

## Apéndice J Análisis estadístico de actividad enzimática de la PPO en jugo de manzana tratado con APD (Tratamiento 2, 100MPa, Ti=45°C).

### General Linear Model: UAE versus Tiempo almacen, Timepo de tratam

Factor	Type	Levels	Values
Tiempo almacen	fixed	3	0, 1, 2
Timepo de tratam	fixed	6	0, 5, 10, 20, 30, 40

Analysis of Variance for UAE, using Adjusted SS for Tests

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Tiempo almacen	2	134993	134993	67497	1833.23	0.000
Timepo de tratam	5	299064	299064	59813	1624.53	0.000
Tiempo almacen*Timepo de tratam	10	380050	380050	38005	1032.23	0.000
Error	90	3314	3314	37		
Total	107	817420				

S = 6.06782 R-Sq = 99.59% R-Sq(adj) = 99.52%

#### Tukey Simultaneous Tests

Response Variable UAE

All Pairwise Comparisons among Levels of Tiempo almacen\*Timepo de tratam

Tiempo almacen = 0

Timepo de tratam = 0 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	5	-345.2	3.503	-98.5	0.0001
0	10	-333.1	3.503	-95.1	0.0001
0	20	-361.4	3.503	-103.2	0.0001
0	30	-380.5	3.503	-108.6	0.0001
0	40	-385.2	3.503	-110.0	0.0001
1	0	-344.0	3.503	-98.2	0.0001
1	5	-367.1	3.503	-104.8	0.0001
1	10	-355.4	3.503	-101.5	0.0001
1	20	-386.2	3.503	-110.3	0.0001
1	30	-390.6	3.503	-111.5	0.0001
1	40	-390.4	3.503	-111.4	0.0001
2	0	-365.4	3.503	-104.3	0.0001
2	5	-380.8	3.503	-108.7	0.0001
2	10	-366.4	3.503	-104.6	0.0001
2	20	-387.4	3.503	-110.6	0.0001
2	30	-383.7	3.503	-109.5	0.0001
2	40	-390.6	3.503	-111.5	0.0001

Tiempo almacen = 0

Timepo de tratam = 5 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	10	12.10	3.503	3.45	0.0737
0	20	-16.23	3.503	-4.63	0.0016

0	30	-35.38	3.503	-10.10	0.0001
0	40	-40.05	3.503	-11.43	0.0001
1	0	1.12	3.503	0.32	1.0000
1	5	-21.91	3.503	-6.25	0.0001
1	10	-10.27	3.503	-2.93	0.2575
1	20	-41.08	3.503	-11.73	0.0001
1	30	-45.38	3.503	-12.96	0.0001
1	40	-45.22	3.503	-12.91	0.0001
2	0	-20.23	3.503	-5.78	0.0001
2	5	-35.62	3.503	-10.17	0.0001
2	10	-21.28	3.503	-6.07	0.0001
2	20	-42.23	3.503	-12.06	0.0001
2	30	-38.50	3.503	-10.99	0.0001
2	40	-45.42	3.503	-12.97	0.0001

Tiempo almacen = 0

Timepo de tratam = 10 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	20	-28.33	3.503	-8.09	0.0001
0	30	-47.48	3.503	-13.55	0.0001
0	40	-52.15	3.503	-14.89	0.0001
1	0	-10.98	3.503	-3.13	0.1651
1	5	-34.01	3.503	-9.71	0.0001
1	10	-22.37	3.503	-6.38	0.0001
1	20	-53.18	3.503	-15.18	0.0001
1	30	-57.48	3.503	-16.41	0.0001
1	40	-57.32	3.503	-16.36	0.0001
2	0	-32.33	3.503	-9.23	0.0001
2	5	-47.72	3.503	-13.62	0.0001
2	10	-33.38	3.503	-9.53	0.0001
2	20	-54.33	3.503	-15.51	0.0001
2	30	-50.60	3.503	-14.44	0.0001
2	40	-57.52	3.503	-16.42	0.0001

Tiempo almacen = 0

Timepo de tratam = 20 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	30	-19.15	3.503	-5.466	0.0001
0	40	-23.82	3.503	-6.798	0.0001
1	0	17.35	3.503	4.953	0.0005
1	5	-5.67	3.503	-1.619	0.9755
1	10	5.97	3.503	1.703	0.9611
1	20	-24.85	3.503	-7.093	0.0001
1	30	-29.15	3.503	-8.321	0.0001
1	40	-28.99	3.503	-8.274	0.0001
2	0	-4.00	3.503	-1.142	0.9995
2	5	-19.39	3.503	-5.534	0.0001
2	10	-5.05	3.503	-1.441	0.9925
2	20	-26.00	3.503	-7.422	0.0001
2	30	-22.27	3.503	-6.356	0.0001
2	40	-29.19	3.503	-8.331	0.0001

Tiempo almacen = 0  
 Timepo de tratam = 30 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	40	-4.67	3.503	-1.333	0.9968
1	0	36.50	3.503	10.419	0.0001
1	5	13.47	3.503	3.846	0.0234
1	10	25.11	3.503	7.169	0.0001
1	20	-5.70	3.503	-1.628	0.9743
1	30	-10.00	3.503	-2.856	0.2987
1	40	-9.84	3.503	-2.809	0.3266
2	0	15.15	3.503	4.324	0.0048
2	5	-0.24	3.503	-0.068	1.0000
2	10	14.10	3.503	4.025	0.0132
2	20	-6.85	3.503	-1.956	0.8813
2	30	-3.12	3.503	-0.890	1.0000
2	40	-10.04	3.503	-2.866	0.2930

