

# Disclosed: An efficient depth-first, top-down algorithm for mining disjunctive closed itemsets in high-dimensional data

## Supplementary Material - Summary of data sets

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## Figures for the experiments assessing the performance of Disclosed

### Good data sets

Figure A-1: Performance measures for the GDS963 data set. Disclosed M1 refers to Disclosed's performance under model1 experiment restrictions, while Disclosed M2 refers to model2

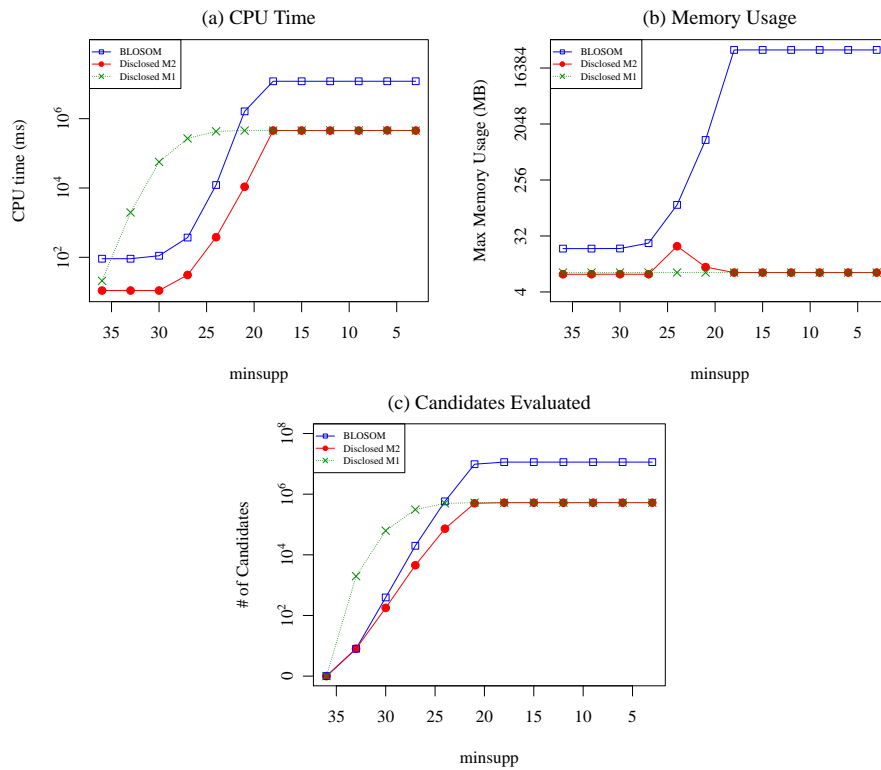


Figure A-2: Performance measures for the GDS2200 data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2

