

Polysomatism in högbomite: The crystal structures of 10*T*, 12*H*, 14*T*, and 24*R* polysomes
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Appendix 1: Observed and calculated F-values of högbomite-24*R*.

h	k	l	F(obs)	s (Fobs)	F(calc)
-1	2	0	262.3417	1.4668	262.1820
0	3	0	191.5251	0.9063	190.5291
-2	4	0	791.5708	6.5069	802.7292
-1	5	0	150.6873	0.8440	147.4857
-3	6	0	146.8710	1.9209	145.7683
0	6	0	415.2779	2.6612	413.8264
-2	7	0	94.0707	0.8276	91.1537
-4	8	0	331.7093	1.5278	329.4506
-1	8	0	97.9746	0.8699	99.4403
-3	9	0	79.1298	1.1850	78.0504
-5	10	0	93.0960	1.3550	94.8863
-1	1	1	47.1612	0.6362	48.7516
0	2	1	9.0097	4.2891	2.2401
-2	3	1	10.4552	2.9046	9.6254
-4	4	1	9.9827	5.5506	10.7855
-1	4	1	19.0330	1.4728	21.8545
-3	5	1	35.3784	1.0123	34.8151
0	5	1	11.6796	4.7809	5.2935
-5	6	1	6.9978	4.7690	5.3664
-2	6	1	14.0391	4.0048	13.9671
-7	7	1	24.9538	3.1010	22.1344
-4	7	1	11.2460	4.1974	3.6173
-1	7	1	7.0342	5.1083	12.2052
-6	8	1	2.7673	6.4061	6.6690
-3	8	1	5.9736	2.8013	
0	8	1	16.6962	5.8663	13.5207
-8	9	1	6.6865	6.4574	-0.3716
-5	9	1	16.7375	5.1318	14.6919

Appendix 1: Observed and calculated F-values of hogbomite-24R

-2	9	1	2.7022	6.4190	-0.2663
-7	10	1	10.8512	7.5785	-2.4011
-4	10	1	19.9575	4.1400	9.7174
0	1	2	54.2013	0.6367	-54.1969
-2	2	2	17.4924	3.4921	20.7192
-1	3	2	17.9340	1.4028	-16.1085
-3	4	2	31.7440	1.0811	-28.7896
0	4	2	6.6109	5.1716	
-5	5	2	3.6707	7.0683	-2.2234
-2	5	2	33.9304	1.4008	-33.8751
-4	6	2	4.7034	6.6988	-1.2774
-1	6	2	9.0970	5.7319	-13.7567
-6	7	2	23.8967	2.7774	-24.4369
-3	7	2	13.4280	6.6141	-5.4682
0	7	2	26.3213	3.0559	-27.2475
-8	8	2	20.5421	6.1797	-7.6816
-5	8	2	17.2656	4.7300	-19.6539
-2	8	2	6.2489	7.0774	-4.6181
-7	9	2	4.7328	6.3992	-2.3704
-4	9	2	24.9283	3.1321	-24.7294
-1	9	2	15.2007	6.0791	-9.8024
-6	10	2	7.3848	6.5489	-7.1569
-3	10	2	12.4906	7.0830	-14.6656
0	0	3	3.7941	2.1797	-2.8572
-1	2	3	15.7580	2.3906	-10.8394
-3	3	3	14.8909	4.4018	8.7531
0	3	3	21.1303	4.4983	-19.7904
-2	4	3	2.5701	6.3931	0.2884
-4	5	3	18.5795	2.2167	-18.7957
-1	5	3	9.0351	5.8162	-2.5484
-6	6	3	7.8172	7.2466	3.8971
-3	6	3	13.1326	5.8765	-15.8719

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0	6	3	15.9067	6.7960	5.9972
-5	7	3	12.7683	4.7796	10.7566
-2	7	3	12.1445	5.5958	-9.3265
-7	8	3	12.6379	6.4287	-10.9199
-4	8	3	9.8224	7.0837	7.3353
-1	8	3	6.1965	6.4280	-5.2629
-6	9	3	12.8643	5.1314	-5.3483
-3	9	3	11.6901	6.1991	5.3818
-5	10	3	13.6528	7.4702	-10.1042
-1	1	4	22.1839	5.4560	-13.3975
0	2	4	340.1362	1.0177	341.1125
-2	3	4	79.8729	0.7966	79.0159
-4	4	4	268.2338	1.9093	266.0908
-1	4	4	4.4227	5.5084	-1.1756
-3	5	4	39.0897	1.3841	-40.2762
0	5	4	69.1977	1.1582	68.4076
-5	6	4	26.7124	2.4530	24.1649
-2	6	4	204.1686	1.2203	202.3719
-7	7	4	30.6201	2.6351	-31.7023
-4	7	4	47.4444	1.3791	47.9494
-1	7	4	15.7676	4.3960	-16.1938
-6	8	4	145.0898	1.5983	139.0815
-3	8	4	6.1235	7.0436	1.8927
0	8	4	107.6351	3.6047	104.2390
-8	9	4	23.5681	4.2942	25.8998
-5	9	4	17.9833	6.3068	-21.4646
-2	9	4	46.9904	2.8621	48.8878
-7	10	4	5.9737	13.2896	
-4	10	4	95.9772	1.3276	93.7662
0	1	5	99.9247	0.8481	-98.9888
-2	2	5	50.1719	0.7737	45.9985
-1	3	5	37.6592	0.7533	-37.2997

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	4	5	43.5066	1.0154	-44.0841
0	4	5	8.0598	7.8531	-1.0696
-5	5	5	23.1913	2.5595	-24.3857
-2	5	5	58.3882	0.9967	-62.4107
-4	6	5	14.0340	3.9005	-14.7349
-1	6	5	15.1456	4.8231	-16.5352
-6	7	5	28.1277	2.2859	-29.4763
-3	7	5	18.9284	3.2902	-18.6416
0	7	5	42.8468	1.9940	-45.5382
-8	8	5	24.0238	4.3310	-23.3390
-5	8	5	11.1180	8.6068	-12.6266
-2	8	5	19.6212	4.1254	-18.9102
-7	9	5	17.7982	4.9666	-16.5671
-4	9	5	32.1562	2.2651	-35.7472
-1	9	5	4.1847	6.4330	-8.6509
-6	10	5	11.5849	6.3703	-22.2411
-3	10	5	5.9736	-2.8470	
0	0	6	16.0235	1.7355	-5.0044
-1	2	6	4.9858	4.8937	-2.0726
-3	3	6	16.3025	6.5970	-14.3532
0	3	6	1.3849	6.7403	8.5539
-2	4	6	9.1971	6.2476	-5.7707
-4	5	6	5.5591	5.7062	
-1	5	6	8.4444	5.8787	-6.3509
-6	6	6	8.2589	7.3288	-7.3912
-3	6	6	5.3708	6.2673	1.7664
0	6	6	12.1577	8.5684	-7.5603
-5	7	6	5.9737	-9.5797	
-2	7	6	8.7517	6.9217	4.1898
-7	8	6	3.2156	6.4271	3.7458
-4	8	6	7.0045	7.1050	-8.1237
-1	8	6	9.2099	7.0510	-0.8806

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-6	9	6	12.5458	5.2069	3.0168
-3	9	6	7.4084	8.6045	-5.3172
-5	10	6	7.2109	6.4564	2.9811
-1	1	7	113.2136	0.7326	111.3284
0	2	7	89.6471	1.0196	-81.2069
-2	3	7	32.5479	0.8597	34.2770
-4	4	7	28.0499	2.0541	-28.4300
-1	4	7	63.4601	0.6940	65.6201
-3	5	7	77.8434	0.9632	79.7707
0	5	7	14.0982	6.2435	7.0833
-5	6	7	28.8468	1.6042	29.9365
-2	6	7	6.9759	6.7686	-11.1668
-7	7	7	57.0773	1.8794	59.0060
-4	7	7	5.2536	6.3664	12.1242
-1	7	7	50.8815	1.3557	50.2116
-6	8	7	8.6869	7.3114	-8.8449
-3	8	7	37.5788	1.8178	36.9496
0	8	7	1.7503	7.4584	1.1015
-8	9	7	12.6207	5.5808	16.2859
-5	9	7	49.0854	2.6951	49.5984
-2	9	7	4.9540	6.3946	3.9661
-7	10	7	25.3418	3.4253	22.8875
-4	10	7	6.9982	9.0172	-1.1141
0	1	8	92.7412	2.2484	-90.3934
-2	2	8	34.4754	1.0285	47.4377
-1	3	8	51.7911	1.6258	-49.5470
-3	4	8	71.5248	0.7610	-70.2090
0	4	8	111.0646	1.4371	108.9901
-5	5	8	15.6320	5.7687	-18.2679
-2	5	8	57.7590	0.9565	-56.7712
-4	6	8	100.7082	1.5492	99.8649
-1	6	8	47.7262	1.0763	-46.0968

