

Table (1). Experimental conditions, used in the study of sublimation of circular geometry, and values of experimental and theoretical “ h_{sub} ” by different models

$T_w(^{\circ}\text{C})$	$A(\text{m}^2)$	$m_{\text{ini}}(\text{kg})$	$m_{\text{fin}}(\text{kg})$	$\frac{\overline{dm}}{dt}$ (g/s)	$\overline{h}_{\text{exp.}}$ (W/m ² K)	$\overline{h}_{\text{Linear gradient}}$ (W/m ² K)	$\overline{h}_{\text{Leidenfrost}}$ (W/m ² K)	$\overline{h}_{\text{Cubic}}$ (W/m ² K)
Temperature effect (D=89 mm)								
-30	0.0062	0.240	0.093	0.062	117.33	124.85	122.40	123.85
-24	0.0062	0.212	0.088	0.066	111.15	118.49	116.62	117.92
-18	0.0062	0.217	0.089	0.074	112.26	116.08	114.84	116.05
-12	0.0062	0.209	0.071	0.079	109.04	110.18	110.09	111.17
0	0.0062	0.248	0.139	0.085	99.76	117.15	116.52	109.08
50	0.0062	0.252	0.102	0.121	87.79	102.70	105.47	105.78
100	0.0062	0.252	0.081	0.147	75.94	93.99	99.36	80.62
150	0.0062	0.221	0.073	0.180	72.31	87.26	94.25	75.85
200	0.0062	0.256	0.099	0.213	70.01	88.78	97.09	80.40
Temperature effect (D=60 mm)								
50	0.0028	0.105	0.052	0.081	126.32	124.66	127.55	127.88
100	0.0028	0.105	0.050	0.091	102.61	116.83	122.22	121.82
150	0.0028	0.106	0.029	0.106	94.54	105.87	114.75	113.73
200	0.0028	0.107	0.032	0.124	89.72	103.23	113.73	112.05
Average relative absolute error, % of whole table						12.72	16.73	10.60

$A(m^2)$	$m_{ini}(kg)$	$m_{fin}(kg)$	$-\frac{\overline{dm}}{dt}$ (g/s)	$\overline{h}_{exp.}$ (W/m ² K)	$\overline{h}_{Linear\ gradient}$ (W/m ² K)	$\overline{h}_{Leidenfrost}$ (W/m ² K)	\overline{h}_{Cubic} (W/m ² K)
Weight effect (D=89 mm, T=100 °C)							
0.0062	0.252	0.081	0.148	75.95	94.00	99.36	80.62
0.0062	0.447	0.256	0.189	95.93	115.37	120.94	119.93
0.0062	0.633	0.407	0.200	104.16	128.18	133.85	132.81
0.0062	0.867	0.648	0.219	112.51	140.86	146.95	145.79
Weight effect (D=89 mm, T=200 °C)							
0.0062	0.256	0.099	0.213	70.01	88.78	97.09	80.40
0.0062	0.737	0.577	0.300	99.12	125.55	135.51	133.50
0.0062	0.856	0.702	0.331	107.99	130.83	141.33	139.19
0.0062	1.189	1.054	0.354	116.71	143.68	154.94	152.68
Weight effect (D=60 mm, T=200 °C)							
0.0028	0.107	0.032	0.124	89.72	103.23	113.73	112.05
0.0028	0.189	0.137	0.149	108.58	131.42	141.90	139.81
0.0028	0.255	0.177	0.164	117.04	140.25	151.80	149.51
0.0028	0.299	0.246	0.170	123.20	149.59	161.41	159.01
Average relative absolute error, % of whole table					22.28	31.10	25.66

Table (2). Experimental conditions, used in the study of sublimation of circular geometry, and values of experimental and theoretical “ h_{sub} ” by different models

Table (3). Comparison of the accuracy of different model, in respect to experimental data

	Experimental	Linear gradient	Leidenfrost	Cubic
Average relative absolute error, % of whole data set	-	17.31	23.63	17.83
Maximum and minimum values of \overline{h}_{sub}	126.3-70.0	149.6 - 87.3	161.4 - 94.2	159 - 75.8