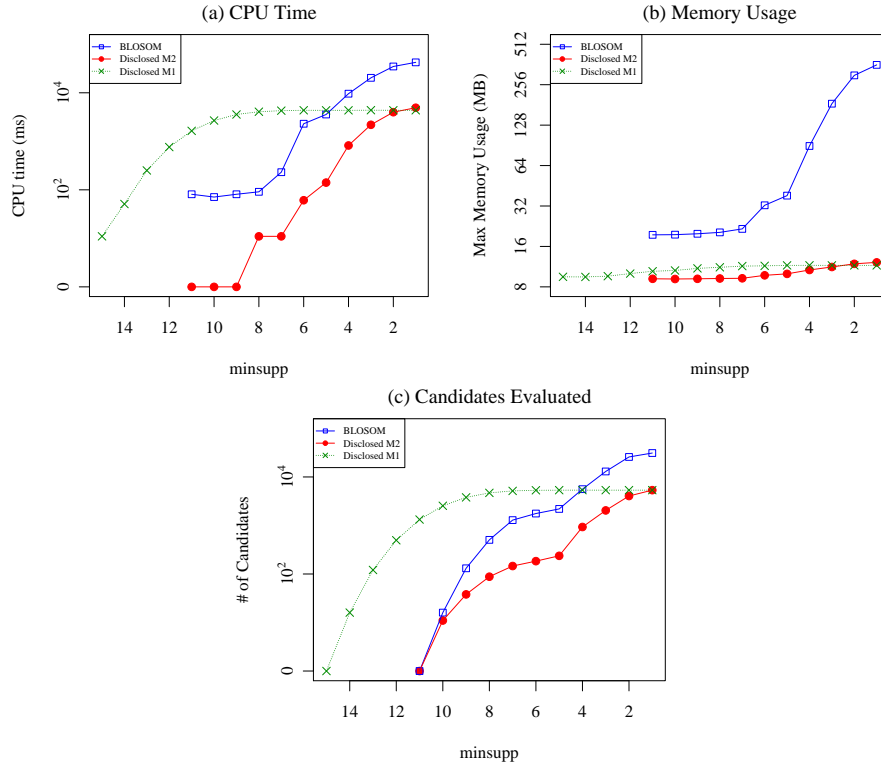


Figure A-3: Performance measures for the GDS2545 data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2

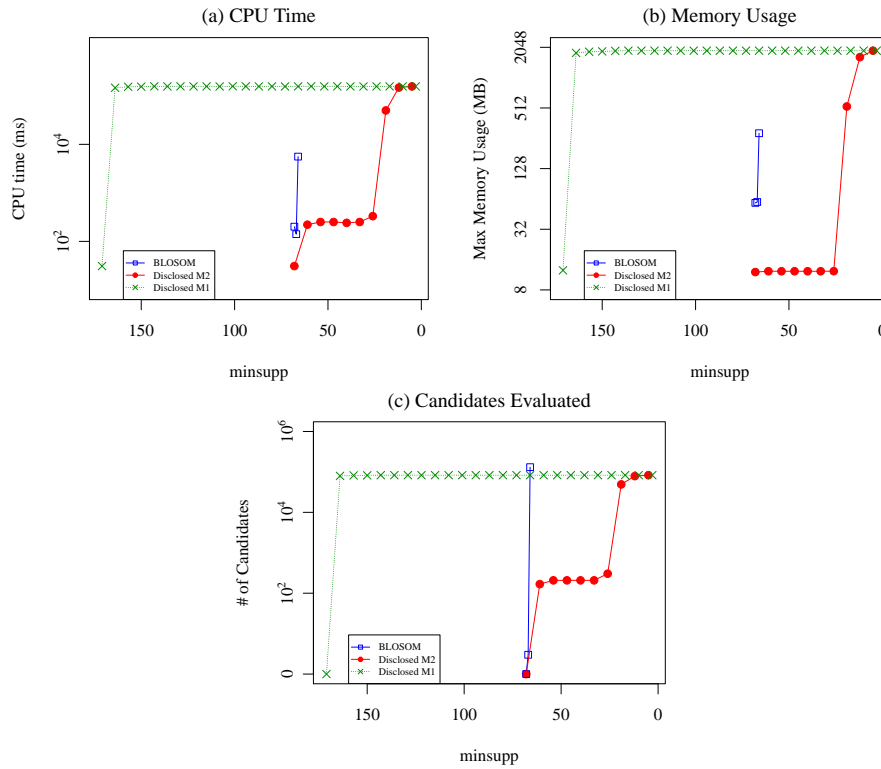
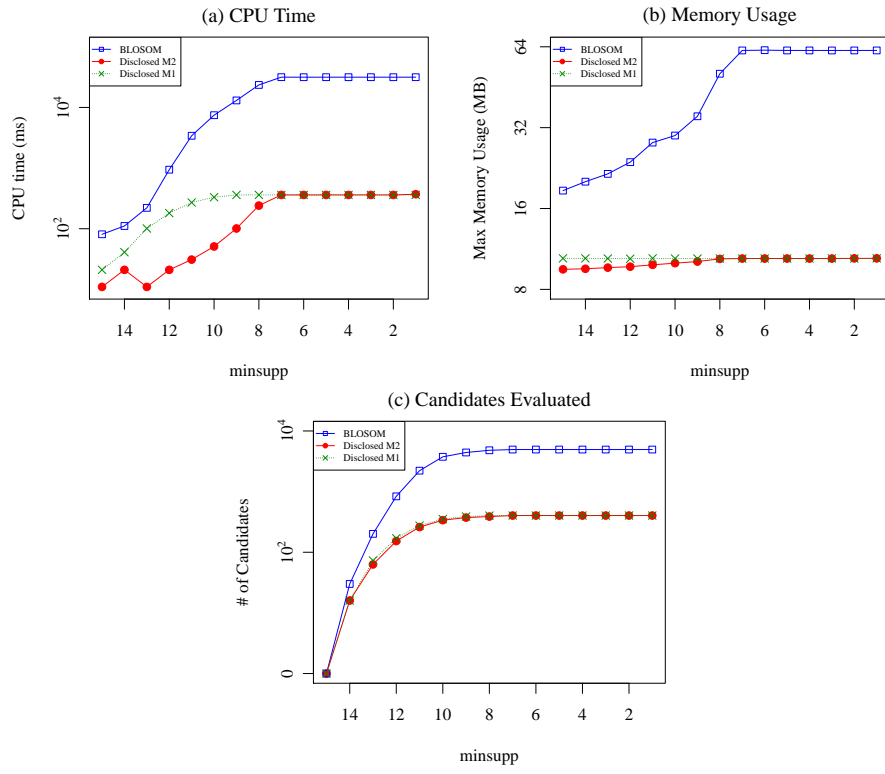


