

TABLA B-01
P=80kPa T=120°C

COLUMNA				
Pabs[Pa]	$\Delta P_{\text{columna}}$ [Pa]	T[°C]	ν [m ² /kg]	ϵ
79993	876.93552	126	2.256935	0.746919
79993	841.38408	125	2.252039	0.714838
79993	770.2812	125	2.254039	0.693235
79993	687.32784	123	2.244552	0.59507
79993	604.37448	124	2.252804	0.301845
79993	509.57064	124	2.255481	0.276911
79993	426.61728	123	2.251896	0.276911
79993	284.41152	121	2.244027	0.276911
79993	189.60768	119	2.234784	0.276911
	461.6586			

PLACA						
T[°C]	Pman [kg/cm ²]	Pabs[Pa]	ν [m ² /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
126	0.2	99620	1.828428	2.42208E-05	5573.061	0.944057
125	0.18	97658	1.860661	2.45788E-05	4967.294	0.949136
125	0.14	93734	1.939428	2.56242E-05	4119.219	0.956054
123	0.11	90791	1.992413	2.61758E-05	3271.144	0.963971
124	0.09	88829	2.04228	2.69115E-05	2423.07	0.972722
124	0.08	87848	2.065321	2.72164E-05	1696.149	0.980692
123	0.03	82943	2.182937	2.86901E-05	1211.535	0.985393
121	0.02	81962	2.197656	2.87177E-05	726.921	0.991131
119	0.01	80981	2.21273	2.87482E-05	242.307	0.997008

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re _e	V[m/s]	ΔP_{techo} [Pa]
0.611104	0.980126	0.018299	2.457828	2.457827927	59301.79
0.610912	0.981931	0.017454	2.298743	2.298742764	55637.47
0.610581	0.984388	0.016259	2.056236	2.056235666	49590.21
0.610246	0.987201	0.01472	1.804402	1.804401901	43823.24
0.6098	0.99031	0.012857	1.543273	1.543273127	36699.5
0.609285	0.993141	0.01084	1.288094	1.288094415	29267.18
0.608991	0.994811	0.00943	1.058491	1.058491324	25393.16
0.608516	0.996849	0.007338	0.815334	0.815333934	19720.36
0.607671	0.998937	0.004254	0.467526	0.467526308	11396.65

TABLA B-02
P=80kPa T=140°C

COLUMNA				
Pabs[Pa]	$\Delta P_{\text{columna}}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ
79993	912.487	134	2.302978	0.765325
79993	888.786	136	2.315398	0.741857
79993	853.2346	137	2.322293	0.649976
79993	758.4307	141	2.34852	0.617566
79993	675.4774	146	2.380284	0.426349
79993	604.3745	148	2.394128	0.299952
79993	485.8697	148	2.397678	0.287882
79993	367.3649	148	2.401238	0.287882
79993	225.1591	146	2.393741	0.287882
	432.0324			

PLACA						
T[°C]	P_{man} [kg/cm ²]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	R
134	0.21	100601	1.848532	2.5055E-05	6299.982	0.937377
136	0.18	97658	1.9146	2.6102E-05	5451.908	0.944173
137	0.17	96677	1.939155	2.6513E-05	4846.14	0.949873
141	0.15	94715	1.999826	2.7655E-05	3998.066	0.957788
146	0.12	91772	2.09041	2.9318E-05	3271.145	0.964356
148	0.1	89810	2.147007	3.0281E-05	2665.377	0.970322
148	0.08	87848	2.195334	3.0965E-05	1817.303	0.979313
148	0.04	83924	2.298765	3.2429E-05	1090.381	0.987008
146	0.02	81962	2.342654	3.2867E-05	363.4605	0.995565

RESULTADOS					
C_D	γ	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{lecho} [Pa]
0.615129	0.977753	0.019518	61295.59	2.645998	266.676
0.615629	0.980168	0.018516	55677.25	2.436521	344.1189
0.615999	0.982193	0.017599	51992.98	2.293369	372.12142
0.6167	0.985005	0.016271	45952.03	2.079162	367.41096
0.617532	0.987338	0.015074	40062.49	1.867686	364.1657
0.618319	0.989457	0.013813	35466.14	1.675994	355.13682
0.619746	0.992651	0.011562	28937.46	1.374019	318.60231
0.621959	0.995384	0.009181	21881.8	1.043556	271.02361
0.627383	0.998425	0.005359	12564.75	0.595903	193.64604

TABLA B-03
P=80kPa T=160°C

COLUMNA				
Pabs[Pa]	$\Delta P_{\text{columna}}$ [Pa]	T[°C]	ν [m ² /kg]	ϵ
79993	865.08504	164	2.4796472	0.7722269
79993	853.23456	164	2.4800128	0.7524205
79993	853.23456	161	2.4625482	0.7222279
79993	829.5336	160	2.4574487	0.6921985
79993	782.13168	160	2.4588996	0.5619748
79993	734.72976	158	2.4486821	0.4938376
79993	651.7764	158	2.4512165	0.3221039
79993	616.22496	156	2.4406114	0.3097785
79993	497.72016	154	2.4325112	0.2882091
	414.7668	154	2.4350369	0.2882091
	260.71056	154	2.4397414	0.2882091
	1451.1737			

PLACA						
T[°C]	P_{man} [kg/cm ²]	Pabs[Pa]	ν [m ² /kg]	v [m ² /s]	ΔP_{placa} [Pa]	R
164	0.2	99620	2.0100448	2.96057E-05	6542.289	0.9343276
164	0.19	98639	2.0301823	2.99032E-05	6057.675	0.9385874
161	0.18	97658	2.0362036	2.97512E-05	5451.9075	0.9441735
160	0.16	95696	2.0733208	3.02134E-05	4967.2935	0.948093
160	0.12	91772	2.1626233	3.15186E-05	4119.219	0.9551146
158	0.11	90791	2.1757499	3.15394E-05	3755.7585	0.9586329
158	0.09	88829	2.2241479	3.2243E-05	2907.684	0.9672665
156	0.08	87848	2.2384061	3.22745E-05	2544.2235	0.9710383
154	0.06	85886	2.2789018	3.26815E-05	1817.3025	0.9788405
154	0.03	82943	2.3603278	3.38525E-05	1332.6885	0.9839325
154	0.01	80981	2.4178994	3.46805E-05	484.614	0.9940157

