta BNJ 5% warna L*, a*, b* manisan kering buah kelapa
 Data warna L* manisan kering buah kelapa

Perlakuan	Ulangan			Total
	I	II	III	
F1T1	62,22	52,65	55,56	170,43
F1T2	67,65	65,76	53,51	186,92
F1T3	60,46	56,63	42,28	159,37
F2T1	57,01	58,52	48,46	163,99
F2T2	57,74	64,97	68,13	190,84
F2T3	59,06	61,28	67,12	187,46
F3T1	64,49	61,43	64,17	190,09
F3T2	61,73	59,39	68,1	189,22
F3T3	62,76	65,8	62,07	190,63
Total	553,12	546,43	529,4	1628,95

Tabel 2 arah

F	T			Total
	T1	T2	T3	
F1	170,43	186,92	159,37	516,72
F2	163,99	190,84	187,46	542,29
F3	190,09	189,22	190,63	569,94
Total	524,51	566,98	537,46	1628,95

➤ Faktor koreksi (FK)

$$= \frac{(1628,95)^2}{9.3}$$

$$= 98276,967$$

➤ Jumlah kuadrat

$$JK_{Total} = \sum_{i=1}^c \sum_{j=1}^e \sum_{k=1}^r Y_{ijk}^2 - FK$$

$$= (62,22^2 + 67,65^2 + 60,46^2 + 57,01^2 + \dots + 62,07^2) - 98276,967$$

$$= 982,620$$

$$JK_{kelompok} = \frac{\sum_{k=1}^r Y_{..k}^2}{ab} - FK$$

$$= \frac{(553,12^2 + 546,43^2 + 529,4^2)}{3.3} - 98276,967$$

$$= 33,238$$

$$JK_{perlakuan} = \frac{\sum_{i=1}^c \sum_{j=1}^e Y_{ij.}^2}{r} - FK$$

$$= \frac{(170,43^2 + 163,99^2 + 190,09^2 + \dots + 190,63^2)}{3} - 98276,967$$

$$= 428,486$$

$$JK_{perlakuan} = \frac{\sum_{i=1}^a Y_{i..}^2}{b} - FK$$

$$= \frac{(516,72^2 + 542,29^2 + 569,94^2)}{3.3} - 98276,967$$

$$= 157,434$$

$$JK_{perlakuan_B} = \frac{\sum_{j=1}^b Y_{.j}^2}{ar} - FK$$

$$= \frac{(524,51^2 + 566,98^2 + 537,46^2)}{3.3} - 98276,967$$

$$= 105,290$$

$$JK_{AB} = JK_P - JK_A - JK_B$$

$$= 428,486 - 157,434 - 105,290$$

$$= 165,762$$

$$JK_{galat} = JK_{total} - JK_{kelompok} - JK_{perlakuan}$$

$$= 982,620 - 33,238 - 428,486$$

$$= 520,896$$

➤ Kuadrat tengah (KT)

$$KT = \frac{JK_x}{dbx}$$

➤ F hitung

$$F_{hitung} = \frac{KT_x}{KT_{galat}}$$

Tabel analisis ragam

SK	DB	JK	KT	F Hit	F Tab	
					0,05	0,01
Kelompok	2	33,238	16,6188	0,510	3,634	6,226 tn
Perlakuan	8	428,486	53,5608	1,645	2,591	3,890 tn
F	2	157,434	78,7170	2,418	3,634	6,226 tn
T	2	105,290	52,6451	1,617	3,634	6,226 tn
FT	4	165,762	41,4405	1,273	3,007	4,773 tn
Galat/Sisa	16	520,896	32,5560			
Total	26	982,620				

Data warna a* manisan kering buah kelapa

Perlakuan	Ulangan			Total
	I	II	III	
F1T1	2,07	2,05	2,31	6,43
F1T2	1,88	1,76	1,85	5,49
F1T3	2,76	2,48	2,72	7,96
F2T1	1,76	2,04	2,42	6,22

F2T2	1,54	2,02	2,5	6,06
F2T3	1,57	2,04	1,68	5,29
F3T1	2,32	2,28	2,04	6,64
F3T2	2,09	2,23	2,16	6,48
F3T3	3,08	3,66	4,32	11,06
Total	19,07	20,56	22	61,63

Tabel 2 arah

F	T			Total
	T1	T2	T3	
F1	6,43	5,49	7,96	19,88
F2	6,22	6,06	5,29	17,57
F3	6,64	6,48	11,06	24,18
Total	19,29	18,03	24,31	61,63