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-6	7	8	44.4557	1.3666	-44.9360
-3	7	8	24.2922	5.1291	-21.9903
0	7	8	29.4747	2.7280	-31.2359
-8	8	8	52.2112	1.9956	54.6335
-5	8	8	49.6219	1.6168	-48.2975
-2	8	8	70.1105	1.2498	67.9159
-7	9	8	3.4153	6.4228	-4.8889
-4	9	8	29.6116	3.1387	-29.2044
-1	9	8	26.2015	3.3138	-24.1107
-6	10	8	47.9242	1.9139	46.9943
-3	10	8	41.6318	2.0782	-36.5670
0	0	9	5.8789	6.5412	-1.1534
-1	2	9	26.8935	0.8231	25.6910
-3	3	9	40.9995	2.2755	-38.2869
0	3	9	78.5796	1.1635	80.1267
-2	4	9	11.1664	4.3295	-3.7562
-4	5	9	50.7365	1.1418	52.0519
-1	5	9	14.3551	3.3084	-13.6348
-6	6	9	12.1222	6.4156	-6.6736
-3	6	9	17.0229	4.7389	19.5254
0	6	9	15.1539	7.2436	-14.8264
-5	7	9	34.8431	2.0685	-33.9944
-2	7	9	49.9724	2.3227	49.3276
-7	8	9	20.4617	4.0200	20.7173
-4	8	9	12.2264	6.2595	-13.4544
-1	8	9	10.8700	8.5778	-4.5211
-6	9	9	29.5118	4.0807	28.2036
-3	9	9	19.8045	6.3241	-20.7436
-5	10	9	5.9736	6.5073	
-1	1	10	46.4256	0.8855	42.5123
0	2	10	175.4701	0.9350	-163.4884
-2	3	10	28.5567	0.9600	25.9115

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-4	4	10	71.9560	1.0657	-74.8643
-1	4	10	20.7496	3.2371	22.0541
-3	5	10	24.5880	2.7442	23.2222
0	5	10	10.9544	8.7785	16.9054
-5	6	10	12.1174	5.3568	13.5606
-2	6	10	45.2608	1.2375	-47.0390
-7	7	10	20.8377	4.3601	16.8806
-4	7	10	14.1129	5.0362	14.0836
-1	7	10	17.6665	5.5868	14.7224
-6	8	10	23.8341	2.9987	-25.7439
-3	8	10	12.4042	6.5784	11.8057
0	8	10	13.5002	9.8926	-21.3729
-8	9	10	10.0809	6.6979	10.1500
-5	9	10	4.2887	6.4470	14.5744
-2	9	10	3.2553	6.4677	12.9469
-7	10	10	5.6941	7.2957	9.1630
-4	10	10	10.5429	6.5336	-17.2391
0	1	11	47.3547	1.2418	-48.1406
-2	2	11	191.4705	1.6194	182.4445
-1	3	11	36.2397	0.7972	-37.2690
-3	4	11	18.8921	2.3408	-20.6185
0	4	11	75.2250	1.1337	76.9210
-5	5	11	28.4588	3.1392	-26.2478
-2	5	11	29.1599	1.5862	-29.9445
-4	6	11	46.1387	1.2462	46.7763
-1	6	11	4.0753	5.7812	-3.6958
-6	7	11	14.9948	5.3773	-6.1951
-3	7	11	14.9283	4.7541	-11.8542
0	7	11	23.6727	3.1918	-18.4633
-8	8	11	19.2501	5.2854	20.6347
-5	8	11	5.9736	7.4878	
-2	8	11	23.6078	2.7575	23.6979

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-7	9	11	10.7590	6.7468	-7.3114
-4	9	11	18.6609	4.9918	-11.3979
-1	9	11	9.5288	7.2118	7.5772
-6	10	11	21.2366	5.3106	15.5019
0	0	12	144.9756	0.9707	141.1686
-1	2	12	361.2104	2.1503	-362.4499
-3	3	12	257.7300	1.0871	-255.5704
0	3	12	335.9925	2.9991	-334.6349
-2	4	12	77.5964	3.4313	76.5328
-4	5	12	236.7579	1.2169	-235.1674
-1	5	12	195.6022	1.0368	-194.0845
-6	6	12	35.0549	2.0135	35.2188
-3	6	12	186.3895	1.5331	-186.5922
0	6	12	45.2572	2.9993	44.5870
-5	7	12	126.0363	1.7020	-124.8032
-2	7	12	176.1946	1.4215	-176.6391
-7	8	12	121.2869	1.5035	-118.1794
-4	8	12	26.1956	4.9644	27.8031
-1	8	12	105.9994	2.5754	-105.2209
-6	9	12	118.7789	2.6937	-117.9031
-3	9	12	91.3464	1.4999	-91.1535
-5	10	12	88.6919	1.4225	-88.2653
-1	1	13	14.3574	3.2827	-19.1561
0	2	13	236.1087	1.0372	-231.8416
-2	3	13	10.1632	3.5299	-9.9749
-4	4	13	113.5809	2.4261	-117.7603
-1	4	13	23.1406	2.4510	-23.5076
-3	5	13	14.3563	4.8706	-11.8792
0	5	13	13.7976	6.5265	2.9154
-5	6	13	22.2949	3.7039	-20.1896
-2	6	13	75.0696	0.9536	-78.6214
-7	7	13	3.5650	7.3674	-4.3475
-4	7	13	9.1216	7.8829	-4.6207

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-1	7	13	22.1089	2.3001	-17.8284
-6	8	13	45.3831	1.5721	-44.5020
-3	8	13	25.6418	2.8568	-25.8586
0	8	13	34.5806	2.5815	-36.1878
-8	9	13	2.9028	6.4636	-13.8309
-5	9	13	3.7075	6.4343	-6.6536
-2	9	13	11.2870	5.6841	2.1868
-4	10	13	23.8580	3.6531	-28.9529
0	1	14	43.1523	0.7058	41.4954
-2	2	14	234.1510	0.9335	233.5010
-1	3	14	39.8287	0.7589	37.2739
-3	4	14	28.6444	1.3611	26.9600
0	4	14	115.8661	1.4323	121.8752
-5	5	14	27.3771	2.5215	26.2199
-2	5	14	21.6648	2.0025	19.0243
-4	6	14	83.2152	1.0342	85.2813
-1	6	14	18.5886	3.3502	24.7310
-6	7	14	20.2576	3.1672	19.5081
-3	7	14	26.7382	2.1244	24.4300
0	7	14	15.0843	6.3130	16.5133
-8	8	14	48.6615	1.9862	50.8513
-5	8	14	21.5881	3.2928	21.7181
-2	8	14	55.6865	1.4240	57.8126
-7	9	14	18.6046	6.1386	21.3037
-4	9	14	13.3678	8.2257	17.1249
-1	9	14	22.2837	4.2667	21.3091
-6	10	14	45.0434	1.9709	44.8130
0	0	15	9.5149	7.6521	10.3073
-1	2	15	19.0902	2.8127	-17.1177
-3	3	15	49.7353	1.0345	-52.6973
0	3	15	36.1717	2.1195	35.9107
-2	4	15	13.8635	4.9360	16.6769

Appendix 1: Observed and calculated F-values of hogbomite-24R

-4	5	15	14.4610	3.2799	14.2962
-1	5	15	30.6893	1.8700	-32.8319
-6	6	15	13.4767	7.8892	17.7563
-3	6	15	19.3562	2.7223	-13.1658
0	6	15	4.6413	7.3223	10.0590
-5	7	15	33.8962	1.8266	-33.2019
-2	7	15	26.0258	3.0977	26.3996
-7	8	15	3.0707	6.4459	-2.7867
-4	8	15	18.9580	5.0390	11.9987
-1	8	15	16.2600	6.7666	-19.8375
-6	9	15	9.9511	7.1629	10.4279
-3	9	15	24.9804	2.7280	-23.5473
-5	10	15	20.5962	5.4167	-13.0851
-1	1	16	359.5865	1.1745	-353.9651
0	2	16	357.1044	8.6953	349.0526
-2	3	16	279.7639	1.9131	-282.5708
-4	4	16	196.5081	1.3259	201.8556
-1	4	16	219.9455	0.8682	-218.6012
-3	5	16	197.3750	1.1143	-196.5704
0	5	16	183.8831	2.5123	-184.1562
-5	6	16	141.3277	1.1808	-139.5313
-2	6	16	137.8924	1.3256	139.4205
-7	7	16	113.0327	2.7621	-115.8366
-4	7	16	139.4106	1.4689	-139.8600
-1	7	16	113.2322	1.2192	-112.2857
-6	8	16	78.5973	1.2028	75.9093
-3	8	16	95.2045	1.1643	-92.3554
0	8	16	61.3111	1.9076	56.9035
-8	9	16	76.2362	1.4605	-76.4488
-5	9	16	98.3971	1.2047	-95.4157
-2	9	16	97.6933	1.2035	-99.1508
-4	10	16	52.7304	1.7645	43.7118