Figure A-4: Performance measures for the GDS2941 data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2



## Bad data sets

Figure A-5: Performance measures for the Embryo data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2

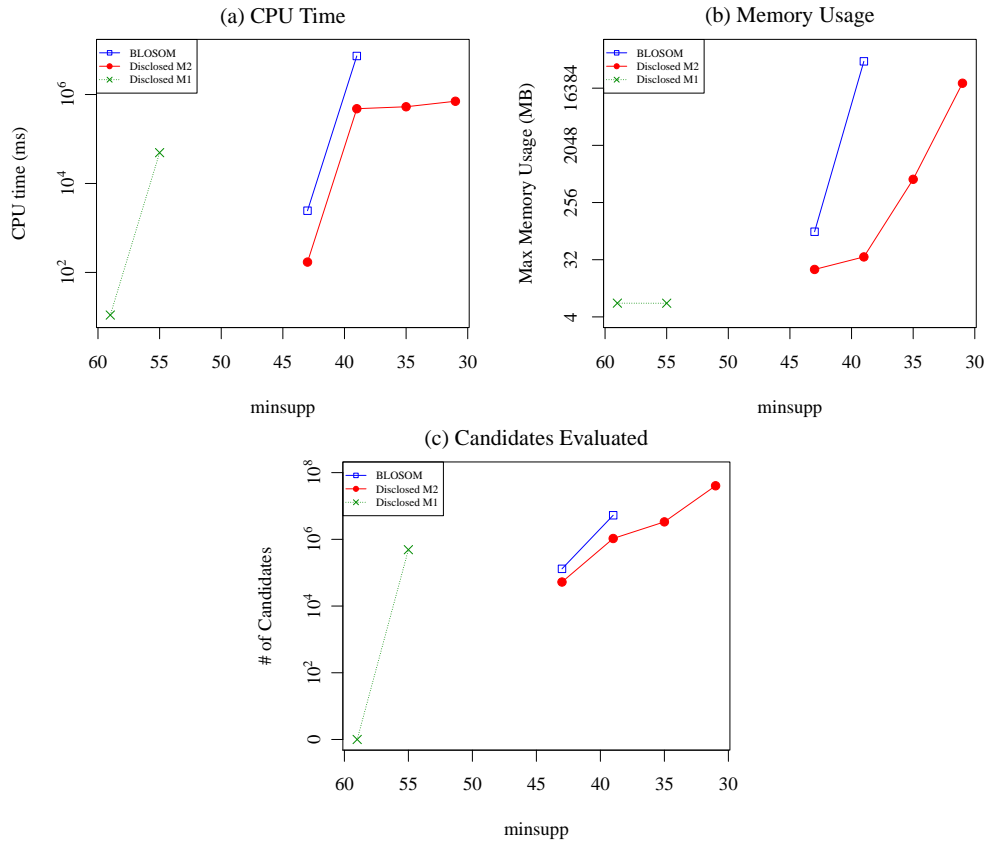


Figure A-6: Performance measures for the Promoters data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2