RESULTADOS					
C_D	γ	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{lecho} [Pa]
0.6108829	0.9766701	0.020707	55094.205	2.7796289	203.17331
0.6107556	0.9781834	0.0200518	52738.411	2.6653671	244.71228
0.6106236	0.9801678	0.0190856	50351.527	2.5116159	309.06025
0.6104759	0.9815602	0.0184046	47744.192	2.3737135	342.46684
0.6101686	0.9840547	0.0171521	42544.258	2.1220739	393.08961
0.6100559	0.9853045	0.0164454	40712.841	2.0139617	382.85645
0.6097145	0.9883716	0.0146674	35408.736	1.7589622	383.64502
0.609564	0.9897115	0.0137793	33187.224	1.634827	383.59733
0.6091863	0.9924832	0.0117762	27931.293	1.3677854	334.34073
0.608838	0.994292	0.010276	23487.07	1.15356	298.6778
0.607958	0.997874	0.006285	13972.57	0.690107	219.2433

TABLA B-04

P=67kPa T=120°C (Primeros experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{\text{columna}}$ [Pa]	T[°C]	ν [m ² /kg]	ϵ
67000	1694.61864	122	2.6331583	0.735915
67000	1505.01096	120	2.6266305	0.717491
67000	1268.00136	121	2.6427863	0.696303
67000	1196.89848	121	2.645564	0.671678
67000	1054.69272	120	2.6441535	0.642709
67000	948.0384	122	2.6623222	0.59507
67000	817.68312	120	2.6534696	0.392605
67000	734.72976	120	2.6567456	0.325117
67000	497.72016	117	2.6450137	0.285418
67000	284.41152	119	2.6676068	0.285418
67000	142.20576	116	2.6520483	0.285418

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ² /kg]	v [m ² /s]	ΔP_{placa} [Pa]	R
122	0.18		97658	1.84589	2.42E-05	8117.2845	0.9169
120	0.1		89810	1.99838	2.6E-05	7511.517	0.9164
121	0.03		82943	2.17141	2.84E-05	6421.1355	0.9226
121	0.02		81962	2.19766	2.87E-05	5694.2145	0.9305
120	0		80000	2.24611	2.93E-05	5088.447	0.9364
122		1	78667	2.29667	3.01E-05	4482.6795	0.943
120		1.5	78000.5	2.30424	3E-05	3755.7585	0.9518
120		2	77334	2.32429	3.03E-05	3028.8375	0.9608
117		2.5	76667.5	2.32599	3.01E-05	2301.9165	0.97
119		3.5	75334.5	2.38022	3.09E-05	1332.6885	0.9823
116		4	74668	2.38248	3.07E-05	605.7675	0.9919

RESULTADOS					
C_D	Y	Q [m ³ /s]	Re_G	V [m/s]	ΔP_{lecho} [Pa]
0.6117324	0.970472	0.021993	72128.22566	3.413868	754.392
0.6114894	0.970288	0.022001	67021.6187	3.146571	704.269
0.6110993	0.972498	0.021238	59215.19029	2.812712	632.078
0.6108997	0.97532	0.020172	55408.04927	2.642416	636.238
0.6107118	0.977404	0.019314	51939.85216	2.474028	562.949
0.6105088	0.979757	0.018221	48319.34749	2.298388	526.534
0.6102914	0.982895	0.016684	44586.6987	2.090591	467.786
0.6100127	0.986087	0.015026	40020.20697	1.868861	455.462
0.6096691	0.989334	0.013083	34731.2413	1.61881	287.255
0.6090863	0.993716	0.010016	26615.79008	1.221441	165.605
0.6083733	0.997118	0.00674	18153.50856	0.816363	88.823

TABLA B-05

P=67kPa T=140°C (Primeros experimentos)

COLUMNA					PLACA							
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ	T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	R
67000	1907.92728	138	2.734910226	0.767578474	138	0.18		97658	1.92437433	2.63842E-05	9086.5125	0.906955779
67000	1836.8244	142	2.765178437	0.762736359	142	0.12		91772	2.069711369	2.8705E-05	8480.745	0.90758897
67000	1742.02056	148	2.810148041	0.757688197	148	0.09		88829	2.170903998	3.06194E-05	7874.9775	0.911346773
67000	1582.03908	146	2.803007842	0.746918783	146	0.05		84905	2.260861584	3.17164E-05	7269.21	0.914384194
67000	1427.98284	144	2.795584465	0.728841553	144	0.01		80981	2.359556339	3.2922E-05	6542.289	0.91921205
67000	1392.4314	142	2.783259675	0.707983211	142	0.01		80981	2.347865013	3.25764E-05	6542.289	0.91921205
67000	1220.59944	145	2.811042625	0.65488925	145	0		80000	2.394615393	3.35056E-05	5694.2145	0.928822319
67000	1137.64608	146	2.821399495	0.600398079	146		0.5	79333.5	2.420836346	3.39676E-05	4846.14	0.93891433
67000	1042.84224	146	2.825354136	0.38439704	146		1	78667	2.441490899	3.42582E-05	4119.219	0.947637268
67000	942.11316	146	2.829568034	0.309778499	146		2	77334	2.483867934	3.48546E-05	3149.991	0.959267709
67000	711.0288	144	2.825367779	0.288209078	144		3.5	75334.5	2.537708345	3.54153E-05	2544.2235	0.966227645
67000	438.46776	140	2.808893024	0.288209078	140		4	74668	2.535198868	3.49878E-05	1453.842	0.980529249
67000	296.262	140	2.814866278	0.288209078	140		4.5	74001.5	2.558193564	3.53061E-05	969.228	0.98690259
RESULTADOS												
C_D	γ	Q [m ³ /s]	Re_e	V [m/s]	ΔP_{techo} [Pa]							
0.61475989	0.966946412	0.023652591	57161.25	3.657772917	868.7090952							
0.614713407	0.967171351	0.023699352	57868.4	3.445357806	924.8937071							
0.614569341	0.968506295	0.023415377	55512.82	3.298178951	919.710573							
0.614501394	0.969585327	0.022982743	54137.26	3.10053535	853.478961							
0.614336167	0.971300403	0.022307247	52448.88	2.875893012	799.5061627							
0.614437191	0.971300403	0.022251084	52308.03	2.870227123	763.6565915							
0.614081718	0.974714413	0.02103243	49777.55	2.686616068	675.1429448							
0.613717991	0.978478559	0.019495943	46942.1	2.472452173	677.3815079							
0.613372735	0.98170525	0.018028919	43263.49	2.270240983	655.3282725							
0.612832686	0.986007566	0.015828936	38220.15	1.962130291	653.0772006							
0.612439533	0.988695592	0.014223969	33187.89	1.723211456	487.7649079							
0.61149388	0.9935398	0.010741853	25472.02	1.295050912	311.6281734							
0.610872062	0.995692841	0.008784505	20783.79	1.051783016	212.7765347							