➤ Faktor koreksi (FK)

$$= \frac{(61,63)^2}{9.3}$$

$$= 140,676$$

➤ Jumlah kuadrat

$$JK_{Total} = \sum_{i=1}^c \sum_{j=1}^e \sum_{k=1}^r Y_{ijk}^2 - FK$$

$$= (2,07^2 + 1,88^2 + 2,76^2 + 1,76^2 + \dots + 4,32^2) - 140,676$$

$$= 9,928$$

$$JK_{kelompok} = \frac{\sum_{k=1}^r Y_{..k}^2}{ab} - FK$$

$$= \frac{(19,07^2 + 20,56^2 + 22^2)}{3.3} - 140,676$$

$$= 0,477$$

$$JK_{perlakuan} = \frac{\sum_{i=1}^c \sum_{j=1}^e Y_{ij.}^2}{r} - FK$$

$$= \frac{(6,43^2 + 5,49^2 + 7,96^2 + \dots + 11,06^2)}{3} - 140,676$$

$$= 8,206$$

$$JK_{perlakuan}_A = \frac{\sum_{i=1}^a Y_{i..}^2}{br} - FK$$

$$= \frac{(19,88^2 + 17,57^2 + 24,18^2)}{3.3} - 140,676$$

$$= 2,501$$

$$JK_{perlakuan}_B = \frac{\sum_{j=1}^b Y_{.j.}^2}{ar} - FK$$

$$= \frac{(19,29^2 + 18,03^2 + 24,31^2)}{3.3} - 140,676$$

$$= 2,453$$

$$JK_{AB} = JK_P - JK_A - JK_B$$

$$= 8,206 - 2,501 - 2,453$$

$$= 3,252$$

$$JK_{galat} = JK_{total} - JK_{kelompok} - JK_{perlakuan}$$

$$= 9,928 - 0,477 - 8,206$$

$$= 1,245$$

➤ Kuadrat tengah (KT)

$$KT = \frac{JK_x}{dbx}$$

➤ F hitung

$$F_{hitung} = \frac{KT_x}{KT_{galat}}$$

SK	DB	JK	KT	F Hit	F Tab		
					0,05	0,01	
Kelompok	2	0,477	0,2385	3,064	3,634	6,226	tn
Perlakuan	8	8,206	1,0257	13,180	2,591	3,890	**
F	2	2,501	1,2503	16,066	3,634	6,226	**
T	2	2,453	1,2264	15,758	3,634	6,226	**
FT	4	3,252	0,8131	10,448	3,007	4,773	**
Galat/Sisa	16	1,245	0,0778				
Total	26	9,928					

Data warna b* manisan kering buah kelapa

Perlakuan	Ulangan			Total
	I	II	III	
F1T1	3,16	2,29	1,83	7,28
F1T2	2,94	4,28	4,06	11,28
F1T3	3,34	4,06	3,35	10,75
F2T1	5,13	5	5,15	15,28
F2T2	3,68	4,43	4,95	13,06
F2T3	4,84	6,39	5,39	16,62
F3T1	4,32	4,13	4	12,45
F3T2	2,51	2,22	2,87	7,6
F3T3	5,7	4,68	6,02	16,4
Total	35,62	37,48	37,62	110,72

Tabel 2 arah

F	T	Total
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	T1	T2	T3	
F1	7,28	11,28	10,75	29,31
F2	15,28	13,06	16,62	44,96
F3	12,45	7,6	16,4	36,45
Total	35,01	31,94	43,77	110,72

➤ Faktor koreksi (FK)

$$= \frac{(110,72)^2}{9.3}$$

$$= 454,034$$

➤ Jumlah kuadrat

$$JK_{Total} = \sum_{i=1}^c \sum_{j=1}^e \sum_{k=1}^r Y_{ijk}^2 - FK$$

$$= (3,16^2 + 2,94^2 + 3,34^2 + 5,13^2 + \dots + 3,68^2) - 454,034$$

$$= 37,488$$

$$JK_{kelompok} = \frac{\sum_{k=1}^r Y_{..k}^2}{ab} - FK$$

$$= \frac{(35,62^2 + 37,48^2 + 37,62^2)}{3.3} - 454,034$$

$$= 0,277$$

$$JK_{perlakuan} = \frac{\sum_{i=1}^c \sum_{j=1}^e Y_{ij.}^2}{r} - FK$$

$$= \frac{(7,28^2 + 15,28^2 + 12,45^2 + \dots + 16,4^2)}{3} - 454,034$$

$$= 31,895$$

$$JK_{perlakuan}_A = \frac{\sum_{i=1}^a Y_{i..}^2}{br} - FK$$

$$= \frac{(29,31^2 + 44,96^2 + 36,45^2)}{3.3} - 454,034$$

$$= 13,642$$

$$JK_{perlakuan}_B = \frac{\sum_{j=1}^b Y_{.j.}^2}{ar} - FK$$

$$= \frac{(43,77^2)}{3.3} - 454,034$$

$$= 8,374$$

$$JK_{AB} = JK_P - JK_A - JK_B$$

$$= 31,895 - 13,642 - 8,374$$

$$= 9,879$$

$$JK_{galat} = JK_{total} - JK_{kelompok} - JK_{perlakuan}$$

$$= 37,488 - 0,277 - 31,895$$

$$= 5,316$$

➤ Kuadrat tengah (KT)

$$KT = \frac{JKx}{dbx}$$

➤ F hitung

$$F_{hitung} = \frac{KTx}{KT_{galat}}$$

SK	DB	JK	KT	F Hit	F Tab		
					0,05	0,01	
Kelompok	2	0,277	0,1385	0,417	3,634	6,226	tn
Perlakuan	8	31,895	3,9869	12,000	2,591	3,890	**
F	2	13,642	6,8208	20,529	3,634	6,226	**
T	2	8,374	4,1872	12,603	3,634	6,226	**
FT	4	9,879	2,4698	7,434	3,007	4,773	**
Galat/Sisa	16	5,316	0,3322				
Total	26	37,488					