Appendix 1: Observed and calculated F-values of hogbomite-24R

0	1	17	104.2783	0.7594	104.0692
-2	2	17	238.1084	0.9527	235.0514
-1	3	17	119.6036	0.8083	117.7156
-3	4	17	73.4537	0.8127	72.9194
0	4	17	131.3769	1.4104	136.4539
-5	5	17	84.7043	1.2572	84.7243
-2	5	17	45.6157	1.9362	45.8969
-4	6	17	92.5922	1.3760	95.4177
-1	6	17	60.5261	0.9647	62.0844
-6	7	17	36.5021	1.5416	36.1832
-3	7	17	65.8603	1.1381	65.7765
0	7	17	25.5912	9.0952	22.9627
-8	8	17	48.8898	2.2689	51.1595
-5	8	17	39.6806	1.7671	41.3074
-2	8	17	68.2172	1.2597	68.7562
-7	9	17	49.6783	1.6858	49.5081
-4	9	17	13.2466	7.3634	22.7547
-1	9	17	39.7679	4.7782	39.3274
-6	10	17	48.0068	2.0122	47.4347
0	0	18	7.5193	1.2517	
-1	2	18	6.6134	5.0767	2.4172
-3	3	18	5.6391	6.8994	-5.7376
0	3	18	15.3850	3.5394	13.4754
-2	4	18	8.6409	6.5029	3.2606
-4	5	18	7.7251	5.9527	8.5159
-1	5	18	5.5591	-1.9669	
-6	6	18	5.5833	7.3325	5.8587
-3	6	18	3.8111	6.3046	2.0724
0	6	18	5.6793	7.3041	5.8786
-5	7	18	2.1099	6.3667	0.9505
-2	7	18	10.4494	6.5635	12.9937
-7	8	18	6.3056	6.4228	6.0325

Appendix 1: Observed and calculated F-values of hogbomite-24R

-4	8	18	7.9575	6.7119	6.8086
-1	8	18	5.9736	1.9011	
-6	9	18	2.3216	6.4529	10.0230
-3	9	18	17.9383	5.6834	2.6707
-5	10	18	4.8982	6.4606	2.7342
-1	1	19	86.6137	2.8559	-89.1816
0	2	19	182.3585	1.9027	-184.7154
-2	3	19	115.6406	1.2105	-118.5057
-4	4	19	102.0090	2.5025	-106.7047
-1	4	19	74.8431	0.7600	-75.8882
-3	5	19	33.9908	1.3818	-33.5856
0	5	19	85.5978	1.2802	-88.0356
-5	6	19	76.0542	0.8631	-75.4949
-2	6	19	73.1523	0.9782	-74.2909
-7	7	19	8.6652	7.6609	-10.7565
-4	7	19	72.2160	1.1044	-73.5761
-1	7	19	37.8640	1.5114	-36.4306
-6	8	19	54.2449	1.4178	-50.8219
-3	8	19	56.7366	1.3624	-54.1235
0	8	19	34.4853	8.4189	-38.2808
-8	9	19	51.8522	1.7702	-51.8844
-5	9	19	9.0790	7.8137	-14.6711
-2	9	19	51.6952	1.6215	-53.0949
-4	10	19	35.0363	2.3410	-34.3319
0	1	20	309.9427	4.9322	-309.6304
-2	2	20	124.8281	1.0602	122.4665
-1	3	20	317.2751	4.2666	-318.1729
-3	4	20	216.5137	1.4684	-216.6228
0	4	20	85.5647	1.2412	85.0598
-5	5	20	222.9444	1.4997	-224.1328
-2	5	20	151.4782	1.1892	-150.3974
-4	6	20	65.0435	1.0594	68.3897

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	6	20	169.5859	1.2353	-167.8438
-6	7	20	99.6827	1.0460	-98.5761
-3	7	20	172.8885	1.8825	-171.4323
0	7	20	71.5266	3.2293	-69.4819
-8	8	20	42.2650	10.9034	37.6254
-5	8	20	108.4721	1.7808	-105.6203
-2	8	20	32.3249	3.6695	33.2966
-7	9	20	118.8798	1.5300	-120.4137
-4	9	20	63.1067	1.3931	-61.0670
-1	9	20	95.3433	1.9218	-94.6610
-6	10	20	29.2946	4.5846	26.3552
0	0	21	21.7921	2.1754	-23.3537
-1	2	21	30.9234	1.0602	27.7984
-3	3	21	5.3271	6.9790	10.6655
0	3	21	23.1353	3.6403	20.0901
-2	4	21	30.5252	1.4603	-27.1926
-4	5	21	21.7783	2.0445	21.4130
-1	5	21	14.3102	3.2649	13.3639
-6	6	21	22.2637	3.0747	-18.8363
-3	6	21	24.7992	2.0222	23.8358
0	6	21	23.4163	2.8973	-18.2556
-5	7	21	9.3903	6.9485	5.0256
-2	7	21	20.0731	3.3155	17.1557
-7	8	21	28.4116	5.3639	26.2774
-4	8	21	12.4574	5.7376	-14.7594
-1	8	21	15.2173	6.4760	21.1414
-6	9	21	20.3541	4.4191	20.9915
-3	9	21	10.5886	6.8512	11.5206
-5	10	21	33.7669	6.3685	27.1101
-1	1	22	33.3887	1.3032	-35.6265
0	2	22	97.4953	1.1587	-95.3875
-2	3	22	44.9423	0.7662	-44.9974
-4	4	22	58.0515	1.1790	-58.8550

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	4	22	20.7751	1.9179	-23.3292
-3	5	22	6.0952	6.5539	-11.0725
0	5	22	35.1791	3.5414	-35.8419
-5	6	22	21.6746	2.2752	-22.3402
-2	6	22	42.3291	1.3579	-43.8774
-7	7	22	6.6109	-2.9321	
-4	7	22	29.6802	2.0437	-27.8281
-1	7	22	12.0785	4.8061	-7.5257
-6	8	22	34.1812	2.3189	-32.5516
-3	8	22	11.1602	6.4732	-10.8981
0	8	22	24.6281	5.1172	-27.2370
-8	9	22	9.3595	6.9301	-15.8882
-5	9	22	9.5351	7.9210	-2.9221
-2	9	22	25.9402	5.1731	-23.8472
-4	10	22	20.3099	5.9112	-25.1682
0	1	23	21.3404	1.3068	-22.3227
-2	2	23	73.8039	1.0964	73.5426
-1	3	23	12.7847	3.2075	12.9941
-3	4	23	6.1919	5.9486	-4.1710
0	4	23	39.4924	1.7277	42.0695
-5	5	23	12.1527	5.8236	15.5079
-2	5	23	25.1097	1.8713	-26.2540
-4	6	23	20.8133	2.7170	22.1405
-1	6	23	14.0471	4.3617	9.5926
-6	7	23	14.8351	4.5484	-11.6051
-3	7	23	10.5078	5.7044	11.3490
0	7	23	30.7182	2.5181	-28.4089
-8	8	23	9.6128	8.8505	-4.3612
-5	8	23	7.0879	7.0918	1.6404
-2	8	23	5.9736	7.7704	
-7	9	23	5.9736	6.6759	

Appendix 1: Observed and calculated F-values of hogbomite-24R

-4	9	23	19.5137	7.3571	-21.9656
-1	9	23	12.6512	8.8940	5.0621
0	0	24	96.6525	1.4187	-73.4560
-1	2	24	7.3190	5.2710	-8.7711
-3	3	24	8.9993	7.0159	6.1466
0	3	24	10.3146	7.3681	-5.9078
-2	4	24	65.1903	1.2175	60.1555
-4	5	24	13.3087	4.3388	-15.4739
-1	5	24	10.1189	5.5093	-8.9607
-6	6	24	66.1841	2.1876	66.0957
-3	6	24	25.3360	2.3007	-24.9799
0	6	24	69.3012	1.8393	67.7554
-5	7	24	13.4200	5.6301	9.0606
-2	7	24	3.4074	6.3730	0.5347
-7	8	24	18.6660	7.4136	-19.7156
-4	8	24	59.8134	1.3860	57.8098
-1	8	24	16.1885	6.0457	-17.6185
-6	9	24	5.9736	-5.0791	
-3	9	24	7.6991	8.7507	-0.6641
-5	10	24	29.6902	2.7515	-24.9406
-1	1	25	5.7713	-0.9894	
0	2	25	39.6309	1.9973	-38.7231
-2	3	25	31.1168	1.0621	31.2213
-4	4	25	25.5156	6.6865	-26.8876
-1	4	25	12.7421	4.3588	9.8338
-3	5	25	9.2069	6.9820	-8.3662
0	5	25	35.6811	1.8555	35.5646
-5	6	25	22.7052	2.6285	23.0556
-2	6	25	22.4748	2.6325	-23.5808
-7	7	25	8.1640	7.4506	-8.6028
-4	7	25	28.9843	2.1676	29.3610
-1	7	25	5.7169	5.8270	3.6029