TABLA B-06

P=67kPa T=160°C (Primeros experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ
67000	1564.26336	166	2.94082	0.781
67000	1564.26336	158	2.88606	0.7789
67000	1516.86144	157	2.88121	0.7652
67000	1327.25376	156	2.88238	0.7412
67000	1208.74896	159	2.90807	0.7288
67000	1090.24416	160	2.92005	0.6922
67000	1007.2908	160	2.92363	0.6204
67000	912.48696	160	2.92773	0.4006
67000	758.43072	160	2.93442	0.3098
67000	474.0192	160	2.94686	0.2882
67000	237.0096	160	2.9573	0.2882

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	V [m ² /s]	ΔP_{placa} [Pa]	R
166	0.2		99620	2.019532333	2.99056E-05	8965.359	0.910004427
158	0.14		93734	2.106951404	3.05392E-05	8359.5915	0.910815803
157	0.11		90791	2.170545133	3.13784E-05	7511.517	0.917265841
156	0.09		88829	2.21351246	3.19146E-05	6421.1355	0.927713523
159	0.04		83924	2.360660696	3.43203E-05	5694.2145	0.932150344
160	0.01		80981	2.452823916	3.57601E-05	4846.14	0.940157074
160		0.5	79333.5	2.504075754	3.65092E-05	4119.219	0.948077181
160		1	78667	2.525419645	3.68212E-05	3392.298	0.956877751
160		2	77334	2.569211036	3.74612E-05	2665.377	0.965534215
160		3	76001	2.614538429	3.81237E-05	1696.149	0.977682544
160		3	76001	2.614538429	3.81237E-05	969.228	0.987247168

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re _G	V[m/s]	ΔP_{lecho} [Pa]
0.61447	0.968	0.0241	64046.5	3.81879523	93.93424527
0.61451	0.9683	0.02377	61847.6	3.543418895	335.4313789
0.61434	0.9706	0.02292	57894.2	3.310474206	465.1059718
0.61404	0.9743	0.02147	53124.8	3.042492272	494.2600324
0.61388	0.9759	0.02091	48019.9	2.802334861	528.6219542
0.6136	0.9787	0.01971	43318.7	2.55293467	537.3420182
0.61328	0.9817	0.01833	39676.4	2.328824734	551.0896365
0.61289	0.9849	0.01668	35990.3	2.104624414	546.2469711
0.61243	0.9882	0.01483	31884.8	1.843278767	482.3708086
0.61164	0.9925	0.01187	25413.2	1.456358548	301.690377
0.61081	0.9957	0.009	19194.1	1.107451571	138.4186788

TABLA B-07

P=58.7kPa T=120°C (Primeros experimentos)

COLUMNA					PLACA							
Pabs[Pa]	ΔPcolumna[Pa]	T[°C]	v [m ³ /kg]	ε	T[°C]	P _{man} [kg/cm ²]	P _{vacío} [cmHg]	Pabs[Pa]	v [m ³ /kg]	v [m ² /s]	ΔP _{placa} [Pa]	r
58700	1386.50616	121	3.0072	0.80697	121	0.14		93734	1.9189	2.51E-05	10540.3545	0.88755
58700	1315.40328	122	3.0187	0.79293	122	0.1		89810	2.0091	2.63E-05	9813.4335	0.89073
58700	1185.048	125	3.0490	0.78099	125	0.09		88829	2.0477	2.71E-05	9086.5125	0.89771
58700	1078.39368	123	3.0387	0.77669	123	0.02		81962	2.2093	2.90E-05	8359.5915	0.89801
58700	1019.14128	127	3.0734	0.76758	127	0		80000	2.2879	3.04E-05	7269.21	0.90913
58700	948.0384	120	3.0215	0.74117	120		0.2	79733.4	2.2537	2.94E-05	6542.289	0.91795
58700	876.93552	122	3.0411	0.69220	122		2	77334	2.3366	3.06E-05	5694.2145	0.92637
58700	770.2812	123	3.0545	0.54445	123		2	77334	2.3428	3.08E-05	4846.14	0.93733
58700	734.72976	124	3.0643	0.44446	124		3	76001	2.3905	3.15E-05	4240.3725	0.94421
58700	699.17832	122	3.0502	0.33008	122		3.5	75334.5	2.3992	3.15E-05	3513.4515	0.95336
58700	592.524	123	3.0638	0.30978	123		4.5	74001.5	2.4492	3.22E-05	2423.07	0.96726
58700	474.0192	122	3.0619	0.28821	122		5.5	72668.5	2.4880	3.26E-05	1696.149	0.97666
58700	308.11248	120	3.0546	0.28821	120		6	72002	2.4980	3.26E-05	969.228	0.98654
RESULTADOS												
C _D	Y	Q[m ³ /s]	Re _G	V[m/s]	ΔP _{lecho} [Pa]							
0.615	0.960	0.025	66598.155	4.311	73.375							
0.615	0.961	0.025	68311.460	4.084	141.532							
0.615	0.964	0.024	65581.553	3.941	103.204							
0.615	0.964	0.024	64990.617	3.627	158.506							
0.615	0.968	0.023	61301.598	3.375	231.968							
0.615	0.971	0.022	58928.854	3.176	238.983							
0.614	0.975	0.020	54484.486	2.894	291.805							
0.614	0.978	0.019	50032.219	2.688	267.944							
0.614	0.981	0.018	46585.450	2.481	307.955							
0.613	0.984	0.016	42746.034	2.241	349.511							
0.612	0.989	0.014	35319.089	1.841	357.510							
0.612	0.992	0.011	29653.388	1.518	314.250							
0.611	0.996	0.009	22585.156	1.140	217.810							

