

## Apéndice I Análisis estadístico de actividad enzimática de la PPO en jugo de manzana tratado con APD (Tratamiento 1, 100MPa, Ti=27°C)

### Actividad enzimática versus Tiempo almacenamietno, Timepo de tratamiento

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	49822	49822	24911	890.43	0.000
Timepo de tratam	5	63765	63765	12753	455.85	0.000
Tiempo almacen*Timepo de tratam	10	111490	111490	11149	398.51	0.000
Error	90	2518	2518	28		
Total	107	227596				

S = 5.28930 R-Sq = 98.89% R-Sq(adj) = 98.68%

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	-119.1	3.054	-39.00	0.0001
0	10	-167.7	3.054	-54.90	0.0001
0	20	-177.5	3.054	-58.11	0.0001
0	30	-197.1	3.054	-64.54	0.0001
0	40	-198.6	3.054	-65.05	0.0001
1	0	-182.7	3.054	-59.82	0.0001
1	5	-188.5	3.054	-61.73	0.0001
1	10	-186.6	3.054	-61.12	0.0001
1	20	-175.8	3.054	-57.57	0.0001
1	30	-190.5	3.054	-62.40	0.0001
1	40	-197.7	3.054	-64.74	0.0001
2	0	-189.2	3.054	-61.96	0.0001
2	5	-191.8	3.054	-62.81	0.0001
2	10	-194.2	3.054	-63.61	0.0001
2	20	-182.4	3.054	-59.74	0.0001
2	30	-193.6	3.054	-63.41	0.0001
2	40	-192.2	3.054	-62.95	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
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0	10	-48.58	3.054	-15.91	0.0001
0	20	-58.38	3.054	-19.12	0.0001
0	30	-78.01	3.054	-25.55	0.0001
0	40	-79.56	3.054	-26.05	0.0001
1	0	-63.58	3.054	-20.82	0.0001
1	5	-69.42	3.054	-22.73	0.0001
1	10	-67.55	3.054	-22.12	0.0001
1	20	-56.71	3.054	-18.57	0.0001
1	30	-71.46	3.054	-23.40	0.0001
1	40	-78.61	3.054	-25.74	0.0001
2	0	-70.11	3.054	-22.96	0.0001
2	5	-72.72	3.054	-23.81	0.0001
2	10	-75.15	3.054	-24.61	0.0001
2	20	-63.35	3.054	-20.74	0.0001
2	30	-74.55	3.054	-24.41	0.0001
2	40	-73.14	3.054	-23.95	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	-9.80	3.054	-3.21	0.1382
0	30	-29.43	3.054	-9.64	0.0001
0	40	-30.98	3.054	-10.15	0.0001
1	0	-15.00	3.054	-4.91	0.0006
1	5	-20.84	3.054	-6.82	0.0001
1	10	-18.97	3.054	-6.21	0.0001
1	20	-8.13	3.054	-2.66	0.4206
1	30	-22.88	3.054	-7.49	0.0001
1	40	-30.03	3.054	-9.83	0.0001
2	0	-21.53	3.054	-7.05	0.0001
2	5	-24.14	3.054	-7.90	0.0001
2	10	-26.57	3.054	-8.70	0.0001
2	20	-14.77	3.054	-4.84	0.0008
2	30	-25.97	3.054	-8.50	0.0001
2	40	-24.56	3.054	-8.04	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	-19.63	3.054	-6.429	0.0001
0	40	-21.18	3.054	-6.937	0.0001
1	0	-5.20	3.054	-1.703	0.9611
1	5	-11.04	3.054	-3.615	0.0469
1	10	-9.17	3.054	-3.002	0.2219
1	20	1.67	3.054	0.546	1.0000
1	30	-13.08	3.054	-4.283	0.0055
1	40	-20.23	3.054	-6.626	0.0001
2	0	-11.73	3.054	-3.842	0.0237
2	5	-14.34	3.054	-4.696	0.0013
2	10	-16.77	3.054	-5.493	0.0001
2	20	-4.97	3.054	-1.626	0.9745
2	30	-16.17	3.054	-5.294	0.0002
2	40	-14.76	3.054	-4.834	0.0008

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	-1.550	3.054	-0.5076	0.0180
1	0	14.433	3.054	4.7264	0.0011
1	5	8.593	3.054	2.8140	0.3233
1	10	10.467	3.054	3.4275	0.0791
1	20	21.300	3.054	6.9750	0.0001
1	30	6.553	3.054	2.1458	0.7821
1	40	-0.600	3.054	-0.1965	1.0000
2	0	7.900	3.054	2.5870	0.4740
2	5	5.293	3.054	1.7334	0.9546
2	10	2.860	3.054	0.9365	1.0000
2	20	14.667	3.054	4.8028	0.0009
2	30	3.467	3.054	1.1352	0.9996
2	40	4.870	3.054	1.5947	0.9789