Appendix 1: Observed and calculated F-values of hogbomite-24R

-6	8	25	13.9899	7.0180	-12.6513
-3	8	25	1.5966	6.4262	13.4851
0	8	25	23.5587	4.3053	-18.3191
-8	9	25	5.3259	6.4686	18.6839
-5	9	25	12.5167	6.7846	-3.7330
-2	9	25	24.1168	4.7642	25.7590
0	1	26	10.0987	3.7533	-15.9463
-2	2	26	40.9834	2.7973	-35.7813
-1	3	26	27.6108	1.1902	-28.2166
-3	4	26	6.1616	5.4590	-13.2890
0	4	26	29.4488	1.9226	-26.7834
-5	5	26	28.7406	7.8947	-27.7953
-2	5	26	11.9713	5.3420	-5.2869
-4	6	26	27.6298	3.9551	-23.0412
-1	6	26	16.3441	3.8801	-17.7238
-6	7	26	15.9282	6.2803	-7.3006
-3	7	26	25.0045	2.6598	-23.5295
0	7	26	9.2598	9.4560	-3.7629
-8	8	26	23.4289	4.2070	-18.7634
-5	8	26	9.3787	6.8807	-10.8645
-2	8	26	25.1305	5.0820	-22.0799
-7	9	26	22.4916	4.1377	-23.3091
-4	9	26	5.9736	-4.7007	
-1	9	26	13.7064	8.5194	-16.3647
0	0	27	22.6062	2.2177	25.4610
-1	2	27	31.8109	0.8130	-29.0928
-3	3	27	38.7423	1.4678	-36.6147
0	3	27	15.3491	3.4383	-19.4877
-2	4	27	14.9294	4.0107	12.8974
-4	5	27	7.6642	5.4938	-13.0735
-1	5	27	21.2021	2.1488	-21.0639
-6	6	27	7.9811	8.8609	2.7044

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	6	27	12.4749	4.3704	-9.3725
0	6	27	8.1019	7.6775	-0.4165
-5	7	27	19.8097	7.2570	-21.8550
-2	7	27	6.5476	7.0457	-12.4075
-7	8	27	9.9876	6.3454	-2.8058
-4	8	27	10.8420	6.5308	-1.8694
-1	8	27	3.7773	6.4158	-4.0591
-6	9	27	8.2527	7.1753	-7.4343
-3	9	27	20.4019	5.2255	-10.5973
-1	1	28	84.6535	0.9587	84.1998
0	2	28	511.0484	2.6675	513.3915
-2	3	28	12.9525	3.3684	7.3544
-4	4	28	350.8749	1.3634	351.9766
-1	4	28	49.9453	0.9318	51.2590
-3	5	28	72.4211	1.3051	71.9881
0	5	28	20.8668	2.9247	-21.6822
-5	6	28	16.7188	3.9070	16.9013
-2	6	28	269.2355	1.3037	271.5200
-7	7	28	63.4368	1.6208	60.9473
-4	7	28	9.3335	6.9972	-7.6057
-1	7	28	47.2248	1.5765	49.9445
-6	8	28	170.4713	1.6484	173.5106
-3	8	28	35.8763	1.9420	36.4681
0	8	28	163.4003	2.1241	158.9550
-8	9	28	12.9582	7.5040	12.9084
-5	9	28	52.0562	1.5759	53.2198
-2	9	28	9.7408	7.4904	-11.0004
0	1	29	79.5731	0.8544	-80.8937
-2	2	29	196.2200	1.1205	-196.4695
-1	3	29	89.7051	0.8857	-92.2808
-3	4	29	67.2755	0.9877	-67.1414
0	4	29	131.4305	1.5372	-130.7766
-5	5	29	62.6103	1.3064	-65.3283

Appendix 1: Observed and calculated F-values of hogbomite-24R

-2	5	29	36.7174	1.3623	-35.5458
-4	6	29	96.3711	2.0952	-95.7353
-1	6	29	61.5207	1.0124	-61.5314
-6	7	29	32.2040	2.3457	-32.6512
-3	7	29	54.8265	1.3493	-55.5106
0	7	29	8.7881	7.6720	-11.8515
-8	8	29	45.6231	2.2824	-48.2044
-5	8	29	46.0290	2.0413	-45.9712
-2	8	29	60.9832	1.3980	-60.5324
-7	9	29	35.1625	2.3716	-36.9538
-4	9	29	8.7684	7.2342	-13.7336
-1	9	29	39.1622	2.1545	-40.3077
0	0	30	15.4273	3.3733	-10.5131
-1	2	30	19.3237	2.3706	-19.8339
-3	3	30	9.2215	6.4661	-6.3309
0	3	30	24.2735	3.9683	-24.6066
-2	4	30	8.5358	6.6189	-7.7643
-4	5	30	20.6071	2.5280	-21.3636
-1	5	30	10.4712	4.6982	-9.6837
-6	6	30	11.9998	7.0999	-8.7364
-3	6	30	17.4736	3.9579	-17.6702
0	6	30	3.3049	7.4067	-8.4450
-5	7	30	12.6419	6.6071	-4.9312
-2	7	30	18.0794	5.5470	-20.0318
-7	8	30	21.3215	4.1363	-19.7724
-4	8	30	5.9736	-8.7831	
-1	8	30	16.9605	6.5926	-14.5204
-6	9	30	20.0700	4.6109	-18.5999
-3	9	30	13.6914	6.5366	-8.9867
-1	1	31	78.0257	0.8972	80.2757
0	2	31	215.2219	1.1390	219.1728
-2	3	31	84.8244	1.5473	87.8227

Appendix 1: Observed and calculated F-values of hogbomite-24R

-4	4	31	154.7037	1.4505	155.2674
-1	4	31	58.1190	0.8333	58.3083
-3	5	31	46.2728	1.2033	43.0485
0	5	31	68.4343	1.2632	69.3887
-5	6	31	47.9238	1.2024	48.4887
-2	6	31	118.3246	1.3224	118.8423
-7	7	31	27.7583	2.8492	24.6557
-4	7	31	53.3998	1.3949	54.3403
-1	7	31	28.9194	2.3307	31.0718
-6	8	31	89.0352	1.1717	87.2150
-3	8	31	30.4840	2.2137	31.6745
0	8	31	71.4542	2.0991	68.9520
-5	9	31	22.8293	5.0423	23.0829
-2	9	31	43.7070	2.0049	43.5856
0	1	32	168.8713	2.3810	169.2052
-2	2	32	665.1144	2.3474	659.0168
-1	3	32	113.6861	3.7038	117.3408
-3	4	32	127.6955	1.6531	128.0250
0	4	32	452.3319	4.1375	457.3913
-5	5	32	60.5382	1.3708	59.6298
-2	5	32	116.3154	2.6885	115.4469
-4	6	32	347.7987	2.6472	347.9176
-1	6	32	84.9436	0.9145	84.9856
-6	7	32	86.7917	1.7308	85.5543
-3	7	32	56.6511	1.3426	56.3678
0	7	32	73.5392	1.5591	74.2188
-8	8	32	194.5179	3.0310	193.0405
-5	8	32	83.0516	1.6720	82.9466
-2	8	32	226.8436	1.6091	225.2615
-7	9	32	30.8916	3.0882	30.0043
-4	9	32	65.5423	1.4089	67.1330
0	0	33	76.4788	1.5439	-71.1581

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	2	33	20.6279	1.7985	-19.8175
-3	3	33	5.4432	7.1940	16.9391
0	3	33	46.7772	1.3527	-48.2604
-2	4	33	52.9652	1.0179	-52.0651
-4	5	33	35.5615	1.3056	-34.9445
-1	5	33	9.0077	5.6457	5.0841
-6	6	33	37.9743	2.1553	-38.2443
-3	6	33	16.1044	4.7048	-16.2211
0	6	33	24.8476	3.7519	-31.0985
-5	7	33	19.4967	3.4966	14.3129
-2	7	33	39.0301	1.7448	-40.6764
-7	8	33	22.0782	5.0012	-23.7937
-4	8	33	26.6519	4.5462	-29.9776
-1	8	33	12.2620	6.6260	-7.7813
-6	9	33	31.3085	3.2093	-30.2345
-3	9	33	3.5050	6.4363	1.7707
-1	1	34	14.7716	2.5075	8.0487
0	2	34	118.1440	1.3043	122.9648
-2	3	34	8.8226	5.0084	8.0083
-4	4	34	76.4571	1.1957	77.4487
-1	4	34	14.0533	3.8514	10.0534
-3	5	34	11.8391	6.6763	8.4373
0	5	34	6.7889	7.2477	3.3148
-5	6	34	6.9240	5.8314	6.8088
-2	6	34	56.0262	1.2221	56.1326
-7	7	34	6.6109	5.0940	
-4	7	34	10.3881	6.6562	3.0897
-1	7	34	13.9925	6.8125	6.6029
-6	8	34	34.0113	2.1086	34.2332
-3	8	34	16.6403	5.9242	6.4878
0	8	34	26.8136	4.3649	29.3031
-5	9	34	5.9736	4.7462	

Appendix 1: Observed and calculated F-values of hogbomite-24R

-2	9	34	4.4293	6.4731	-0.7380
0	1	35	48.5308	0.8755	48.3442
-2	2	35	21.0972	4.4135	-20.2335
-1	3	35	48.7709	0.9342	48.9902
-3	4	35	25.8102	1.5725	24.7424
0	4	35	3.4943	7.1593	2.1509
-5	5	35	46.1467	1.7150	45.3258
-2	5	35	22.6846	2.4817	22.4165
-4	6	35	15.7584	5.5022	8.2881
-1	6	35	19.8708	3.5229	20.8640
-6	7	35	18.5159	4.3894	13.8257
-3	7	35	36.2753	3.4221	34.2696
0	7	35	17.0389	5.7888	20.2686
-8	8	35	3.5712	7.5907	14.0804
-5	8	35	10.2339	7.6528	9.0288
-2	8	35	7.5121	6.5838	16.2580
-7	9	35	33.6210	2.4590	34.6193
-4	9	35	19.3480	4.8533	18.0819
0	0	36	205.0652	1.5545	206.9599
-1	2	36	50.0620	0.7658	-49.3967
-3	3	36	67.6369	1.2503	-68.2382
0	3	36	10.9088	8.5450	-14.1078
-2	4	36	169.4077	1.1698	168.0956
-4	5	36	14.9845	5.7665	-17.9462
-1	5	36	51.8941	1.1556	-52.0943
-6	6	36	114.3579	2.0938	108.5898
-3	6	36	36.1047	1.6484	-34.6505
0	6	36	102.9645	1.5919	100.7550
-5	7	36	46.8507	1.5588	-46.9298
-2	7	36	4.1052	6.4004	0.9627
-7	8	36	19.7630	4.4719	-16.3575
-4	8	36	87.9806	2.1807	85.1083
-1	8	36	33.1904	2.2223	-29.2336