TABLA B-08

P=58.7kPa T=140°C (Primeros experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{\text{columna}}$ [Pa]	T[°C]	γ [m ³ /kg]	ϵ
58700	1718.3196	142	3.155	0.801
58700	1481.31	138	3.136	0.787
58700	1327.25376	140	3.160	0.760
58700	1125.7956	137	3.147	0.743
58700	1054.69272	139	3.166	0.716
58700	983.58984	138	3.162	0.653
58700	912.48696	140	3.182	0.543
58700	853.23456	139	3.177	0.494
58700	746.58024	141	3.199	0.331
58700	604.37448	139	3.190	0.291
58700	438.46776	140	3.207	0.280
58700	296.262	138	3.199	0.280

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	γ [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
142	0.07		86867	2.1876	3.03E-05	7632.6705	0.91213
138	0.03		82943	2.2690	3.11E-05	7269.21	0.91236
140		0.25	79666.75	2.3750	3.28E-05	6542.289	0.91788
137		1	78667	2.3873	3.27E-05	6057.675	0.92300
139		1.5	78000.5	2.4200	3.33E-05	5209.6005	0.93321
138		2	77334	2.4349	3.34E-05	4724.9865	0.93890
140		2.5	76667.5	2.4686	3.41E-05	4240.3725	0.94469
139		3	76001	2.4842	3.42E-05	3634.605	0.95218
141		3.5	75334.5	2.5189	3.49E-05	2786.5305	0.96301
139		4	74668	2.5289	3.48E-05	2301.9165	0.96917
140		4.5	74001.5	2.5582	3.53E-05	1696.149	0.97708
138		5	73335	2.5687	3.53E-05	1211.535	0.98348

RESULTADOS					
C_D	γ	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{lecho} [Pa]
0.611	0.969	0.025	66598.155	3.632	829.936
0.611	0.969	0.025	68311.460	3.461	670.000
0.611	0.971	0.024	65581.553	3.232	624.810
0.611	0.973	0.024	64990.617	3.077	486.801
0.611	0.976	0.023	61301.598	2.849	510.054
0.610	0.978	0.022	58928.854	2.695	495.504
0.610	0.980	0.020	54484.486	2.546	479.833
0.610	0.983	0.019	50032.219	2.341	486.676
0.610	0.987	0.018	46585.450	2.047	468.170
0.609	0.989	0.016	42746.034	1.848	377.056
0.609	0.992	0.014	35319.089	1.582	272.777
0.609	0.994	0.011	29653.388	1.327	179.371

TABLA B-09

P=58.7kPa T=160°C (Primeros experimentos)

COLUMNA					PLACA							
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ	T[°C]	P _{man} [kg/cm ²]	P _{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
58700	1712.39436	158	3.2794	0.77929	158	0.04		83924	2.3550	3.41E-05	7753.824	0.908
58700	1576.11384	156	3.2713	0.76274	156	0.01		80981	2.4295	3.50E-05	7269.21	0.910
58700	1422.0576	161	3.3187	0.74692	161	0		80000	2.4890	3.64E-05	6542.289	0.918
58700	1285.77708	164	3.3497	0.72884	164		0.5	79333.5	2.5278	3.73E-05	5815.368	0.927
58700	1214.6742	164	3.3537	0.70342	164		1	78667	2.5493	3.76E-05	5330.754	0.932
58700	1090.24416	167	3.3842	0.67274	167		1.5	78000.5	2.5893	3.85E-05	4846.14	0.938
58700	989.51508	164	3.3664	0.56861	164		2	77334	2.5935	3.82E-05	4119.219	0.947
58700	942.11316	167	3.3926	0.47275	167		3	76001	2.6578	3.95E-05	3634.605	0.952
58700	882.86076	164	3.3725	0.34548	164		3.5	75334.5	2.6628	3.92E-05	2907.684	0.961
58700	705.10356	166	3.3984	0.26996	166		4	74668	2.6992	4.00E-05	2423.07	0.968
58700	485.86968	164	3.3952	0.26996	164		4.5	74001.5	2.7110	4.00E-05	1696.149	0.977
58700	248.86008	162	3.3930	0.26996	162		5	73335	2.7230	3.99E-05	969.228	0.987
58700	142.20576	160	3.3832	0.26996	160		5.5	72668.5	2.7351	3.98863E-05	484.614	0.993

