

Table s1 - Coefficients of determination (R^2), Chi-square test (X^2) and root mean squared error (RMSE) for the ten mathematical models used to describe the drying process of sweet potato slices (BDI) (1, 2 and 3mm thick) subjected to temperatures of 50, 60 and 70°C.

MODELS	THICKNES S (mm)	R^2			X^2			RMSE		
		50	60	70	50	60	70	50	60	70
Newton Model	1	0.99828	0.99887	0.99899	0.00033	0.00028	0.00028	0.01824	0.01681	0.01673
	2	0.99828	0.99860	0.99965	0.00033	0.00032	0.00008	0.01824	0.01784	0.00890
	3	0.99830	0.99823	0.99763	0.00044	0.00037	0.00055	0.01938	0.01936	0.02343
Page Model	1	0.99997	0.99998	0.99996	0.00001	0.00001	0.00001	0.00247	0.00249	0.00370
	2	0.99997	0.99966	0.99983	0.00001	0.00009	0.00004	0.00247	0.00940	0.00668
	3	0.99877	0.99907	0.99774	0.00029	0.00021	0.00058	0.01711	0.01453	0.02411
Henderson and Pabbis Model	1	0.99831	0.99889	0.99900	0.00036	0.00032	0.00033	0.01903	0.01801	0.01823
	2	0.99831	0.99868	0.99965	0.00036	0.00034	0.00009	0.01903	0.01840	0.00946
	3	0.99832	0.99832	0.99764	0.00040	0.00038	0.00061	0.01999	0.01951	0.02465
EDT Model	1	0.99824	0.90098	0.99896	0.00038	0.02740	0.00034	0.01941	0.16554	0.01856
	2	0.99565	0.99855	0.99963	0.00105	0.00037	0.00010	0.03233	0.01926	0.00977
	3	0.99826	0.99818	0.99766	0.00041	0.00041	0.00060	0.02030	0.02031	0.02451
Thompson Model	1	0.99828	0.99887	0.99899	0.00037	0.00033	0.00034	0.01922	0.01816	0.01833
	2	0.99572	0.99860	0.99965	0.00103	0.00036	0.00009	0.03207	0.01892	0.00951
	3	0.99830	0.99823	0.99763	0.00040	0.00040	0.00061	0.02012	0.02004	0.02470
Wong and Sing Model	1	0.57797	0.85366	0.90589	0.07155	0.03949	0.02980	0.26750	0.19872	0.17263
	2	0.57797	0.89945	0.82276	0.07155	0.02447	0.04174	0.26750	0.15642	0.20431
	3	0.96422	0.93738	0.97144	0.00836	0.01375	0.00725	0.09141	0.11725	0.08514
Midilly and Kucuk Model	1	0.59179	0.67246	0.70148	0.06982	0.09569	0.10549	0.26423	0.30935	0.32479
	2	0.59179	0.75269	0.67569	0.07854	0.06347	0.08192	0.28026	0.25192	0.28621
	3	0.85369	0.81496	0.86738	0.03493	0.04099	0.03586	0.18690	0.20245	0.18937
Logarithmic Model	1	0.99850	0.99911	0.99927	0.00036	0.00031	0.00030	0.01901	0.01760	0.01738
	2	0.99850	0.99897	0.99973	0.00036	0.00030	0.00008	0.01901	0.01737	0.00898
	3	0.99894	0.99870	0.99846	0.00027	0.00032	0.00045	0.01651	0.01781	0.02111
Diffusion Approximation Model	1	0.99828	0.99998	0.99995	0.00042	0.00001	0.00002	0.02039	0.00294	0.00457
	2	0.99953	0.99970	0.99965	0.00013	0.00009	0.00011	0.01124	0.00938	0.01027
	3	0.99899	0.99925	0.99766	0.00026	0.00018	0.00068	0.01610	0.01355	0.02600
Two Terms Model	1	0.99831	0.99889	0.99900	0.00047	0.00049	0.00055	0.02158	0.02206	0.02353
	2	0.99831	0.99868	0.99965	0.00047	0.00045	0.00013	0.02158	0.02125	0.01119
	3	0.99832	0.99832	0.99764	0.00047	0.00044	0.00078	0.02173	0.02107	0.02795

Table s2 - Coefficients of determination (R^2), Chi-square test (X^2) and root mean squared error (RMSE) for the ten mathematical models used to describe the drying process of sweet potato slices (BDII) (1, 2 and 3mm thick) subjected to temperatures of 50, 60 and 70°C.

