

APÉNDICE F**TABLAS DE RESULTADOS DE SECADO 2**

Tabla F.1 Resultados experimentales de arroz con cáscara a 100°C, 53kPa y 2.97 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	98	103.6	1.2424	4.5408	3.8169	0.7239	2.5745	0.281	1	-0.0088	0.303
2	5	98	103.8	1.2455	1.9331	1.7643	0.1688	0.5188	0.325	1.157	0.00308	0.320
3	8	98	100	1.2588	2.1552	1.9399	0.2153	0.6811	0.316	1.124	-0.0097	0.330
4	11	100	94	1.2421	2.8993	2.4738	0.4255	1.2317	0.345	1.228	0.01114	0.323
5	15	103	98	1.2524	1.9165	1.7629	0.1536	0.5105	0.300	1.070	0.01395	0.279
6	18	104	103	1.2358	4.297	3.6672	0.6298	2.4314	0.259	0.921	0.00643	0.242
7	23	105	98	1.2537	6.827	5.7964	1.0306	4.5427	0.226	0.806	0.00774	0.207
8	28	106	100	1.2472	6.2468	5.4551	0.7917	4.2079	0.188	0.669	0.00158	0.181
9	36	103	98	1.2547	9.6312	8.3809	1.2503	7.1262	0.175	0.623	-0.0022	0.191
10	50	106	99	1.2465	3.9934	3.5216	0.4718	2.2751	0.207	0.737	0.00267	0.194
11	60	110	100	1.2374	3.5295	3.1788	0.3507	1.9414	0.180	0.642	-0.0030	0.180

Tabla F.2 Resultados experimentales de arroz con cáscara a 100°C, 53kPa y 3.34 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	98.9	98	1.2436	4.0264	3.5448	0.4816	2.3012	0.209	1	-0.0325	0.290
2	5	104	98	1.2419	3.6924	3.0281	0.6643	1.7862	0.371	1.77	-0.0189	0.400
3	8	102	98	1.2363	1.9348	1.7252	0.2096	0.4889	0.428	2.048	0.06830	0.326
4	11	98.8	98.5	1.2362	1.7207	1.6321	0.0886	0.3959	0.223	1.069	-0.0211	0.266
5	15	97.7	98.5	1.2431	4.6513	3.8477	0.8036	2.6046	0.308	1.474	0.00026	0.308
6	18	100.4	100	1.2406	4.0249	3.3697	0.6552	2.1291	0.307	1.470	0.00026	0.307
7	23	103.1	104	1.244	3.174	2.7213	0.4527	1.4773	0.306	1.464	0.00736	0.288
8	28	102.1	102	1.2513	2.2539	2.041	0.2129	0.7897	0.269	1.288	0.00399	0.253
9	36	101.2	106	1.2522	4.535	3.9046	0.6304	2.6524	0.237	1.135	-0.0042	0.267
10	50	100	110	1.2319	4.6536	3.8706	0.783	2.6387	0.296	1.417	0.00907	0.251
11	60	101.5	112.5	1.2489	5.9664	5.1607	0.8057	3.9118	0.205	0.984	-0.0034	0.205

Tabla F.3 Resultados experimentales de arroz con cáscara a 100°C, 53kPa y 3.30 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	103	96	1.2401	6.2499	5.1619	1.088	3.9218	0.277	1	-0.03045	0.353
2	5	107.3	99.5	1.2392	4.0645	3.2154	0.8491	1.9762	0.429	1.548	0.051611	0.352
3	8	91.9	100	1.2299	3.5186	3.0252	0.4934	1.7953	0.274	0.990	0.01499	0.252
4	11	93.5	100	1.2407	4.8149	4.1469	0.668	2.9062	0.229	0.828	-0.0117	0.253
5	15	100.3	100	1.2437	4.3946	3.7112	0.6834	2.4675	0.276	0.998	0.00261	0.273
6	18	106.3	100	1.2387	2.9949	2.6225	0.3724	1.3838	0.269	0.970	0.00370	0.259
7	23	101.2	103	1.2509	3.2123	2.8193	0.393	1.5684	0.250	0.903	0.00850	0.229
8	28	98.6	106	1.2421	2.5677	2.3394	0.2283	1.0973	0.208	0.749	-0.0034	0.221
9	36	96.7	102	1.26	4.5989	3.9618	0.6371	2.7018	0.235	0.849	9.73E-05	0.235
10	50	94.6	108	1.2317	4.7469	4.0793	0.6676	2.8476	0.234	0.845	-0.0033	0.251
11	60	100	100	1.2364	3.0818	2.6922	0.3896	1.4558	0.267	0.964	-0.0044	0.267