RESULTADOS					
C _D	Y	Q[m ³ /s]	Re _G	V[m/s]	ΔP_{techo} [Pa]
0.615	0.967	0.024	56296.112	3.662	843.829
0.615	0.968	0.024	53942.745	3.485	787.559
0.614	0.971	0.023	49859.502	3.322	715.651
0.614	0.974	0.022	46449.081	3.133	663.181
0.614	0.976	0.021	44461.286	2.984	650.581
0.614	0.978	0.020	41893.971	2.842	583.083
0.613	0.982	0.018	39059.284	2.601	562.477
0.613	0.984	0.017	36255.536	2.416	576.540
0.613	0.987	0.016	32790.038	2.143	593.548
0.612	0.989	0.014	29691.775	1.953	466.685
0.612	0.992	0.012	25018.238	1.626	320.448
0.611	0.996	0.009	19042.140	1.223	155.201
0.610	0.998	0.006	13557.138	0.858	96.022

TABLA B-10

P=80kPa T=120°C (Segundos experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ
80000	876.94	122	2.233	0.734
80000	841.38	120	2.223	0.705
80000	805.83	124	2.247	0.684
80000	758.43	122	2.237	0.597
80000	663.63	123	2.245	0.517
80000	616.22	120	2.229	0.489
80000	580.67	122	2.242	0.352
80000	485.87	120	2.232	0.336
80000	414.77	119	2.228	0.336
80000	296.26	120	2.238	0.336
80000	225.16	118	2.228	0.336
	165.40			

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
122	0.22	0	101582	1.774	2.322E-05	6784.596	0.933
120	0.2	0	99620	1.799	2.342E-05	6057.675	0.939
124	0.19	0	98639	1.837	2.420E-05	5330.754	0.946
122	0.16	0	95696	1.884	2.468E-05	4846.140	0.949
123	0.12	0	91772	1.971	2.589E-05	3876.912	0.958
120	0.11	0	90791	1.977	2.574E-05	3392.298	0.963
122	0.1	0	89810	2.009	2.632E-05	2907.684	0.968
120	0.08	0	87848	2.044	2.662E-05	2180.763	0.975
119	0.06	0	85886	2.085	2.708E-05	1696.149	0.980
120	0.04	0	83924	2.140	2.788E-05	848.075	0.990
118	0.02	0	81962	2.180	2.824E-05	484.614	0.994

RESULTADOS					
C_D	γ	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{lecho} [Pa]
0.612	0.967	0.019821	67257.632	2.716	175.501
0.611	0.967	0.018899	63441.326	2.540	224.732
0.611	0.968	0.01795	58189.788	2.389	266.231
0.611	0.971	0.017349	55080.666	2.241	281.459
0.610	0.974	0.015909	47989.873	1.972	295.680
0.610	0.976	0.014925	45205.103	1.831	296.591
0.610	0.978	0.013951	41252.517	1.694	308.818
0.610	0.982	0.01221	35605.858	1.452	285.388
0.609	0.984	0.010892	31158.776	1.267	261.815
0.609	0.987	0.00782	21656.179	0.890	221.104
0.608	0.989	0.005971	16299.636	0.664	183.130

TABLA B-11

P=80kPa T=140°C (Segundos experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ
80000	876.94	146	2.374	0.705
80000	841.38	146	2.374	0.691
80000	805.83	150	2.399	0.676
80000	758.43	143	2.359	0.650
80000	663.63	140	2.343	0.620
80000	616.22	136	2.321	0.382
80000	580.67	134	2.310	0.367
80000	485.87	136	2.325	0.336
80000	414.77	135	2.321	0.336
80000	296.26	135	2.326	0.336
80000	225.16	138	2.346	0.336
	165.40			

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
146	0.22	0	101582	1.887	2.645E-05	6542.289	0.936
146	0.2	0	99620	1.924	2.698E-05	5815.368	0.942
150	0.18	0	97658	1.983	2.811E-05	5330.754	0.945
143	0.17	0	96677	1.969	2.738E-05	4846.140	0.950
140	0.16	0	95696	1.974	2.722E-05	4119.219	0.957
136	0.1	0	89810	2.084	2.841E-05	3634.605	0.960
134	0.09	0	88829	2.096	2.842E-05	2907.684	0.967
136	0.08	0	87848	2.130	2.906E-05	2180.763	0.975
135	0.06	0	85886	2.174	2.957E-05	1696.149	0.980
135	0.04	0	83924	2.225	3.027E-05	848.075	0.990
138	0.02	0	81962	2.296	3.151E-05	484.614	0.994

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{techo} [Pa]
0.614	0.977	0.020	59763.891	2.749	212.561
0.614	0.979	0.019	55771.317	2.572	285.286
0.613	0.981	0.019	52002.448	2.453	296.573
0.613	0.982	0.018	50730.639	2.312	312.673
0.613	0.985	0.016	47084.348	2.118	351.502
0.613	0.986	0.016	43515.336	1.920	373.640
0.613	0.988	0.014	39006.787	1.709	383.388
0.612	0.991	0.012	33295.059	1.480	356.803
0.612	0.993	0.011	29133.903	1.292	333.145
0.611	0.996	0.008	20337.000	0.907	256.722
0.610	0.998	0.006	14991.999	0.681	206.863

TABLA B-12

P=80kPa T=160°C (Segundos experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ
80000	936.19	158	2.443	0.739
80000	888.79	156	2.432	0.717
80000	829.53	154	2.422	0.668
80000	770.28	152	2.413	0.620
80000	711.03	157	2.444	0.585
80000	651.78	156	2.440	0.446
80000	604.37	160	2.464	0.435
80000	509.57	162	2.479	0.344
80000	438.47	162	2.481	0.336
80000	319.96	164	2.497	0.336
80000	225.16	162	2.488	0.336
	70.59			