Appendix 1: Observed and calculated F-values of hogbomite-24R

-6	9	36	11.9163	6.3174	-4.5165
-3	9	36	34.1300	2.3840	-30.8814
-1	1	37	39.3948	1.0268	-39.5336
0	2	37	13.7392	4.5107	12.0924
-2	3	37	23.7725	1.6854	-24.4968
-4	4	37	14.3545	6.3258	-11.1749
-1	4	37	20.3286	1.9804	-21.0831
-3	5	37	37.9855	1.8056	-34.4415
0	5	37	22.6990	3.4491	-19.2190
-5	6	37	10.1101	6.2594	-6.6466
-2	6	37	17.4058	7.8982	-18.2869
-7	7	37	31.5292	4.4721	-32.2468
-4	7	37	8.5478	7.0825	-12.4747
-1	7	37	11.4026	5.6815	-16.8486
-6	8	37	24.8131	3.0549	-21.9311
-3	8	37	8.0879	7.8589	-2.6443
0	8	37	24.7104	5.0743	-23.1734
-5	9	37	25.3604	3.8221	-25.5992
-2	9	37	9.7090	9.1084	-12.5321
0	1	38	46.3861	0.9463	46.2900
-2	2	38	61.4435	1.1184	-61.8118
-1	3	38	35.7017	1.1789	34.6407
-3	4	38	34.8512	1.2156	32.0072
0	4	38	36.5651	1.7565	-35.7309
-5	5	38	25.9534	2.5397	24.0261
-2	5	38	32.1495	2.1603	31.6139
-4	6	38	24.3166	2.3497	-24.8109
-1	6	38	23.6062	2.4153	22.2110
-6	7	38	23.6793	3.9245	21.9245
-3	7	38	18.2213	6.2829	20.6069
0	7	38	12.0760	9.2400	22.7386
-8	8	38	11.5796	9.9514	-12.1950

Appendix 1: Observed and calculated F-values of hogbomite-24R

-5	8	38	14.0590	6.0222	19.1912
-2	8	38	13.3108	8.3380	-15.0495
-7	9	38	12.0247	8.0132	16.0945
-4	9	38	13.2302	7.2317	19.7819
0	0	39	95.8588	1.8904	95.2577
-1	2	39	25.3220	1.4601	23.6989
-3	3	39	49.3048	1.5798	52.5040
0	3	39	12.6501	6.4515	-14.7596
-2	4	39	66.8837	0.9628	65.9328
-4	5	39	9.0493	6.3635	-1.9728
-1	5	39	41.6744	1.2226	43.6302
-6	6	39	38.2655	3.0342	33.9771
-3	6	39	25.6459	2.8334	24.9228
0	6	39	44.5072	3.1412	40.1378
-5	7	39	46.0650	1.5692	46.4491
-2	7	39	16.5960	4.8178	-18.7113
-7	8	39	17.9798	6.6958	11.0694
-4	8	39	31.0677	2.2089	28.9471
-1	8	39	32.1317	2.2325	31.8256
-6	9	39	6.5693	7.2317	-4.8300
-3	9	39	35.4941	2.2953	35.7435
-1	1	40	55.5267	0.9056	-57.2553
0	2	40	95.4025	1.3191	94.6945
-2	3	40	54.9174	1.0439	-53.7307
-4	4	40	86.4373	4.6079	86.0245
-1	4	40	54.0634	0.9452	-54.5517
-3	5	40	39.5603	1.4153	-39.7599
0	5	40	35.4543	2.0710	-35.0536
-5	6	40	46.5495	1.8739	-47.5226
-2	6	40	67.7019	1.3521	70.0796
-7	7	40	22.4541	7.4156	-23.7044
-4	7	40	35.2604	1.9102	-34.3391

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	7	40	40.0354	1.7769	-38.8966
-6	8	40	44.0333	2.1556	43.8021
-3	8	40	47.1707	1.8844	-46.2604
0	8	40	40.8189	4.7442	38.9310
-5	9	40	18.2176	6.7919	-24.6121
-2	9	40	18.3127	10.3436	-20.6283
0	1	41	89.7979	1.0302	88.6480
-2	2	41	84.9494	1.8405	-86.5949
-1	3	41	45.5892	0.9658	47.1131
-3	4	41	62.9780	0.8684	63.3657
0	4	41	60.3886	1.2946	-61.0515
-5	5	41	12.1854	8.7981	16.4207
-2	5	41	78.5690	1.6679	76.5218
-4	6	41	44.6045	1.4983	-46.1114
-1	6	41	28.0166	2.0631	27.7653
-6	7	41	45.9132	2.7159	44.1026
-3	7	41	9.6845	7.1195	13.3892
0	7	41	55.6925	2.6014	55.2528
-8	8	41	16.9805	8.7942	-25.0744
-5	8	41	31.4604	4.4468	27.8343
-2	8	41	38.4199	1.9025	-37.3868
-4	9	41	42.8125	2.0419	44.0781
0	0	42	50.4417	1.7162	53.1186
-1	2	42	34.1828	1.0991	33.0787
-3	3	42	39.7633	1.5813	36.8717
0	3	42	23.3433	6.3941	21.2899
-2	4	42	38.1937	1.3939	39.0874
-4	5	42	22.6399	2.4300	20.8130
-1	5	42	30.5647	1.6175	31.6562
-6	6	42	27.3186	2.9437	27.9844
-3	6	42	29.7055	2.3127	26.1433
0	6	42	30.3234	2.6522	27.7664
-5	7	42	33.1826	4.2780	29.7698

Appendix 1: Observed and calculated F-values of hogbomite-24R

-2	7	42	13.4925	6.6735	15.4534
-7	8	42	19.7705	3.9755	20.0683
-4	8	42	27.8745	2.4479	24.6596
-1	8	42	22.9355	4.3672	25.3623
-6	9	42	11.4971	6.4660	16.0148
-3	9	42	21.1933	5.6708	25.4804
-1	1	43	99.0685	1.1817	-102.0845
0	2	43	46.7663	1.5639	46.9692
-2	3	43	63.8832	0.8377	-64.3809
-4	4	43	27.1794	2.3067	27.1117
-1	4	43	68.1401	1.3136	-68.5883
-3	5	43	80.3331	1.0508	-81.1534
0	5	43	33.8839	2.2817	-37.1227
-5	6	43	33.3323	1.8844	-33.8926
-2	6	43	18.6758	4.1281	14.7102
-7	7	43	62.1952	3.1870	-59.8440
-4	7	43	27.9425	4.6452	-28.7344
-1	7	43	46.4303	2.1736	-45.4402
-6	8	43	11.8499	8.0878	6.7484
-3	8	43	27.5520	3.8494	-27.0798
0	8	43	6.6109	-2.1724	
-5	9	43	46.7598	1.9306	-47.7699
0	1	44	231.5308	1.1373	-235.3008
-2	2	44	62.5743	3.6510	63.6269
-1	3	44	168.3432	1.0203	-169.0062
-3	4	44	174.9393	1.0856	-175.8384
0	4	44	46.6412	1.5255	48.0035
-5	5	44	103.7208	1.5039	-101.0190
-2	5	44	176.1388	2.7676	-181.5999
-4	6	44	32.6561	4.3855	30.7512
-1	6	44	108.3784	1.2044	-108.8868
-6	7	44	116.4229	1.7722	-118.0143

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	7	44	85.8388	1.1537	-85.5733
0	7	44	123.8416	2.2532	-126.7338
-8	8	44	3.2978	7.4973	3.5897
-5	8	44	94.8915	1.8495	-94.6706
-2	8	44	17.6323	5.3785	19.4463
-4	9	44	104.7345	1.3001	-106.4434
0	0	45	7.8618	7.0316	
-1	2	45	60.7132	0.7324	60.6609
-3	3	45	58.9082	1.2558	57.9298
0	3	45	52.2969	1.3577	54.9161
-2	4	45	12.0519	6.3241	8.4870
-4	5	45	40.1824	1.4555	40.5943
-1	5	45	43.4111	1.3431	42.7766
-6	6	45	21.6075	4.2831	12.8158
-3	6	45	29.2269	2.6603	32.4451
0	6	45	19.4676	4.6532	13.5165
-5	7	45	44.5966	2.2554	39.9286
-2	7	45	37.1821	4.8291	35.7630
-7	8	45	22.5030	4.1889	20.6305
-4	8	45	15.7611	7.2159	14.7212
-1	8	45	22.7244	3.7740	22.0486
-6	9	45	22.0478	4.7849	24.9243
-3	9	45	26.2575	4.1035	28.0411
-1	1	46	3.7123	6.2499	-9.3040
0	2	46	40.8900	1.5229	45.8431
-2	3	46	3.2600	6.2501	-0.3768
-4	4	46	34.3967	1.9536	34.6197
-1	4	46	6.6177	6.4105	-5.8447
-3	5	46	4.1905	6.3446	-8.0124
0	5	46	9.5039	7.8387	7.8795
-5	6	46	1.8056	5.8405	2.0942
-2	6	46	26.0735	2.4011	28.9715