Tabla F.4 Resultados experimentales de arroz con cáscara a 100°C, 53kPa y 3.36 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	98.8	95	1.2438	4.8854	4.0844	0.801	2.8406	0.281	1	-0.0165	0.323
2	5	101.5	96	1.2455	6.8785	5.3725	1.506	4.127	0.364	1.294	0.00904	0.351
3	8	99.6	96	1.2418	6.2781	5.0065	1.2716	3.7647	0.337	1.197	0.00314	0.333
4	11	99.7	96	1.2421	5.4072	4.3777	1.0295	3.1356	0.328	1.1649	0.00349	0.321
5	15	101.3	98	1.2407	2.3734	2.1025	0.2709	0.8618	0.314	1.114	0.01471	0.292
6	18	100.3	99	1.2365	4.787	4.0317	0.7553	2.7952	0.270	0.958	0.00055	0.268
7	23	96.4	102	1.2349	3.4016	2.9444	0.4572	1.7095	0.267	0.948	0.00088	0.265
8	28	101.8	105	1.2478	5.0705	4.2744	0.7961	3.0266	0.263	0.932	0.00036	0.261
9	36	100.5	107	1.2543	4.3132	3.6818	0.6314	2.4275	0.260	0.922	0.00017	0.258
10	50	102.7	108	1.2468	4.1133	3.5261	0.5872	2.2793	0.257	0.913	0.00327	0.241
11	60	101.2	109	1.2378	3.0288	2.7	0.3288	1.4622	0.224	0.797	-0.0037	0.224

Tabla F.5 Resultados experimentales de arroz con cáscara a 105°C, 53kPa y 3.27 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	105	97	1.2399	5.3811	4.2431	1.138	3.0032	0.378	1	0.0040	0.368
2	5	101	96	1.242	3.7037	3.0541	0.6496	1.8121	0.358	0.946	-0.0192	0.387
3	8	105	97	1.2298	6.0712	4.6482	1.423	3.4184	0.416	1.098	0.00679	0.406
4	11	103	96	1.245	4.3803	3.4911	0.8892	2.2461	0.395	1.044	-0.0064	0.408
5	15	111	97	1.2387	4.6222	3.6186	1.0036	2.3799	0.421	1.112	0.02725	0.380
6	18	105	97	1.2386	4.3696	3.5753	0.7943	2.3367	0.339	0.897	-0.0075	0.358
7	23	105	97	1.2501	5.2808	4.1756	1.1052	2.9255	0.377	0.996	0.02511	0.314
8	28	105	97	1.2421	3.8608	3.3334	0.5274	2.0913	0.252	0.665	-0.0063	0.277
9	36	104.7	97	1.2606	4.4707	3.7241	0.7466	2.4635	0.303	0.799	0.00031	0.300
10	50	102	96	1.2322	3.6732	3.1118	0.5614	1.8796	0.298	0.788	-0.0286	0.441
11	60	108	97	1.2337	3.6571	2.7629	0.8942	1.52922	0.584	1.543	-0.0097	0.584

Tabla F.6 Resultados experimentales de arroz con cáscara a 105°C, 53kPa y 3.26 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	105.5	95	1.2363	4.3718	3.62	0.7518	2.3837	0.315	1	0.00801	0.295
2	5	105.6	95	1.2315	2.0977	1.9107	0.187	0.6792	0.275	0.872	-0.0196	0.304
3	8	104.7	96	1.2599	4.2032	3.4611	0.7421	2.2195	0.334	1.060	0.01653	0.309
4	11	104.9	96	1.2416	3.0431	2.6458	0.3973	1.3952	0.284	0.902	-0.0048	0.294
5	15	102.2	98	1.2506	4.0932	3.4272	0.666	2.1888	0.304	0.964	0.01961	0.274
6	18	102.5	103	1.2384	3.6923	3.2087	0.4836	1.9703	0.245	0.778	-0.0039	0.255
7	23	105	105	1.2384	3.626	3.1275	0.4985	1.8812	0.264	0.840	-0.0028	0.272
8	28	105.5	108	1.2463	3.3441	2.8828	0.4613	1.6531	0.279	0.884	0.00509	0.258
9	36	105.9	110	1.2297	4.0176	3.4835	0.5341	2.2414	0.238	0.755	-0.0005	0.242
10	50	111	113	1.2421	5.7263	4.84	0.8863	3.6	0.246	0.780	0.01226	0.184
11	60	105.1	110	1.24	3.8104	3.3913	0.4191	3.3913	0.123	0.391	-0.0020	0.123