Tiempo almacen = 0  
 Timepo de tratam = 40 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	0	41.170	3.503	11.752	0.0001
1	5	18.143	3.503	5.179	0.0002
1	10	29.783	3.503	8.502	0.0001
1	20	-1.033	3.503	-0.295	1.0000
1	30	-5.335	3.503	-1.523	0.9866
1	40	-5.170	3.503	-1.476	0.9903
2	0	19.817	3.503	5.657	0.0001
2	5	4.430	3.503	1.265	0.9983
2	10	18.770	3.503	5.358	0.0001
2	20	-2.183	3.503	-0.623	1.0000
2	30	1.550	3.503	0.442	1.0000
2	40	-5.370	3.503	-1.533	0.9857

Tiempo almacen = 1  
 Timepo de tratam = 0 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	5	-23.03	3.503	-6.57	0.0001
1	10	-11.39	3.503	-3.25	0.1250
1	20	-42.20	3.503	-12.05	0.0001
1	30	-46.50	3.503	-13.27	0.0001
1	40	-46.34	3.503	-13.23	0.0001
2	0	-21.35	3.503	-6.10	0.0001
2	5	-36.74	3.503	-10.49	0.0001
2	10	-22.40	3.503	-6.39	0.0001
2	20	-43.35	3.503	-12.38	0.0001
2	30	-39.62	3.503	-11.31	0.0001
2	40	-46.54	3.503	-13.28	0.0001

Tiempo almacen = 1  
 Timepo de tratam = 5 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	10	11.64	3.503	3.323	0.1042
1	20	-19.18	3.503	-5.474	0.0001
1	30	-23.48	3.503	-6.702	0.0001
1	40	-23.31	3.503	-6.655	0.0001
2	0	1.67	3.503	0.478	1.0000
2	5	-13.71	3.503	-3.914	0.0189
2	10	0.63	3.503	0.179	1.0000
2	20	-20.33	3.503	-5.802	0.0001
2	30	-16.59	3.503	-4.737	0.0011
2	40	-23.51	3.503	-6.712	0.0001

Tiempo almacen = 1  
Timepo de tratam = 10 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	20	-30.82	3.503	-8.80	0.0001
1	30	-35.12	3.503	-10.02	0.0001
1	40	-34.95	3.503	-9.98	0.0001
2	0	-9.97	3.503	-2.84	0.3050
2	5	-25.35	3.503	-7.24	0.0001
2	10	-11.01	3.503	-3.14	0.1615
2	20	-31.97	3.503	-9.12	0.0001
2	30	-28.23	3.503	-8.06	0.0001
2	40	-35.15	3.503	-10.03	0.0001

Tiempo almacen = 1  
Timepo de tratam = 20 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	30	-4.302	3.503	-1.228	0.9988
1	40	-4.137	3.503	-1.181	0.9993
2	0	20.850	3.503	5.952	0.0001
2	5	5.463	3.503	1.560	0.9830
2	10	19.803	3.503	5.653	0.0001
2	20	-1.150	3.503	-0.328	1.0000
2	30	2.583	3.503	0.737	1.0000
2	40	-4.337	3.503	-1.238	0.9987

Tiempo almacen = 1  
Timepo de tratam = 30 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	40	0.1650	3.503	0.04710	1.0000
2	0	25.1517	3.503	7.17951	0.0001
2	5	9.7650	3.503	2.78741	0.3396
2	10	24.1050	3.503	6.88074	0.0001
2	20	3.1517	3.503	0.89964	1.0000
2	30	6.8850	3.503	1.96531	0.8773
2	40	-0.0350	3.503	-0.00999	1.0000

Tiempo almacen = 1

Timepo de tratam = 40 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2	0	24.9867	3.503	7.13241	0.0001
2	5	9.6000	3.503	2.74031	0.3693
2	10	23.9400	3.503	6.83364	0.0001
2	20	2.9867	3.503	0.85254	1.0000
2	30	6.7200	3.503	1.91822	0.8971
2	40	-0.2000	3.503	-0.05709	1.0000

Tiempo almacen = 2

Timepo de tratam = 0 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2	5	-15.39	3.503	-4.392	0.0038
2	10	-1.05	3.503	-0.299	1.0000
2	20	-22.00	3.503	-6.280	0.0001
2	30	-18.27	3.503	-5.214	0.0002
2	40	-25.19	3.503	-7.190	0.0001

Tiempo almacen = 2

Timepo de tratam = 5 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2	10	14.340	3.503	4.093	0.0106
2	20	-6.613	3.503	-1.888	0.9088
2	30	-2.880	3.503	-0.822	1.0000
2	40	-9.800	3.503	-2.797	0.3334

Tiempo almacen = 2

Timepo de tratam = 10 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2	20	-20.95	3.503	-5.981	0.0001
2	30	-17.22	3.503	-4.915	0.0006
2	40	-24.14	3.503	-6.891	0.0001

Tiempo almacen = 2

Timepo de tratam = 20 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2	30	3.733	3.503	1.0657	0.9998
2	40	-3.187	3.503	-0.9096	1.0000

Tiempo almacen = 2

Timepo de tratam = 30 subtracted from:

Tiempo almacen	Timepo de tratam	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2	40	-6.920	3.503	-1.975	0.8728