MODELS	THICKNES S (mm)	R ²			X ²			RMSE		
		50	60	70	50	60	70	50	60	70
Newton Model	1	0.99863	0.99721	0.99987	0.00029	0.00064	0.00003	0.01704	0.02528	0.00560
	2	0.99834	0.99774	0.99991	0.00038	0.00048	0.00002	0.01942	0.02200	0.00399
	3	0.99956	0.99937	0.99646	0.00009	0.00013	0.00071	0.00926	0.01119	0.02664
Page Model	1	0.99961	0.99987	0.99997	0.00009	0.00003	0.00001	0.00954	0.00583	0.00308
	2	0.99936	0.99964	0.99993	0.00016	0.00009	0.00001	0.01256	0.00928	0.00383
	3	0.99956	0.99971	0.99662	0.00009	0.00006	0.00072	0.00953	0.00789	0.02685
Henderson and Pabbis Model	1	0.99872	0.99751	0.99987	0.00030	0.00063	0.00004	0.01728	0.02514	0.00604
	2	0.99847	0.99788	0.99991	0.00038	0.00050	0.00002	0.01948	0.02247	0.00420
	3	0.99959	0.99941	0.99651	0.00008	0.00013	0.00074	0.00919	0.01120	0.02728
EDT Model	1	0.99858	0.99714	0.99997	0.00033	0.00073	0.00001	0.01820	0.02699	0.00314
	2	0.99829	0.99768	0.99993	0.00043	0.00055	0.00001	0.02062	0.02352	0.00369
	3	0.99964	0.99933	0.99657	0.00008	0.00014	0.00073	0.00870	0.01189	0.02703
Thompson Model	1	0.87796	0.91312	0.76541	0.02668	0.02116	0.05903	0.16334	0.14547	0.24295
	2	0.95721	0.84207	0.50600	0.01039	0.03469	0.07621	0.10195	0.18624	0.27607
	3	0.90285	0.89199	0.91062	0.01927	0.02162	0.01824	0.13883	0.14705	0.13504
Wong and Sing Model	1	0.99863	0.99721	0.99987	0.00032	0.00071	0.00004	0.01788	0.02665	0.00605
	2	0.99834	0.99774	0.99992	0.00041	0.00054	0.00002	0.02028	0.02320	0.00397
	3	0.99956	0.99937	0.99646	0.00009	0.00013	0.00075	0.00953	0.01156	0.02746
Midilly and Kucuk Model	1	0.75448	0.76956	0.61402	0.05572	0.05841	0.10654	0.23605	0.24168	0.32641
	2	0.83624	0.71516	0.58527	0.04105	0.06553	0.07577	0.20261	0.25599	0.27526
	3	0.79721	0.78797	0.80392	0.04037	0.04298	0.04029	0.20094	0.20732	0.20071
Logarithmic Model	1	0.99896	0.99795	0.99996	0.00027	0.00059	0.00001	0.01641	0.02421	0.00374
	2	0.99910	0.99812	0.99992	0.00025	0.00050	0.00002	0.01570	0.02245	0.00440
	3	0.99970	0.99949	0.99679	0.00007	0.00012	0.00073	0.00822	0.01074	0.02701
Diffusion Approximatio n Model	1	0.99968	0.99987	0.99997	0.00008	0.00004	0.00001	0.00911	0.00621	0.00337
	2	0.99951	0.99964	0.99993	0.00013	0.00010	0.00002	0.01161	0.00976	0.00391
	3	0.99964	0.99979	0.99657	0.00008	0.00005	0.00078	0.00897	0.00689	0.02791
Two Terms Model	1	0.99872	0.99751	0.99987	0.00037	0.00081	0.00005	0.01932	0.02851	0.00740
	2	0.99847	0.99788	0.99993	0.00046	0.00065	0.00002	0.02154	0.02548	0.00418
	3	0.99959	0.99941	0.99651	0.00010	0.00014	0.00085	0.00978	0.01204	0.02917

Table s3 - Parameters obtained from the models adjusted to the drying data of BD I (sweet potato I), at temperatures of 50, 60 and 70°C for thicknesses of 1, 2 and 3 mm.