Appendix 1: Observed and calculated F-values of hogbomite-24R

-7	7	46	16.3987	7.6537	-3.2634
-4	7	46	10.9681	6.5315	7.8542
-1	7	46	5.9736	-2.6004	
-6	8	46	25.6175	3.6092	23.8460
-3	8	46	2.0758	7.1428	-0.1643
-5	9	46	10.5086	6.9757	-1.8022
0	1	47	69.2783	1.4998	-67.3764
-2	2	47	44.4861	1.4265	-42.7558
-1	3	47	68.9759	0.9470	-68.7039
-3	4	47	59.6393	0.9410	-58.7916
0	4	47	30.7713	2.1790	-29.9384
-5	5	47	53.4130	1.6579	-53.0426
-2	5	47	42.3163	1.4604	-42.0428
-4	6	47	25.3707	2.7225	-22.1218
-1	6	47	55.7606	1.3922	-53.7594
-6	7	47	39.4300	1.9131	-40.0314
-3	7	47	49.8842	1.4908	-48.0869
0	7	47	24.8751	4.1586	-25.5047
-5	8	47	51.7914	1.5490	-46.8750
-2	8	47	13.4120	7.4335	-19.1887
-4	9	47	22.5226	4.5526	-26.7607
0	0	48	307.3279	1.8198	314.1608
-1	2	48	156.7767	1.2240	-157.6886
-3	3	48	151.6009	1.5394	-152.2784
0	3	48	129.7469	3.4049	-131.6397
-2	4	48	216.0971	2.1810	219.0637
-4	5	48	97.5479	1.1174	-95.4927
-1	5	48	109.2867	1.1628	-110.0105
-6	6	48	130.5531	4.7067	129.1710
-3	6	48	83.3173	1.0926	-80.9316
0	6	48	127.2854	3.3074	126.4640
-5	7	48	96.1692	1.1803	-96.1870

Appendix 1: Observed and calculated F-values of hogbomite-24R

-2	7	48	75.4510	1.2462	-74.7746
-7	8	48	45.8760	2.0354	-44.0441
-4	8	48	104.2147	2.1790	101.7035
-1	8	48	50.4559	1.8420	-50.4533
-1	1	49	139.8907	1.6119	139.9171
0	2	49	75.2684	1.1357	78.2721
-2	3	49	111.0125	1.5538	111.8816
-4	4	49	59.4876	1.3808	61.3953
-1	4	49	105.2471	1.1831	107.1434
-3	5	49	102.7809	1.5621	103.8361
0	5	49	74.2463	1.4532	76.9106
-5	6	49	74.9750	1.3611	76.6643
-2	6	49	55.5055	1.7999	54.8694
-7	7	49	72.9385	1.6309	73.5238
-4	7	49	68.0862	1.8196	67.0838
-1	7	49	73.9702	1.4061	72.7969
-6	8	49	41.3649	1.9025	41.0648
-3	8	49	65.9755	1.4112	64.9640
0	1	50	66.7448	1.3815	-65.9443
-2	2	50	46.7090	1.3946	-44.3087
-1	3	50	45.5615	1.5708	-46.1739
-3	4	50	51.6147	1.0548	-50.1855
0	4	50	32.9644	3.0414	-34.2169
-5	5	50	18.2479	9.1975	-25.1144
-2	5	50	51.3070	1.3412	-52.2694
-4	6	50	28.4886	2.3082	-29.1080
-1	6	50	35.9989	1.8767	-31.3590
-6	7	50	41.6309	1.8007	-37.2800
-3	7	50	14.6175	7.3470	-22.0179
0	7	50	39.7804	2.4182	-39.1579
-5	8	50	34.2938	2.1673	-30.7326
-2	8	50	15.7623	7.2431	-21.0678
0	0	51	32.5475	2.4926	-31.9769

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	2	51	79.9118	0.9603	-82.5994
-3	3	51	57.9249	1.5097	-57.0138
0	3	51	84.8599	1.5604	-85.9566
-2	4	51	27.4086	3.0078	-25.0174
-4	5	51	71.2357	1.0045	-71.4282
-1	5	51	50.3582	1.3122	-50.9177
-6	6	51	20.9162	6.2147	-20.7935
-3	6	51	59.9492	1.8290	-60.1126
0	6	51	12.0898	9.1787	-17.3146
-5	7	51	29.4571	3.5313	-29.9288
-2	7	51	62.4719	1.6378	-59.7542
-7	8	51	48.4499	1.9168	-48.7570
-4	8	51	18.9070	4.7850	-17.1731
-1	8	51	38.8969	2.2262	-39.8009
-1	1	52	160.2328	1.9131	-163.3130
0	2	52	8.3884	7.1752	1.8051
-2	3	52	105.3558	1.1176	-108.3511
-4	4	52	7.7159	7.2610	9.6724
-1	4	52	125.3989	1.2459	-126.9118
-3	5	52	130.1460	1.5331	-132.7252
0	5	52	47.8665	1.8297	-49.7657
-5	6	52	74.6991	1.3941	-74.1448
-2	6	52	8.4103	7.1015	6.8634
-7	7	52	96.3592	4.5134	-91.9080
-4	7	52	43.5515	1.7306	-44.2044
-1	7	52	89.8900	1.2227	-89.0518
-6	8	52	11.6443	5.8859	11.2112
-3	8	52	72.9226	1.3707	-73.0383
0	1	53	13.1707	5.3554	-8.3914
-2	2	53	45.1752	1.4944	-43.8370
-1	3	53	1.3393	5.7991	-1.1491
-3	4	53	2.4652	5.8068	1.5817

Appendix 1: Observed and calculated F-values of hogbomite-24R

0	4	53	37.4060	3.0369	-37.7127
-5	5	53	3.6619	7.4364	0.5111
-2	5	53	11.7978	8.0000	-5.7273
-4	6	53	32.4539	2.4137	-32.3738
-1	6	53	5.9534	7.1132	10.1895
-6	7	53	12.7888	6.4671	5.4998
-3	7	53	2.2649	6.4385	4.9066
0	7	53	14.0326	9.3345	-4.0431
-5	8	53	16.4089	5.6102	14.0458
-2	8	53	23.4929	3.7425	-25.3736
0	0	54	35.5170	2.4115	-32.5434
-1	2	54	44.8832	1.0387	-43.2444
-3	3	54	40.6086	1.7441	-43.1103
0	3	54	40.0563	1.7532	-37.2079
-2	4	54	32.0781	2.2301	-29.4395
-4	5	54	32.0532	2.3808	-30.7533
-1	5	54	34.1100	2.5293	-34.9226
-6	6	54	21.0265	4.9370	-26.4052
-3	6	54	33.7212	3.1937	-28.5943
0	6	54	28.6894	2.9359	-26.7566
-5	7	54	30.4109	2.3610	-32.0902
-2	7	54	28.7428	3.7080	-26.2363
-4	8	54	26.0022	5.5304	-25.4873
-1	1	55	5.5367	6.2574	6.5805
0	2	55	9.2347	7.3776	20.3852
-2	3	55	8.5273	6.0613	-8.6608
-4	4	55	11.7093	9.7735	11.6559
-1	4	55	6.0715	6.5920	7.0310
-3	5	55	7.2851	7.0643	14.3438
0	5	55	14.2638	8.8764	-18.5225
-5	6	55	11.6832	6.1254	-1.6673
-2	6	55	11.9473	5.9306	7.2187

Appendix 1: Observed and calculated F-values of hogbomite-24R

-7	7	55	10.8684	9.8513	13.7319
-4	7	55	12.0320	6.1112	-13.1988
-1	7	55	4.0979	6.4508	10.7358
-6	8	55	5.7949	7.2914	-2.8556
-3	8	55	10.7905	8.1025	6.9662
0	1	56	4.6132	6.2534	3.9571
-2	2	56	116.1227	1.6547	115.5385
-1	3	56	22.2837	2.3956	20.0949
-3	4	56	0.7045	6.5566	-0.1371
0	4	56	98.1665	1.4704	99.6134
-5	5	56	34.7574	4.3122	33.9869
-2	5	56	12.4594	7.6913	-3.5624
-4	6	56	82.5697	1.1910	83.6631
-1	6	56	12.7966	7.8406	7.8993
-6	7	56	3.8719	6.4383	-3.9790
-3	7	56	27.2405	2.6109	25.8677
0	7	56	1.2032	7.5598	-0.3863
-5	8	56	11.2599	8.4165	-4.6607
-2	8	56	72.3606	1.4963	67.0438
0	0	57	101.7217	2.0161	-102.8453
-1	2	57	25.2490	1.5240	-24.6989
-3	3	57	48.6793	3.3130	-46.4636
0	3	57	6.1690	8.4368	2.5856
-2	4	57	82.0671	1.0268	-82.3116
-4	5	57	0.2889	5.8525	-0.0613
-1	5	57	36.6162	1.6725	-36.5412
-6	6	57	55.5775	1.8983	-56.4412
-3	6	57	13.5502	6.9515	-17.1528
0	6	57	62.0010	1.9666	-62.0075
-5	7	57	43.6762	1.8263	-42.9339
-2	7	57	8.0504	7.1107	12.2596
-4	8	57	51.9590	1.8065	-52.0168
-1	1	58	9.1080	7.2728	-2.5380