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	15.9833	3.054	5.2340	0.0002
1	5	10.1433	3.054	3.3216	0.1045
1	10	12.0167	3.054	3.9350	0.0177
1	20	22.8500	3.054	7.4825	0.0001
1	30	8.1027	3.054	2.6533	0.4274
1	40	0.9500	3.054	0.3111	1.0000
2	0	9.4500	3.054	3.0945	0.1809
2	5	6.8433	3.054	2.2409	0.7214
2	10	4.4100	3.054	1.4441	0.9923
2	20	16.2167	3.054	5.3104	0.0002
2	30	5.0167	3.054	1.6428	0.9720
2	40	6.4200	3.054	2.1023	0.8076

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	-5.84	3.054	-1.912	0.8994
1	10	-3.97	3.054	-1.299	0.9977
1	20	6.87	3.054	2.249	0.7162
1	30	-7.88	3.054	-2.581	0.4785
1	40	-15.03	3.054	-4.923	0.0006
2	0	-6.53	3.054	-2.139	0.7859
2	5	-9.14	3.054	-2.993	0.2261
2	10	-11.57	3.054	-3.790	0.0279
2	20	0.23	3.054	0.076	1.0000
2	30	-10.97	3.054	-3.591	0.0502
2	40	-9.56	3.054	-3.132	0.1661

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	1.873	3.054	0.613	1.0000
1	20	12.707	3.054	4.161	0.0084
1	30	-2.041	3.054	-0.668	1.0000
1	40	-9.193	3.054	-3.010	0.2178
2	0	-0.693	3.054	-0.227	1.0000
2	5	-3.300	3.054	-1.081	0.9998
2	10	-5.733	3.054	-1.877	0.9125
2	20	6.073	3.054	1.989	0.8666
2	30	-5.127	3.054	-1.679	0.9658
2	40	-3.723	3.054	-1.219	0.9989

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	10.83	3.054	3.548	0.0569
1	30	-3.91	3.054	-1.282	0.9980
1	40	-11.07	3.054	-3.624	0.0457
2	0	-2.57	3.054	-0.840	1.0000
2	5	-5.17	3.054	-1.694	0.9629
2	10	-7.61	3.054	-2.491	0.5433
2	20	4.20	3.054	1.375	0.9955
2	30	-7.00	3.054	-2.292	0.6864
2	40	-5.60	3.054	-1.833	0.9276

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	-14.75	3.054	-4.829	0.0008
1	40	-21.90	3.054	-7.171	0.0001
2	0	-13.40	3.054	-4.388	0.0038
2	5	-16.01	3.054	-5.242	0.0002
2	10	-18.44	3.054	-6.038	0.0001
2	20	-6.63	3.054	-2.172	0.7658
2	30	-17.83	3.054	-5.840	0.0001
2	40	-16.43	3.054	-5.380	0.0001

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	-7.153	3.054	-2.342	0.6512
2	0	1.347	3.054	0.441	1.0000
2	5	-1.259	3.054	-0.412	1.0000
2	10	-3.693	3.054	-1.209	0.9990
2	20	8.114	3.054	2.657	0.4249
2	30	-3.086	3.054	-1.011	0.9999
2	40	-1.683	3.054	-0.551	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	8.500	3.054	2.783	0.3420
2	5	5.893	3.054	1.930	0.8924
2	10	3.460	3.054	1.133	0.9996
2	20	15.267	3.054	4.999	0.0004
2	30	4.067	3.054	1.332	0.9969
2	40	5.470	3.054	1.791	0.9399

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	-2.607	3.054	-0.854	1.0000
2	10	-5.040	3.054	-1.650	0.9708
2	20	6.767	3.054	2.216	0.7379
2	30	-4.433	3.054	-1.452	0.9919
2	40	-3.030	3.054	-0.992	0.9999

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	-2.433	3.054	-0.7968	1.0000
2	20	9.373	3.054	3.0694	0.1914
2	30	-1.827	3.054	-0.5982	1.0000
2	40	-0.423	3.054	-0.1386	1.0000

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	11.8067	3.054	3.8663	0.0220
2	30	0.6067	3.054	0.1987	1.0000
2	40	2.0100	3.054	0.6582	1.0000

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	-11.20	3.054	-3.668	0.0402
2	40	-9.80	3.054	-3.208	0.1386

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	1.403	3.054	0.4595	1.000