MODELS	mm Ø	Temperatures					
		50°C		60°C		70°C	
Newton Model	1	K = 0.0645	R ² =0.99863	K =0.0677	R ² =0.99721	K =0.074	R ² =0.99987
	2	K=0.06453	R ² =0.99828	K=0.03729	R ² =0.99860	K=0.05797	R ² =0.99965
	3	K=0.0156	R ² =0.9983	K=0.0171	R ² =0.9982	K=0.0213	R ² =0.9976
Page Model	1	K= 0.025990	R ² =0.999972	K=0.032860	R ² =0.999980	K=0.035890	R ² =0.999960
		n=1.298149		n=1.239100		n=1.243120	
	2	K=0.02599	R ² =0.99997	K=0.02259	R ² =0.99966	K=0.04595	R ² =0.99983
		n=1.29815		n=1.14426		n=1.07358	
	3	K=0.0116	R ² =0.9988	K=0.0111	R ² =0.9988	K=0.0186	R ² =0.9988
		n=1.0712		n=1.1041		n=1.0344	
Henderson and Pabbis Model	1	K=0.064898	R ² =0.998313	K=0.067980	R ² =0.998890	K=0.074210	R ² =0.999000
		a=1.007948		a=1.005610		a=1.004270	
	2	K=0.06490	R ² =0.99831	K=0.03769	R ² =0.99868	K=0.05809	R ² =0.99965
		a=1.00795		a=1.01171		a=1.00260	
	3	K=0.0157	R ² =0.99832	K=0.0174	R ² =0.99834	K=0.0212	R ² =0.99764
		a=1.0063		a=1.0139		a=0.9960	
EDT Model	1	K=15.86238	R ² =0.99824	K=1.558555	R ² =0.90098	K=15.54347	R ² =0.99896
		a=0.004055		a=1.805996		a=0.004740	
	2	K=13.43303	R ² =0.99565	K=9.52189	R ² =0.99855	K=9.18725	R ² =0.99963
		a=0.00306		a=0.00390		a=0.00628	
	3	K=3.5160	R ² =0.9983	K=4.8602	R ² =0.9982	K=1.3422	R ² =0.9977
		a=0.0044		a=0.0035		a=0.0156	
Thompson Model	1	a= -3096.10	R ² =0.99828	a= -2705.06	R ² =0.99887	a= -2981.05	R ² =0.99899
		b=14.136079		b=13.534153		b=14.85351	
	2	a=-2916.790	R ² =0.99572	a=-3588.700	R ² =0.99860	a=-4033.050	R ² =0.99965
		b=10.96847		b=11.56873		b=15.29068	
	3	a=-4673.940	R ² =0.9983	a=-4633.770	R ² =0.9982	a=-3290.360	R ² =0.9976
		b=8.5467		b=8.8996		b=8.3733	
Wong and Sing	1	a=-0.016769	R ² =0.577966	a=-0.025200	R ² =0.85366	a=-0.030060	R ² =0.905890

Model		b=0.000057		b=0.000130		b=0.000189	
	2	a=-0.01677		a=-0.01710		a=-0.02119	
		b=0.00006	R ² =0.57797	b=0.00006	R ² =0.89945	b=0.00009	R ² =0.82276
	3	a=-0.0088		a=-0.0086		a=-0.0128	
		b=0.0000	R ² =0.9642	b=0.0000	R ² =0.9374	b=0.0000	R ² =0.9714
Midilly and Kucuk Model	1	K=-0.053168		K=-0.066810		K=-0.020106	
		a=0.354268		a=0.448581		a=0.514427	
		b=-0.002237	R ² =0.591792	b=-0.004531	R ² =0.672460	b=-0.006171	R ² =0.701480
	2	K=-0.05317		K=-0.12802		K=-0.16059	
		a=0.35427		a=0.47142		a=0.39657	
		b=-0.00224	R ² =0.59179	b=-0.00351	R ² =0.75269	b=-0.00364	R ² =0.67569
	3	K=-0.0018		K=-0.1591		K=-0.1109	
		a=0.6329		a=0.4984		a=0.5884	
		b=-0.0024	R ² =0.8537	b=-0.0020	R ² =0.8150	b=-0.0036	R ² =0.8674
Logarithmic Model	1	K=0.063616		K=0.066093		K=0.071710	
		a=1.014617		a=1.014681		a=1.015200	
		c=-0.007264	R ² =0.998504	c=-0.009917	R ² =0.999110	c=-0.011800	R ² =0.999270
	2	K=0.06362		K=-0.01173		K=0.05717	
		a=1.01462		a=1.02135		a=1.00750	
		c=-0.00726	R ² =0.99850	c=-0.03656	R ² =0.99897	c=-0.00557	R ² =0.99973
	3	K=0.0149		K=0.0167		K=0.0198	
		a=1.0188		a=1.0227		a=1.0140	
		c=0.0149	R ² =0.9989	c=-0.0136	R ² =0.9987	c=-0.0259	R ² =0.9985
Diffusion Approximation Model	1	K=0.645320		K=0.114830		K=0.124964	
		a=0.366554		a=-4.50600		a=-124.8100	
		b=0.999989	R ² =0.998280	b=0.992000	R ² =0.999980	b=0.994513	R ² =0.999950
	2	K=0.07594		K=0.05762		K=0.05797	
		a=-184.8380		a=-137.1040		a=0.28074	
		b=0.99600	R ² =0.99953	b=0.99637	R ² =0.99970	b=0.99993	R ² =0.99965
	3	K=0.0221		K=0.0255		K=0.5663	
			R ² =0.9990		R ² =0.9993		R ² =0.9977