Appendix 1: Observed and calculated F-values of hogbomite-24R

0	2	58	45.6091	2.7060	-41.6454
-2	3	58	7.2289	5.7863	-4.4547
-4	4	58	37.9623	2.8661	-34.2468
-1	4	58	1.7348	5.8323	-6.1286
-3	5	58	9.7806	7.0625	-5.1593
0	5	58	15.3478	5.9585	-5.3615
-5	6	58	11.7740	5.5863	-8.7220
-2	6	58	30.7726	2.2848	-30.2844
-7	7	58	9.5705	8.9395	-6.6694
-4	7	58	10.5142	6.9839	-6.9539
-1	7	58	4.5868	7.2232	-8.3782
-6	8	58	24.8650	5.1285	-23.5286
-3	8	58	14.1047	7.6264	-9.9430
0	1	59	0.0007	6.2846	0.0002
-2	2	59	118.4543	1.7096	121.3910
-1	3	59	3.3174	5.7984	-2.9415
-3	4	59	7.5548	6.0635	6.6336
0	4	59	96.0561	4.0558	93.0313
-5	5	59	4.7474	7.4363	-5.3326
-2	5	59	4.0301	6.4276	5.3603
-4	6	59	78.0242	1.4687	76.0648
-1	6	59	4.7715	6.4370	9.5947
-6	7	59	12.7689	5.1886	11.1458
-3	7	59	10.1784	8.6273	1.1413
0	7	59	13.2153	9.9477	5.2904
-5	8	59	21.8606	5.1456	16.2268
0	0	60	279.4219	2.0970	282.1704
-1	2	60	12.0571	4.4296	11.3556
-3	3	60	24.5795	2.8550	22.9594
0	3	60	2.3592	7.3659	-4.3024
-2	4	60	216.8958	1.6489	219.3767
-4	5	60	8.0587	7.0077	3.7827

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	5	60	22.5777	3.2810	23.2692
-6	6	60	147.6674	4.2387	145.5090
-3	6	60	15.3603	6.9656	18.2321
0	6	60	148.7505	2.1682	151.3548
-5	7	60	28.9471	2.4290	26.0333
-2	7	60	5.1954	7.1324	-4.0079
-4	8	60	124.5419	1.4972	126.4131
-1	1	61	81.1342	1.0357	-82.9179
0	2	61	193.8533	1.6255	-194.4518
-2	3	61	77.4279	0.9013	-78.4015
-4	4	61	153.8311	1.8734	-153.5300
-1	4	61	74.8992	1.2063	-74.3642
-3	5	61	59.7458	1.3249	-59.8936
0	5	61	58.2155	1.7252	-59.4063
-5	6	61	69.2467	1.3214	-65.9690
-2	6	61	124.2281	1.9556	-125.1007
-7	7	61	33.6785	3.1181	-38.5755
-4	7	61	55.1035	1.5604	-55.8284
-1	7	61	54.6679	1.8474	-53.5681
-3	8	61	60.6418	1.7224	-60.0104
0	1	62	10.6826	5.9501	9.0229
-2	2	62	88.2286	1.3034	87.0501
-1	3	62	16.2007	3.4929	13.3873
-3	4	62	11.1392	5.7757	7.3020
0	4	62	68.4270	1.5018	67.8963
-5	5	62	19.4784	4.7023	13.0277
-2	5	62	8.9808	8.3134	1.9971
-4	6	62	57.1728	1.4337	55.0342
-1	6	62	14.3064	6.2012	8.6902
-6	7	62	6.4494	6.4542	1.8619
-3	7	62	10.8900	6.0232	10.8712
0	0	63	132.9962	2.3491	132.8153

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	2	63	79.1040	0.7726	78.2348
-3	3	63	61.2340	1.4815	58.0237
0	3	63	89.7404	1.3527	89.0552
-2	4	63	111.5197	1.3308	111.6444
-4	5	63	73.3735	1.3472	71.6644
-1	5	63	48.3894	2.6121	48.0185
-6	6	63	89.9558	2.1082	87.8725
-3	6	63	52.5089	1.5705	51.3845
0	6	63	82.0463	1.5811	83.4341
-5	7	63	36.9591	3.6896	34.9263
-2	7	63	73.6942	1.4053	72.0327
-1	1	64	20.1134	3.6293	22.7481
0	2	64	260.1324	1.6649	266.4619
-2	3	64	27.8893	1.8880	28.6697
-4	4	64	207.5509	1.8321	209.6551
-1	4	64	20.1063	3.7959	23.3764
-3	5	64	7.6018	7.1100	9.0133
0	5	64	26.6511	3.1387	22.5476
-5	6	64	26.0508	3.4780	26.5368
-2	6	64	167.3128	2.3120	168.5364
-4	7	64	18.8725	5.0553	21.6156
-1	7	64	15.3238	8.0747	14.0315
0	1	65	11.2009	7.1081	-12.9679
-2	2	65	8.4630	7.4083	-7.4860
-1	3	65	3.1111	6.6764	1.0140
-3	4	65	5.5591	-10.4746	
0	4	65	8.4354	7.7998	-8.1914
-5	5	65	6.1390	7.4797	5.6823
-2	5	65	18.8585	5.9179	-23.2630
-4	6	65	5.4146	7.1464	-10.8178
-1	6	65	4.6616	6.8640	-1.2490
-6	7	65	12.1858	9.0696	-15.3954

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	7	65	5.6540	6.4330	3.0254
0	0	66	57.4671	1.9838	57.6640
-1	2	66	45.7513	1.0859	42.9638
-3	3	66	40.0973	1.9634	37.6175
0	3	66	44.0921	1.9484	41.7127
-2	4	66	49.5939	1.4600	47.5574
-4	5	66	37.4435	1.8802	35.3870
-1	5	66	33.4321	2.2658	32.3807
-6	6	66	38.1681	3.9453	35.1380
-3	6	66	28.8937	3.2906	31.2228
0	6	66	31.4095	3.0347	35.5284
-5	7	66	27.5046	5.1951	26.9802
-2	7	66	24.7314	3.8192	30.6517
-1	1	67	20.8914	3.5357	22.0238
0	2	67	11.6465	9.2055	17.8273
-2	3	67	5.4728	6.6778	1.1414
-4	4	67	9.9103	9.6680	16.9298
-1	4	67	12.9774	7.9588	15.9030
-3	5	67	36.8479	1.8990	34.8438
0	5	67	5.0995	7.4646	-6.8537
-5	6	67	0.3287	6.4509	-0.0989
-2	6	67	21.1033	4.3976	18.3444
-4	7	67	8.5673	6.9255	-5.1579
-1	7	67	17.4302	7.0044	21.5417
0	1	68	42.4094	1.4788	-41.5110
-2	2	68	89.1146	1.2836	89.1297
-1	3	68	60.1400	1.1478	-60.5273
-3	4	68	37.2592	1.9247	-38.0206
0	4	68	67.9944	2.5731	68.6192
-5	5	68	59.8792	2.2709	-61.6255
-2	5	68	19.2793	5.4991	-15.3995
-4	6	68	57.9837	1.4827	57.4332
-1	6	68	46.4660	1.7871	-45.8798

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	7	68	54.3905	1.7609	-52.7004
0	0	69	62.8664	1.9665	-62.0650
-1	2	69	5.2575	6.7429	
-3	3	69	2.0249	7.3606	-3.9936
0	3	69	20.5876	4.4031	11.9821
-2	4	69	54.0192	1.4566	-53.7630
-4	5	69	8.9933	7.2172	12.4103
-1	5	69	7.5924	7.1240	-0.5297
-6	6	69	42.0429	2.5046	-41.8673
-3	6	69	9.7056	8.9285	9.7071
0	6	69	44.9375	3.9294	-43.3781
-5	7	69	15.1212	7.2846	-9.3095
-2	7	69	9.8782	7.2971	11.5928
-1	1	70	33.2780	1.9962	31.3750
0	2	70	17.4246	11.8234	17.9557
-2	3	70	21.1678	3.1989	23.4505
-4	4	70	17.9862	7.6104	16.0815
-1	4	70	29.5864	2.2694	28.7900
-3	5	70	35.1207	2.0440	32.0410
0	5	70	10.3758	9.8095	15.8599
-5	6	70	13.6796	7.6183	21.5699
-2	6	70	18.2454	8.2889	14.6884
-4	7	70	5.9737	15.7627	
0	1	71	12.8155	6.1978	-15.6170
-2	2	71	69.9727	2.6561	67.1130
-1	3	71	5.5591	-4.9269	
-3	4	71	10.1238	7.1460	-8.6056
0	4	71	51.8928	1.8829	50.4518
-5	5	71	14.2611	8.8910	-0.6665
-2	5	71	21.0734	3.5287	-19.7305
-4	6	71	40.1110	3.0941	37.0078