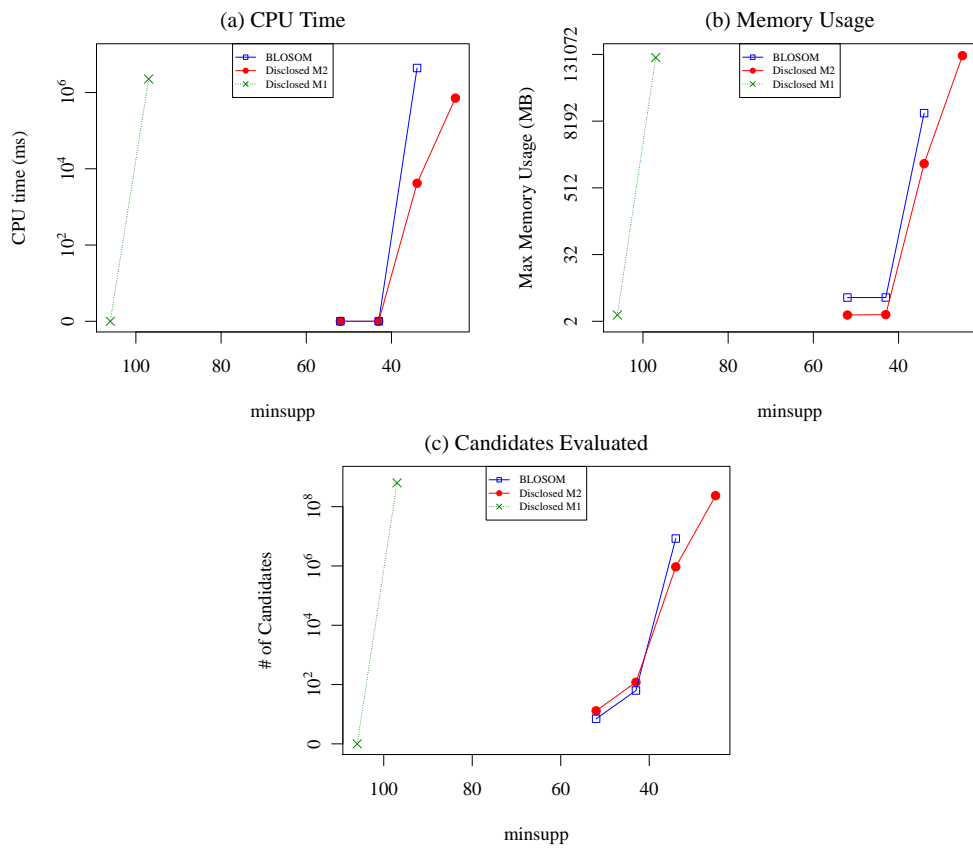
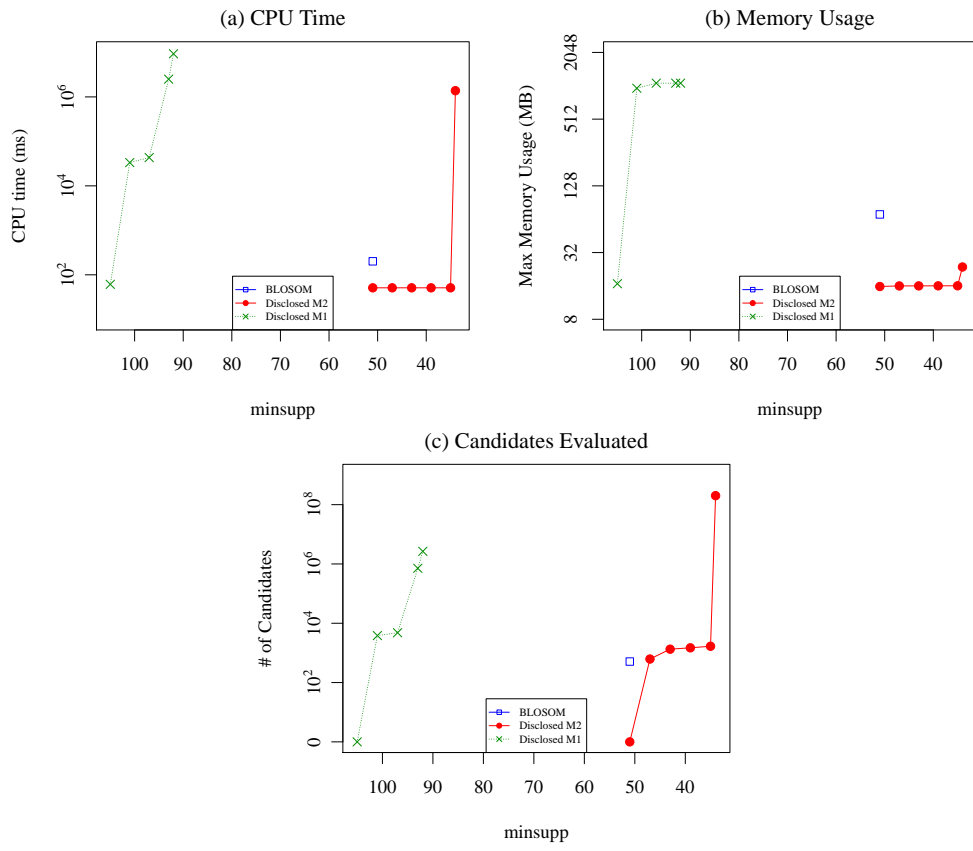