Tabla F.7 Resultados experimentales de arroz con cáscara a 100°C, 67kPa y 2.50 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	99.6	99	1.2434	6.1805	5.0297	1.1508	3.7863	0.303	1	-0.0106	0.330
2	5	101.1	100	1.2455	4.1902	3.4153	0.7749	2.1698	0.357	1.175	0.01425	0.335
3	8	97.7	101	1.2415	2.7036	2.3539	0.3497	1.1124	0.314	1.034	0.00146	0.312
4	11	101.2	101	1.2422	3.947	3.307	0.64	2.0648	0.309	1.019	-0.0092	0.328
5	15	104.7	102	1.2405	4.1592	3.4074	0.7518	2.1669	0.346	1.141	-0.0050	0.354
6	18	96.7	103	1.2367	5.3117	4.2286	1.0831	2.9919	0.362	1.191	-0.0075	0.380
7	23	96.9	104	1.2343	4.4784	3.5518	0.9266	2.3175	0.399	1.315	0.01122	0.371
8	28	101.8	105	1.2474	4.1782	3.4285	0.7497	2.1811	0.343	1.130	0.00506	0.323
9	36	100	107	1.2542	3.8473	3.244	0.6033	1.9898	0.303	0.997	0.00496	0.268
10	50	103	108	1.2464	6.4301	5.4483	0.9818	4.2019	0.233	0.768	0.00200	0.223
11	60	100	107	1.2382	3.6955	3.263	0.4325	2.0248	0.213	0.702	-0.0035	0.213

Tabla F.8 Resultados experimentales de arroz con cáscara a 100°C, 67kPa y 2.51 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg agua/ kg sólido seco]	C/C _o	dC/dt	C _{promedio}
1	0	99.2	98	1.2441	5.3588	4.3844	0.9744	3.1403	0.310	1	-0.0048	0.322
2	5	101.1	99	1.2509	9.07	7.1102	1.9598	5.8593	0.334	1.077	0.00338	0.329
3	8	105.5	101	1.2607	5.9789	4.8234	1.1555	3.5627	0.324	1.045	0.00627	0.3149
4	11	98.8	103	1.2401	5.3955	4.4231	0.9724	3.183	0.305	0.984	-0.0249	0.355
5	15	100.4	104	1.2434	5.4611	4.2444	1.2167	3.001	0.405	1.306	-0.0071	0.416
6	18	98.7	104	1.2357	6.2121	4.7231	1.489	3.4874	0.426	1.376	0.00539	0.413
7	23	100.2	104	1.2353	5.9649	4.6136	1.3513	3.3783	0.399	1.289	0.01119	0.372
8	28	99	103	1.2315	5.0953	4.1063	0.989	2.8748	0.344	1.108	0.00053	0.341
9	36	100.3	104	1.2439	4.0799	3.3607	0.7192	2.1168	0.339	1.094	-0.0003	0.341
10	50	100.2	103	1.2419	4.4185	3.6056	0.8129	2.3637	0.343	1.108	0.00044	0.341
11	60	95.4	107	1.2406	5.7609	4.6152	1.1457	3.3746	0.339	1.094	-0.0056	0.339

Tabla F.9 Resultados experimentales de arroz con cáscara a 105°C, 67kPa y 2.45 m/s.

Muestra	Tiempo [min]	T _{entrada} [°C]	T _{lecho} [°C]	W _{ch} [g]	W _{ch+ph} [g]	W _{ch+ps} [g]	m _{agua} [g]	sólido seco [g]	C [kg]		C/C _o	dC/dt	C _{promedio}
									agua/ kg	sólido seco			
1	0	104.5	106	1.2466	5.6916	4.6805	1.0111	3.4339	0.294	1	-0.0047	0.306	
2	5	104.5	107	1.2415	2.8579	2.4677	0.3902	1.2262	0.318	1.080	-0.0108	0.334	
3	8	94	107	1.2373	8.3202	6.4809	1.8393	5.2443	0.350	1.191	0.00638	0.341	
4	11	92.7	107	1.2366	6.4038	5.1189	1.2849	3.8752	0.331	1.126	-0.0115	0.354	
5	15	125	107	1.2437	6.3729	4.9625	1.4104	3.7319	0.377	1.283	0.00048	0.377	
6	18	112.5	106	1.2306	2.3876	2.0747	0.3129	0.8311	0.376	1.2783	0.01095	0.349	
7	23	105.2	106	1.2436	3.0473	2.6103	0.437	1.3584	0.321	1.092	0.01679	0.279	
8	28	96.2	106	1.2519	4.0394	3.5005	0.5389	2.2668	0.237	0.807	0.00056	0.235	
9	36	104.9	107	1.2337	3.4454	3.0268	0.4186	1.7946	0.233	0.792	-0.0022	0.248	
10	50	105.1	108	1.2322	2.8941	2.5477	0.3464	1.3121	0.264	0.896	0.01419	0.193	
11	60	104.3	110	1.2356	8.2436	7.3469	0.8967	7.3469	0.122	0.414	-0.0020	0.122	