Appendix 1: Observed and calculated F-values of hogbomite-24R

-1	6	71	15.8605	6.7921	1.9676
-3	7	71	10.4263	7.1204	1.2643
0	0	72	13.3648	10.8560	22.0812
-1	2	72	10.4845	5.0104	-16.3712
-3	3	72	7.4504	7.4403	-5.1172
0	3	72	19.6258	9.8620	-19.4955
-2	4	72	3.1471	6.4341	18.2908
-4	5	72	21.1563	3.7293	-22.3631
-1	5	72	12.5953	8.2407	-11.5580
-6	6	72	6.8204	7.5694	11.9985
-3	6	72	26.7341	3.1686	-24.0729
0	6	72	4.9335	7.5411	15.0958
-1	1	73	64.7494	1.2322	65.5683
0	2	73	6.6109	-5.6656	
-2	3	73	67.6230	1.2781	69.2239
-4	4	73	6.9050	7.4348	-3.1860
-1	4	73	53.5333	1.5040	54.5985
-3	5	73	42.7610	1.8303	43.7331
0	5	73	62.0054	1.8200	61.8065
-5	6	73	44.7193	2.0294	48.7940
-2	6	73	12.0557	9.0062	-3.2844
0	1	74	14.6143	7.1005	10.6183
-2	2	74	33.0975	2.4753	32.1004
-1	3	74	8.1354	7.1246	6.3678
-3	4	74	12.1537	6.2367	11.0262
0	4	74	32.0809	2.7100	27.3317
-5	5	74	5.2622	7.5036	3.3580
-2	5	74	15.1831	9.8698	14.5941
-4	6	74	27.0964	2.8017	24.3137
-1	6	74	4.0633	6.4733	7.9277
0	0	75	25.1575	4.1429	-17.9252
-1	2	75	74.7886	1.1726	-74.1717

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	3	75	80.7002	1.4473	-78.1920
0	3	75	56.9398	1.7536	-61.1760
-2	4	75	22.2986	3.9044	-19.1497
-4	5	75	52.7036	1.5832	-52.4396
-1	5	75	67.1743	2.3315	-65.2167
-3	6	75	53.0392	1.6471	-52.5124
-1	1	76	81.8444	1.1461	-81.8757
0	2	76	104.4228	1.5193	107.5299
-2	3	76	92.3899	1.1419	-91.8166
-4	4	76	84.9306	1.4908	84.4739
-1	4	76	64.8518	1.4020	-64.1714
-3	5	76	48.2870	3.3650	-47.9941
0	5	76	86.5467	1.5743	-86.9519
-5	6	76	60.4731	1.6504	-58.4500
-2	6	76	72.3701	1.5241	70.5632
0	1	77	77.0841	1.4425	79.0478
-2	2	77	12.8629	7.2154	12.5466
-1	3	77	71.1494	1.2781	69.9636
-3	4	77	65.1381	1.3605	65.1149
0	4	77	16.7316	8.4554	16.6484
-5	5	77	59.8229	3.3915	58.8065
-2	5	77	65.5363	1.4058	67.4296
-4	6	77	18.2560	6.6057	18.8753
-1	6	77	47.9887	1.9664	49.6330
0	0	78	31.9872	3.6055	-33.1478
-1	2	78	51.7769	1.4626	-49.9994
-3	3	78	43.6433	2.1284	-40.9399
0	3	78	49.3768	1.9634	-49.3860
-2	4	78	26.0592	5.5424	-27.9673
-4	5	78	42.5481	1.8715	-43.5384
-1	5	78	36.5657	2.1621	-36.7080
-3	6	78	39.3116	2.2549	-39.4607
-1	1	79	49.9293	1.8962	-49.8784

Appendix 1: Observed and calculated F-values of hogbomite-24R

0	2	79	13.9905	9.6563	15.8316
-2	3	79	42.3936	2.2145	-41.9458
-4	4	79	19.8299	6.4451	13.2404
-1	4	79	44.3989	1.8369	-46.0042
-3	5	79	42.3451	6.6760	-44.8281
0	5	79	35.2135	5.8976	-29.6822
-2	6	79	16.3424	5.4726	9.9081
0	1	80	40.4535	2.1276	-40.2828
-2	2	80	130.2262	1.8154	132.1804
-1	3	80	50.4839	1.6006	-51.3536
-3	4	80	28.6337	2.8744	-28.4740
0	4	80	104.4403	1.5413	107.0856
-5	5	80	55.2769	2.1231	-54.2093
-2	5	80	19.2901	5.9724	-17.5188
-4	6	80	90.8959	2.6099	90.2236
0	0	81	19.2054	6.0080	24.1896
-1	2	81	67.6096	1.2810	68.1477
-3	3	81	74.6027	4.2987	75.5719
0	3	81	51.5610	2.0029	50.1033
-2	4	81	12.6266	6.9188	22.3151
-4	5	81	43.7038	2.0376	45.3062
-1	5	81	63.0401	1.6217	65.2506
-1	1	82	61.8224	1.6516	-60.1694
0	2	82	14.3116	6.8754	-12.2600
-2	3	82	59.1229	1.8128	-59.0434
-4	4	82	5.1621	7.5440	-13.8933
-1	4	82	53.5454	1.9858	-51.5866
-3	5	82	44.3005	2.0712	-46.8245
0	5	82	54.1886	2.1265	-52.4683
0	1	83	32.7210	2.5364	-34.9902
-2	2	83	30.6810	2.9658	-28.7395
-1	3	83	19.1881	6.2064	-24.8017

Appendix 1: Observed and calculated F-values of hogbomite-24R

-3	4	83	29.0159	4.0626	-32.0414
0	4	83	24.8619	7.3957	-23.1452
-2	5	83	29.7038	2.8245	-32.6614
0	0	84	17.2254	10.9267	-7.0911
-1	2	84	56.5424	1.7954	-58.6797
-3	3	84	58.7109	1.8399	-61.7945
0	3	84	36.4971	2.5459	-40.4846
-2	4	84	7.7614	7.2429	-3.9359
-4	5	84	37.6252	2.2643	-37.0168
-1	5	84	52.1511	1.8607	-53.5642
-1	1	85	30.1915	2.8451	-27.2580
0	2	85	39.5359	2.3633	-42.0813
-2	3	85	13.2040	5.9795	-18.3478
-4	4	85	38.4247	3.7553	-39.1574
-1	4	85	11.6002	6.5311	-19.5420
-3	5	85	33.4345	4.7503	-28.0080
0	1	86	8.0840	7.5418	-19.8858
-2	2	86	45.9097	2.8536	-39.8822
-1	3	86	19.5893	4.7624	-20.9521
-3	4	86	22.5665	3.6011	-18.2646
0	4	86	35.1738	3.1503	-35.8003
-2	5	86	16.3631	7.9518	-15.9402
0	0	87	53.4546	2.6597	55.3962
-1	2	87	9.2228	7.1922	1.5401
-3	3	87	12.2489	9.7162	12.1843
0	3	87	12.7543	11.4468	-11.7394
-2	4	87	43.2141	2.1242	44.0993
-1	1	88	8.7936	7.7943	12.5470
0	2	88	64.8525	1.7407	63.3850
-2	3	88	11.1459	5.9713	5.9005
-4	4	88	58.6786	2.0207	55.6848
-1	4	88	16.7933	5.2093	8.7106

Appendix 1: Observed and calculated F-values of hogbomite-24R

0	1	89	29.8996	6.4614	-30.3114
-2	2	89	123.4871	1.8492	-122.3257
-1	3	89	40.0679	2.1776	-40.8978
-3	4	89	31.1868	2.6603	-30.4688
0	0	90	31.7151	4.1530	32.9962
-1	2	90	11.6833	8.9554	9.6020
-3	3	90	20.5352	7.1332	11.9510
0	3	90	2.1412	7.5615	5.8522
-2	4	90	28.9629	5.7523	27.6172
-1	1	91	10.2239	9.4677	12.4345
0	2	91	89.7102	2.8785	91.8486
-2	3	91	21.3017	4.9277	24.8025
-1	4	91	21.0761	4.8898	15.4283
0	1	92	32.3134	2.7350	-28.9792
-2	2	92	80.4649	2.8621	83.5293
-1	3	92	11.0881	6.7363	-15.1645
0	0	93	85.9263	2.2369	-90.4383
-1	2	93	48.4020	1.7392	-48.0583
-3	3	93	38.3092	2.8868	-38.5623
0	3	93	50.5980	2.3336	-49.6984
-1	1	94	33.5452	2.7647	34.5716
0	2	94	73.2589	1.7949	70.4050
-2	3	94	32.5582	2.6169	34.2861
0	1	95	41.0409	9.1258	38.4617
-2	2	95	47.2021	4.1419	49.6520
-1	3	95	29.9896	2.7831	32.5039
0	0	96	129.2761	2.7877	129.5011
-1	2	96	22.7941	4.5658	-16.3911
-1	1	97	18.9093	8.2557	18.6506
0	1	98	31.4068	6.0989	32.1444
0	0	99	31.3519	4.5940	21.9940