Two Terms Model		a=-154.1890		a=-97.5674		a=0.0149	
		b=0.9976		b=0.9955		b=0.0370	
	1	K=0.064906	R ² =0.998310	K=0.067977	R ² =0.998890	K=0.074213	R ² =0.999000
		a=0.503975		a=0.502804		a=0.501932	
		b=0.503975		b=0.502804		b=0.502335	
		K1=0.064894		K1=0.067977		K1=0.074213	
	2	K=0.06491	R ² =0.99831	K=0.03769	R ² =0.99868	K=0.58089	R ² =0.99965
		a=0.50398		a=0.50586		a=0.50131	
		b=0.50398		b=0.50586		b=0.50131	
		K1=0.06489		K1=0.03769		K1=0.58089	
	3	K=0.0157	R ² =0.9983	K=0.0174	R ² =0.9983	K=0.0212	R ² =0.9976
		a=0.5031		a=0,5068		a =0,4980	
		b=0.5032		b=0,5071		b=0,4980	
		K1=0.0157		K1=0,0174		K1=0,0212	

*a, b, c, k e k1, are constants of the adjusted models.

**R² is the coefficient of determination of the fitted model.

Table s4 - Parameters obtained from the models adjusted to the drying data of BD II (sweet potato II), at temperatures of 50, 60 and 70°C for thicknesses of 1, 2 and 3 mm.

MODELS	mm Ø	Temperatures					
		50°C		60°C		70°C	
Newton Model	1	K=0.0307	R ² =0.9986	K=0.0308	R ² =0.9972	K=0.0929	R ² =0.9999
	2	K=0.0198	R ² =0.9983	K=0.0386	R ² =0.9977	K=0.0711	R ² =0.9999
	3	K=0.01333	R ² =0.99956	K=0.01754	R ² =0.9994	K=0.01430	R ² =0.9965

Page Model	1	K= 0.0188	R ² =0.9996	K= 0.0134	R ² =0.9999	K= 0.0683	R ² =0.9999
		n=1.1345		n=1.2311		n=1.1073	
	2	K= 0.0125	R ² =0.9994	K= 0.0188	R ² =0.9996	K= 0.0770	R ² =0.9999
		n=1.1151		n=1.2091		n=0.9737	
	3	K= 0.01342	R ² =0.99956	K= 0.01336	R ² =0.9997	K=0.01192	R ² =0.9966
		n=0.99850		n=1.06636		n=1.04178	
Henderson and Pabbis Model	1	K=0.0310	R ² =0.9987	K=0.0315	R ² =0.9975	K=0.0929	R ² =0.9999
		a=1.0133		a=1.0243		a=1.0008	
	2	K=0.0201	R ² =0.9985	K=0.0392	R ² =0.9979	K=0.0711	R ² =0.9999
		a=1.0158		a=1.0163		a=0.9993	
	3	K=0.01321	R ² =0.99959	K=0.01772	R ² =0.9994	K=0.01414	R ² =0.9965
		a=0.99210		a=1.0090		a=0.99038	
EDT Model	1	K=8.4566	R ² =0.9986	K=10.9597	R ² =0.9971	K=0.1117	R ² =0.9999
		a=0.0036		a=0.0028		a=1.5766	
	2	K=5.9522	R ² =0.9983	K=10.5356	R ² =0.9977	K=1.4051	R ² =0.9999
		a=0.0033		a=0.0036		a=0.0487	
	3	K=0.69896	R ² =0.99964	K=4.18926	R ² =0.9993	K=0.59907	R ² =0.9966
		a=0.01866		a=0.00417		a=0.02324	
Thompson Model	1	a=-3432.74	R ² =0.9986	a=-3930.14	R ² =0.9972	a=-2841.6	R ² =0.9999
		b=10.2582		b=11.0070		b=16.245	
	2	a=-3693.02	R ² =0.9983	a=-4218.55	R ² =0.9977	a=-45.133	R ² =0.9999
		b=8.5523		b=12.762		b=1.8089	
	3	a=-3316.05	R ² =0.99956	a=-4282.55	R ² =0.9994	a=-4176.3	R ² =0.9965
		b=6.6495		b=8.6682		b=7.7275	
Wong and Sing Model	1	a=-0.0134	R ² =0.8780	a=-0.0148	R ² =0.9131	a=-0.0262	R ² =0.7654
		b=0.000		b=0.000		b=0.000	
	2	a=-0.0109	R ² =0.9572	a=-0.0156	R ² =0.8421	a=-0.0167	R ² =0.5060
		b=0.0000		b=0.0001		b=0.0001	
	3	a=-0.0061	R ² =0.90285	a=-0.0078	R ² =0.8919	a=-0.0068	R ² =0.9106
		b=0.0000		b=0.0000		b=0.0000	

