

Table 1. The effect of harvesting time on chemical composition of creamy flesh sweet potato roots

*Constituents	CEMSA 74 -228			SANTO AMARA			NC 1525			KEMB 37		
	Harvesting Times (Days)											
	140	160	180	140	160	180	140	160	180	140	160	180
Moisture %	6.83	7.59	4.48	7.17	6.55	5.43	7.49	6.41	4.45	6.29	7.93	6.06
Total Solids %	36.30	27.90	29.70	36.60	30.40	28.35	35.00	33.40	30.32	38.90	31.30	29.66
** Total soluble solids %	17.40	15.00	13.00	19.60	17.30	12.20	18.00	16.80	13.83	21.60	19.60	10.20
Reducing Sugars%	15.00	13.12	16.25	18.75	15.62	18.00	17.50	13.50	17.20	17.50	12.50	15.76
Starch %	67.50	67.15	60.71	66.66	68.32	60.79	65.30	69.12	63.45	68.04	69.09	62.56
Crude Fiber %	2.80	3.00	6.49	3.00	3.10	8.85	3.90	2.40	5.88	2.50	3.30	6.69
Total Carbohydrates %	75.00	74.61	67.45	75.81	74.16	67.54	76.07	73.28	70.50	75.47	75.80	69.51
Total Lipids %	2.74	2.23	2.13	3.25	2.92	2.86	3.27	2.33	2.40	3.35	2.75	2.36
Crude Protein %	6.93	7.17	7.35	6.42	6.12	5.72	6.66	5.89	6.57	7.66	5.85	5.98
Protein Digestibility%	74.16	60.02	60.60	76.22	70.55	52.90	60.17	65.70	65.40	62.03	60.30	64.70
Energy value (Kcal/100g dry matter)	352..38	34 7.19	318..37	351..57	354.00	318.78	343.19	354.81	329.88	357.79	351.57	323.20
**Ascorbic acid (mg/100 gm)	6.93	4.42	3.00	6.44	5.50	4.03	6.04	3.90	3.50	4.06	3.60	1.32

* on dry weight basis. ** on fresh weight basis

Table 2. The effect of harvesting time on minerals contents of creamy flesh sweet potato roots

*Constituents	CEMSA 74 -228			SANTO AMARA			NC 1525			KEMB 37		
	Harvested Times (Days)											
	140	160	180	140	160	180	140	160	180	140	160	180
Ash %	5.70	5.40	8.33	6.00	5.50	8.97	6.90	5.40	8.76	4.40	4.70	7.38
Minerals (mg/100g) K	1508.16	1492.38	472.52	1549.10	1635.84	467.16	1439.23	1461.61	373.22	909.26	819.31	260.93
Na	251.80	320.15	526.24	247.21	327.26	625.06	301.88	398.75	618.17	203.79	549.40	616.62
Ca	55.99	45.00	32.921	62.13	50.56	23.98	71.64	45.35	18.07	121.31	53.04	36.37
Fe	11.86	38.96	9.09	6.10	22.80	6.95	8.33	29.70	6.15	15.49	24.61	7.89
Mn	11.25	5.09	3.24	1.74	5.46	1.32	11.01	5.87	1.45	1.70	3.70	2.63
Zn	2.74	4.48	-	1.38	7.38	1.74	7.77	8.14	2.60	6.05	12.98	2.08

*on dry weight basis

Table 3. The effect of harvesting time on chemical composition of yellow flesh sweet potato roots

*Constituents	Samples											
	JAPON TRESMESINO			LO 323			TAINUNG 64			BEAUREGARD		
	Harvested Times (Days)											
	140	160	180	140	160	180	140	160	180	140	160	180
Moisture %	9.74	7.79	4.12	6.95	8.81	5.74	8.95	7.69	6.23	8.22	7.84	5.19
Total Solids %	27.80	26.40	19.57	37.60	28.00	16.37	36.30	25.60	28.60	31.20	28.50	23.98
**Total soluble solids %	14.00	13.90	10.50	12.00	9.80	9.90	16.20	16.30	12.00	14.70	14.30	12.70
Reducing Sugars%	17.80	12.12	22.50	13.65	13.12	18.75	16.25	15.62	28.16	18.78	13.75	13.76
Starch %	63.30	63.78	52.98	66.61	65.35	54.16	64.53	62.79	58.72	64.40	66.24	57.09
Crude Fiber %	3.00	3.10	11.74	2.70	3.40	11.24	4.00	5.40	7.12	4.30	3.10	10.17
Total Carbohydrates%	70.33	70.87	58.87	74.01	72.61	60.18	71.70	69.77	65.24	71.55	73.60	63.43
Total Lipids %	3.25	3.22	3.30	3.37	3.05	3.02	3.35	2.76	2.60	2.85	2.31	2.15
Crude Protein %	5.98	7.42	7.77	6.67	6.73	6.62	6.00	7.98	8.01	7.08	6.65	6.76
Protein Digestibility%	70.13	69.41	68.30	60.27	69.60	80.20	72.76	73.30	76.60	63.17	72.30	73.10
Energy value (Kcal/100g)	334.49	342.14	296.26	353.05	344.81	294.38	340.95	335.84	316.40	340.17	341.79	300.11
**Ascorbic acid (mg/100 gm)	3.76	3.60	4.29	8.42	7.60	4.79	9.01	3.80	7.10	6.73	5.00	5.61
Total Carotenoids (mg/100 gm)	102.00	115.00	151.04	126.50	191.60	255.80	180.50	245.20	270.30	172.10	186.10	226.60
B-carotene (mg/100 gm)	ND	ND	7.534	ND	ND	12.730	ND	ND	13.452	ND	ND	11.277
Retinol equivalent (R.E.)	-	-	1258.18	-	-	2125.91	-	-	2246.48	-	-	1883.26