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
158	0.22	0	101582	1.943	2.816E-05	6542.289	0.936
156	0.2	0	99620	1.972	2.842E-05	5815.368	0.942
154	0.18	0	97658	2.002	2.870E-05	5330.754	0.945
152	0.16	0	95696	2.034	2.900E-05	4603.833	0.952
157	0.14	0	93734	2.102	3.038E-05	3876.912	0.959
156	0.12	0	91772	2.142	3.088E-05	3392.298	0.963
160	0.11	0	90791	2.186	3.186E-05	2907.684	0.968
162	0.08	0	87848	2.271	3.328E-05	2180.763	0.975
162	0.07	0	86867	2.296	3.366E-05	1696.149	0.980
164	0.04	0	83924	2.389	3.520E-05	969.228	0.988
162	0.02	0	81962	2.435	3.569E-05	484.614	0.994

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{lecho} [Pa]
0.614	0.977	0.020	56966.719	2.787	260.833
0.614	0.979	0.019	53583.975	2.602	297.552
0.613	0.981	0.019	51179.131	2.465	296.684
0.613	0.983	0.018	47432.810	2.268	317.258
0.613	0.985	0.016	42209.610	2.078	335.715
0.613	0.987	0.016	39204.339	1.925	329.236
0.612	0.989	0.015	35524.548	1.784	329.975
0.612	0.991	0.013	30003.278	1.528	309.470
0.611	0.993	0.011	26298.605	1.343	284.001
0.611	0.996	0.009	19367.572	1.004	234.253
0.610	0.998	0.006	13624.593	0.701	183.171

TABLA B-13

P=67kPa T=120°C (Segundos experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ
67000	1256.151	122	2.666	0.778
67000	1090.244	124	2.676	0.766
67000	1030.992	124	2.685	0.691
67000	995.440	126	2.691	0.684
67000	912.487	125	2.698	0.648
67000	853.235	128	2.708	0.578
67000	793.982	127	2.706	0.513
67000	764.356	130	2.714	0.397
67000	634.001	126	2.707	0.256
67000	491.795	124	2.693	0.209
67000	314.038	122	2.698	0.209
67000	195.533	120	2.663	0.209

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	r
122	0.14		93734	1.924	2.520E-05	7996.131	0.915
124	0.1		89810	2.020	2.661E-05	6784.596	0.924
124	0.011		81079.1	2.239	2.952E-05	6057.675	0.925
126	0.05		84905	2.149	2.849E-05	5573.061	0.934
125	0.02		81962	2.221	2.936E-05	4846.140	0.941
128	0.01		80981	2.266	3.021E-05	4361.526	0.946
127		0.25	79666.75	2.298	3.055E-05	3634.605	0.954
130		0.75	79000.25	2.335	3.132E-05	3149.991	0.960
126		1	78667	2.321	3.078E-05	2423.070	0.969
124		2.25	77000.75	2.359	3.111E-05	1938.456	0.975
122		2.5	76667.5	2.357	3.090E-05	1211.535	0.984
120		4	74668	2.408	3.139E-05	726.921	0.990

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re_G	V[m/s]	ΔP_{lecho} [Pa]
0.612	0.970	0.022	70093.815	3.356	358.389
0.612	0.973	0.021	62603.716	3.038	357.507
0.611	0.973	0.021	56123.355	2.735	439.184
0.611	0.977	0.020	54641.378	2.693	423.065
0.611	0.979	0.019	50237.789	2.481	427.794
0.611	0.981	0.018	46763.086	2.343	422.679
0.610	0.984	0.017	42494.683	2.127	438.650
0.610	0.986	0.016	38888.918	1.974	459.406
0.610	0.989	0.014	34590.758	1.737	397.239
0.610	0.991	0.012	30848.777	1.535	305.827
0.609	0.994	0.010	24521.000	1.220	196.885
0.609	0.997	0.008	18884.653	0.924	127.445

TABLA B-14

P=67kPa T=140°C (Segundos experimentos)

COLUMNA					PLACA							
Pabs[Pa]	ΔPcolumna[Pa]	T[°C]	γ [m ³ /kg]	ε	T[°C]	P _{man} [kg/cm ²]	P _{vacío} [cmHg]	Pabs[Pa]	γ [m ³ /kg]	v [m ² /s]	ΔP _{placa} [Pa]	R
67000	1303.553	130	2.704	0.798	132	0.16		95696	1.934	2.607E-05	8359.592	0.913
67000	1125.796	134	2.739	0.792	131	0.14		93734	1.970	2.648E-05	7874.977	0.916
67000	948.038	135.8	2.759	0.738	140	0.1		89810	2.105	2.903E-05	6784.596	0.924
67000	841.384	138.3	2.780	0.678	144	0.08		87848	2.174	3.032E-05	6299.982	0.928
67000	770.281	139.3	2.790	0.627	144	0.05		84905	2.250	3.138E-05	5573.061	0.934
67000	675.477	142.3	2.815	0.557	150	0.03		82943	2.338	3.316E-05	4846.140	0.942
67000	616.225	142.6	2.820	0.528	150	0.01		80981	2.395	3.397E-05	4361.526	0.946
67000	533.272	138	2.791	0.356	153		1	78667	2.483	3.553E-05	3513.452	0.955
67000	402.916	141.4	2.820	0.141	148		2	77334	2.496	3.522E-05	2665.377	0.966
67000	308.112	139.9	2.814	0.114	148		2.5	76667.5	2.518	3.553E-05	1938.456	0.975
67000	177.757	137.9	2.805	0.114	144		3.5	75334.5	2.538	3.542E-05	1090.382	0.986
67000	118.5048	138.5	2.811	0.114	144		4	74668	2.560	3.573E-05	726.921	0.990