Midilly and Kucuk Model	1	K=-0.1002	R ² =0.7545	K=-0.0055	R ² =0.7696	K=-0.1208	R ² =0.6140
		a=0.4723		a=0.5515		a= 0.3757	
		b=-0.0027		b=-0.0032		b=-0.0041	
	2	K=-0.0499	R ² =0.8362	K=-0.0028	R ² =0.7152	K=-0.0846	R ² =0.5853
		a= 0.5896		a= 0.4403		a= 0.3330	
		b=-0.0028		b=-0.1091		b=-0.0022	
	3	K=-0.06656	R ² =0.79721	K=-0.03167	R ² =0.7879	K=-0.0797	R ² =0.8039
		a=0.51943		a=0.52864		a=0.52210	
		b=-0.00144		b=-0.00174		b=-0.0016	
Logarithmic Model	1	K=0.0303	R ² =0.9990	K=0.0304	R ² =0.9980	K=0.0912	R ² =0.9999
		a=1.0211		a= 1.0360		a= 1.0061	
		c=-0.0100		c=-0.0145		c=-0.0056	
	2	K=0.0191	R ² =0.9991	K=0.0382	R ² =0.9981	K=0.0712	R ² =0.9999
		a= 1.0291		a= 1.0244		a= 0.9986	
		c=-0.0195		c=-0.0096		c=0.0007	
	3	K=0.01292	R ² =0.9997	K=0.01742	R ² =0.9995	K=0.01365	R ² =0.9968
		a= 0.99590		a= 1.01270		a=0.99753	
		c=-0.00702		c=-0.00593		c=-0.0118	
Diffusion Approximation Model	1	K=0.0473	R ² =0.9997	K=0.0533	R ² =0.9999	K=0.1297	R ² =0.9999
		a=-125.066		a=-157.044		a=-50.641	
		b=0.9961		b=0.9959		b=0.9923	
	2	K=0.0300	R ² =0.9995	K=0.0643	R ² =0.9996	K=0.0685	R ² =0.9999
		a=-156.656		a=-166.073		a=0.9513	
		b=0.9971		b=0.9963		b=26.000	
	3	K=0.45100	R ² =0.99964	K=0.02455	R ² =0.9998	K=0.56856	R ² =0.9966
		a= 0.01864		a=-86.6835		a=0.02326	
		b=0.02891		b=0.99589		b=0.02448	
Two Terms Model	1	K=0.0310	R ² =0.9987	K=0.0315	R ² =0.9975	K=0.0929	R ² =0.9999
		a= 0.5067		a= 0.5121		a= 0.5004	
		b=0.5067		b=0.5121		b=0.5004	

		K1=0.0310		K1=0.0315		K1=0.0929	
	2	K=0.0201	R ² =0.9985	K=0.0392	R ² =0.9979	K=0.0685	R ² =0.9999
		a=0.5079		a= 0.5082		a= 0.9513	
		b=0.5079		b=0.5082		b=0.0487	
		K1=0.0201		K1=0.0392		K1=1.6000	
	3	K=0.01321	R ² =0.99959	K=0.01772	R ² =0.9994	K=0.01414	R ² =0.9965
		a= 0.48897		a= 0.50624		a=0.49502	
		b=0.50309		b=0.50273		b=0.49536	
		K1=0.0132		K1=0.0177		K1=0.01414	

*a, b, c, k e k1, are constants of the adjusted models.

**R² is the coefficient of determination of the fitted model.