*on dry weight basis , **on fresh weight basis , ND= not detected
 Retinol equivalent (R.E.) = 0.167 x µg B-carotene / 100gm

Table 4. The effect of harvesting time on minerals contents of yellow flesh sweet potato roots

Samples *Constituents	JAPON TRESMESINO			LO 323			TAINUNG 64			BEAUREGARD		
	Harvested Times (Days)											
	140	160	180	140	160	180	140	160	180	140	160	180
Ash %	7.70	7.60	8.63	6.30	5.40	4.63	6.00	6.40	6.99	6.00	6.50	6.74
Minerals (mg/100g)	1565.32	1210.99	233.91	1866.23	1082.59	444.09	1613.85	1359.71	436.82	1177.96	1209.29	519.10
K												
Na	413.42	401.01	609.93	533.55	528.52	624.41	302.38	591.74	637.02	-	262.90	609.63
Ca	79.06	23.93	24.88	83.94	25.49	18.49	111.59	35.02	34.81	96.71	39.37	28.41
Fe	65.44	12.80	13.79	27.84	18.43	10.42	96.33	18.78	6.84	23.25	17.77	5.95
Mn	20.33	3.44	3.64	19.13	2.54	2.34	22.70	5.56	2.62	18.40	6.02	5.21
Zn	2.27	2.87	2.01	1.20	2.40	2.32	3.70	5.56	2.83	2.16	2.94	2.52

*on dry weight basis

Table 5. Freshness evaluation of sweet potato products

Samples	Treatments	Fried		Blanched	Baked
		Crispness	Freshness	Freshness	Freshness
CEMSA 74 -228		4.860B	3.357 AB	5.929 A	4.893 C
SANTO AMARA		6.860 A	5.214 A	8.143 A	7.214 AB
NC 1525		6.210 AB	4.857 A	6.286 A	5.429 BC
KEMB 37		7.290 A	5.286 A	7.571 A	7.286 AB
JAPON TRESMESINO		1.430 C	4.071 B	7.929 A	5.571 ABC
LO 323		2.430 C	3.214 AB	6.214 A	6.429 ABC
TAINUNG 64		7.000 A	5.857 A	8.214 A	7.429 AB
BEAUREGARD		6.290 AB	4.714 AB	8.07 1 A	7.786 A
L.S.D		1.8423	2.6844	2.390	2.2442

Table 6. Organoleptic properties of sweet potato products

Samples \ Treatments	Color			Taste			Odor		
	Fried	Blanched	Baked	Fried	Blanched	Baked	Fried	Blanched	Baked
CEMSA 74 -228	5.07 Cc	4.86 Cc	3.25 cD	5.00Cc	5.79 Cc	4.11 Cc	4.36Da	5.85 Ca	3.18Dc
SANTO AMARA	7.43 Aa	6.93 Ba	6.00 Bb	6.07 Bb	7.50Aa	6.71Ba	5.14 Ba	6.21Ba	5.71Ba
NC 1525	7.36 Aa	4.78 Cc	4.64 Cb	5.79Cb	4.36Dd	5.00 Cc	4.79Da	5.00Da	3.43 Dc
KEMB 37	8.00 Aa	7.50 Aa	6.07 Bb	7.21 Aa	8.29 Aa	6.82Aa	5.93 Aa	6.64 Aa	4.79Bb
JAPON TRESMESINO	2.57 Dd	6.86 Ba	4.50 Cb	3.14 Cd	8.00Aa	3.79 Cd	2.71Dd	5.79Ba	5.07Ca
LO 323	3.86 Dd	4.21 Dd	5.29 Bb	5.00Cc	4.00 Cd	5.00Cc	4.21Db	4.21 Db	4.14Db
TAINUNG 64	8.29 Aa	7.75 Aa	7.86 Aa	7.79Aa	7.86Aa	7.21 Aa	6.14Aa	6.79Aa	5.79 Aa
BEAUREGARD	6.00 Bb	7.29 Aa	7.86 Aa	5.64Bb	6.07 Bb	6.93 Ba	5.93Aa	5.64 Aa	6.71 Aa
Mean	6.072 A	6.272 A	5.683 A	5.706B	6.482A	5.697B	4.902 B	5.768A	4.853B

L.S.D for treatments = 0.775 , L.S.D for samples =1.2656
 Capital letter for treatments and small letter for samples.