RESULTADOS					
C _D	Y	Q[m ³ /s]	Re _G	V[m/s]	ΔP _{lecho} [Pa]
0.614	0.969	0.023	69450.33	3.469	358.007
0.614	0.970	0.022	66964.55	3.383	238.138
0.614	0.973	0.022	58568.54	3.067	223.567
0.614	0.975	0.021	54894.46	2.934	183.458
0.614	0.977	0.020	50727.02	2.728	203.831
0.613	0.979	0.019	45615.17	2.523	195.146
0.613	0.981	0.019	42741.02	2.372	192.372
0.613	0.984	0.017	37652.33	2.058	210.838
0.612	0.988	0.015	33433.88	1.798	159.522
0.611	0.991	0.013	28494.93	1.520	133.608
0.610	0.995	0.009	21695.58	1.126	81.788
0.605	0.997	0.008	17703.27	0.914	55.373

TABLA B-15

P=67kPa T=160°C (Segundos experimentos)

COLUMNA				
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	v [m ³ /kg]	ϵ
67000	1054.693	153.4	2.922	0.779
67000	1030.992	158.6	2.950	0.768
67000	936.188	161.3	3.010	0.747
67000	912.487	161.8	3.011	0.717
67000	817.683	161.6	3.001	0.627
67000	758.431	160.3	2.997	0.606
67000	711.029	160.5	3.006	0.557
67000	639.926	158.4	3.002	0.356
67000	568.823	156.9	3.012	0.166
67000	426.617	152.6	3.012	0.114
67000	308.112	150.6	2.989	0.114
67000	213.309	149.1	2.993	0.114

PLACA							
T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	v [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	R
160	0.19		98639	2.011	2.930E-05	8965.359	0.909
164	0.12		91772	2.183	3.216E-05	7996.131	0.913
172	0.1		89810	2.273	3.421E-05	7511.517	0.916
172	0.09		88829	2.298	3.459E-05	6542.289	0.926
170	0.06		85886	2.367	3.544E-05	5573.061	0.935
169	0.04		83924	2.417	3.609E-05	4846.140	0.942
170	0.01		80981	2.511	3.760E-05	4361.526	0.946
169		0.5	79333.5	2.557	3.820E-05	3634.605	0.954
170		1.5	78000.5	2.607	3.905E-05	2907.684	0.963
169		2	77334	2.624	3.919E-05	1938.456	0.975
165		2.5	76667.5	2.622	3.875E-05	1211.535	0.984
165		3.5	75334.5	2.669	3.945E-05	726.921	0.990

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re _G	V[m/s]	ΔP_{lecho} [Pa]
0.611	0.968	0.024	65232.34	3.801	124.559
0.611	0.969	0.024	58446.73	3.482	158.087
0.611	0.970	0.023	54322.27	3.377	131.318
0.611	0.974	0.022	50398.36	3.146	214.338
0.610	0.977	0.021	46060.83	2.860	238.741
0.610	0.979	0.020	42601.22	2.641	263.902
0.610	0.981	0.019	39529.59	2.468	280.405
0.610	0.984	0.017	35985.97	2.227	289.087
0.609	0.987	0.016	32047.75	1.968	295.679
0.609	0.991	0.013	26247.39	1.600	245.925
0.609	0.994	0.010	21055.27	1.254	196.350
0.608	0.997	0.008	16299.05	0.957	148.285

TABLA B-16

P=58.7kPa T=120°C (Segundos experimentos)

COLUMNA					PLACA							
Pabs[Pa]	ΔPcolumna[Pa]	T[°C]	ν [m³/kg]	ε	T[°C]	P _{man} [kg/cm²]	P _{vacío} [cmHg]	Pabs[Pa]	ν [m³/kg]	v [m²/s]	ΔP _{placa} [Pa]	R
58700	1268.00	112.8	2.947	0.730	130	0.12		91772	2.007	2.69E-05	9692.280	0.894
58700	1208.75	117.3	2.985	0.724	117	0.1		89810	1.982	2.56E-05	8117.285	0.910
58700	1102.09	119.2	3.006	0.718	118	0.06		85886	2.080	2.69E-05	7511.517	0.913
58700	1066.54	120.4	3.017	0.705	122	0.04		83924	2.151	2.82E-05	6784.596	0.919
58700	1030.99	129	3.087	0.682	127	0.01		80981	2.260	3.00E-05	6299.982	0.922
58700	948.04	122.2	3.037	0.624	124	0	0.5	79333.5	2.289	3.02E-05	5573.061	0.930
58700	876.94	120.1	3.024	0.523	122		2	77334	2.337	3.06E-05	4846.140	0.937
58700	805.83	122.4	3.046	0.347	119		2.25	77000.75	2.328	3.03E-05	4119.219	0.947
58700	711.03	117.7	3.014	0.237	120		3	76001	2.365	3.08E-05	3149.991	0.959
58700	580.67	116.6	3.012	0.225	120		3.5	75334.5	2.387	3.11E-05	2301.917	0.969
58700	474.02	114.8	3.003	0.225	119		4.25	74334.75	2.413	3.14E-05	1696.149	0.977
58700	284.41	113.3	3.000	0.225	117		5.25	73001.75	2.444	3.16E-05	605.767	0.992
	189.61	111.8	2.993	0.225	117		5.5	72668.5	2.455	3.17E-05	242.307	0.997

RESULTADOS					
C _D	Y	Q[m³/s]	Re _G	V[m/s]	ΔP _{lecho} [Pa]
0.612	0.962	0.025	73839.903	2.007	131.413
0.612	0.968	0.023	70589.471	1.982	221.669
0.611	0.969	0.022	66065.242	2.080	224.210
0.611	0.971	0.022	60981.590	2.151	294.147
0.611	0.972	0.021	56484.424	2.260	331.332
0.611	0.975	0.020	53449.383	2.289	348.623
0.611	0.978	0.019	50242.807	2.337	378.282
0.610	0.981	0.017	46898.604	2.328	376.662
0.610	0.985	0.015	40811.060	2.365	393.205
0.610	0.989	0.013	34864.089	2.387	351.192
0.609	0.992	0.011	30036.124	2.413	308.745
0.608	0.997	0.007	18073.270	2.444	226.858
0.608	0.999	0.004	11417.353	2.455	166.830

TABLA B-17

P=58.7kPa T=140°C (Segundos experimentos)

COLUMNA					PLACA							
Pabs[Pa]	ΔPcolumna[Pa]	T[°C]	ν [m ³ /kg]	ε	T[°C]	P _{man} [kg/cm ²]	P _{vacío} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP _{placa} [Pa]	R
58700	1208.75	134.3	3.119	0.773	128	0.1		95696	2.041	2.72E-05	8965.36	0.900
58700	1102.09	131.2	3.101	0.747	134	0.06		89810	2.169	2.94E-05	7996.13	0.907
58700	1042.84	142.7	3.194	0.722	143	0.04		85886	2.271	3.16E-05	7269.21	0.913
58700	995.44	145.6	3.220	0.672	146	0		83924	2.401	3.37E-05	6542.29	0.918
58700	924.34	136.8	3.154	0.641	146	0	0.5	80000	2.401	3.37E-05	5573.06	0.930
58700	888.79	144.3	3.215	0.616	148		1	79333.5	2.413	3.40E-05	5088.45	0.936
58700	817.68	139.9	3.184	0.381	148		2.25	78667	2.413	3.40E-05	4361.53	0.945
58700	746.58	139.7	3.187	0.345	149		2.5	77000.75	2.419	3.42E-05	3634.61	0.955
58700	699.18	140.9	3.199	0.282	152		3	76667.5	2.437	3.48E-05	3149.99	0.961
58700	616.22	141.2	3.205	0.258	148		3.75	76001	2.414	3.41E-05	2423.07	0.970
58700	509.57	139.8	3.200	0.258	150		4	75001.25	2.426	3.44E-05	1696.15	0.979
58700	343.66	136.3	3.181	0.258	146		5	74668	2.403	3.37E-05	726.92	0.991
	201.46	131.1	3.147	0.258	145		6	73335	2.397	3.35E-05	242.31	0.997

RESULTADOS						
C _D	Y	Q[m ³ /s]	Re _G	V[m/s]	ΔP _{techo} [Pa]	
0.612	0.965	0.024	70812.22	4.017	109.96	
0.611	0.967	0.024	63729.67	3.665	181.74	
0.611	0.969	0.023	62169.23	3.526	215.88	
0.611	0.971	0.022	52912.05	3.283	284.47	
0.611	0.975	0.021	48815.49	2.955	326.26	
0.610	0.977	0.020	46260.26	2.853	332.73	
0.610	0.981	0.019	42809.88	2.568	342.94	
0.610	0.984	0.017	38908.30	2.340	349.37	
0.610	0.986	0.016	35779.63	2.163	354.89	
0.609	0.989	0.014	31867.60	1.891	346.73	
0.609	0.992	0.012	26433.09	1.573	321.19	
0.608	0.997	0.008	17559.78	1.013	262.12	
0.608	0.999	0.004	10164.79	0.569	174.46	

TABLA B-18

P=58.7kPa T=160°C (Segundos experimentos)

COLUMNA					PLACA							
Pabs[Pa]	$\Delta P_{columna}$ [Pa]	T[°C]	ν [m ³ /kg]	ϵ	T[°C]	P_{man} [kg/cm ²]	P_{vacio} [cmHg]	Pabs[Pa]	ν [m ³ /kg]	v [m ² /s]	ΔP_{placa} [Pa]	R
58700	1102.09	154.2	3.281	0.777	160	0.16		95696	2.073	3.02E-05	9934.59	0.896
58700	1042.84	149.6	3.249	0.744	149	0.1		89810	2.152	3.04E-05	9207.67	0.897
58700	995.44	155.6	3.298	0.731	168	0.09		88829	2.277	3.39E-05	8238.44	0.907
58700	971.74	157.8	3.317	0.716	169	0.04		83924	2.417	3.61E-05	7269.21	0.913
58700	936.19	156.2	3.306	0.682	165	0.02		81962	2.452	3.62E-05	6542.29	0.920
58700	853.23	153.9	3.293	0.661	170	0		80000	2.542	3.81E-05	5573.06	0.930
58700	805.83	156.7	3.317	0.611	161		1	78667	2.531	3.70E-05	4846.14	0.938
58700	746.58	153.3	3.294	0.543	164		2	77334	2.594	3.82E-05	4119.22	0.947
58700	663.63	152.6	3.293	0.382	165		2.5	76667.5	2.622	3.88E-05	3149.99	0.959
58700	580.67	152.1	3.294	0.322	167		3	76001	2.658	3.95E-05	2423.07	0.968
58700	485.87	150.4	3.286	0.300	168		4.5	74001.5	2.736	4.08E-05	1696.15	0.977
58700	296.26	147.9	3.276	0.300	167		5	73335	2.755	4.09E-05	726.92	0.990
	189.61	144.4	3.254	0.300	164		5.5	72668.5	2.761	4.07E-05	242.31	0.997

RESULTADOS					
C_D	Y	Q[m ³ /s]	Re_g	V[m/s]	ΔP_{lecho} [Pa]
0.612	0.963	0.026	67634.74	4.406	154.47
0.611	0.964	0.025	65838.83	4.123	68.57
0.611	0.967	0.024	57459.88	3.860	35.62
0.611	0.969	0.024	52222.69	3.546	166.35
0.611	0.972	0.023	49698.99	3.337	220.81
0.610	0.975	0.021	44431.30	3.022	264.01
0.610	0.978	0.020	42880.26	2.830	292.87
0.610	0.981	0.018	39059.28	2.545	328.73
0.610	0.985	0.016	34005.27	2.212	347.99
0.609	0.989	0.014	29580.24	1.924	341.83
0.609	0.992	0.012	24635.82	1.566	327.29
0.608	0.996	0.008	16169.31	1.017	229.14
0.607	0.999	0.005	9431.54	0.581	167.59