Figure A-7: Performance measures for the GDS2519 data set. Disclosed M1 refers to Disclosed's performance under model1 experiment restrictions, while Disclosed M2 refers to model2



## Average data sets

Figure A-8: Performance measures for the GDS2250 data set. Disclosed M1 refers to Disclosed's performance under model1 experiment restrictions, while Disclosed M2 refers to model2

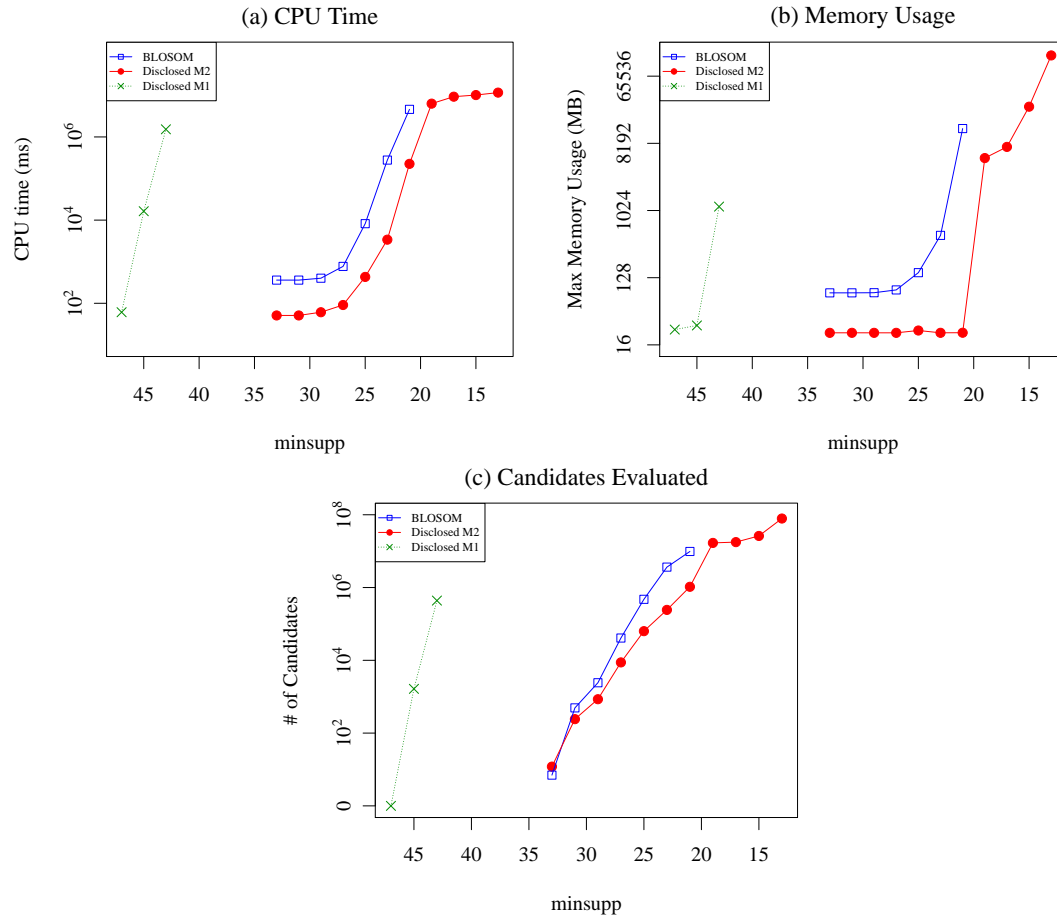


Figure A-9: Performance measures for the Colon data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2

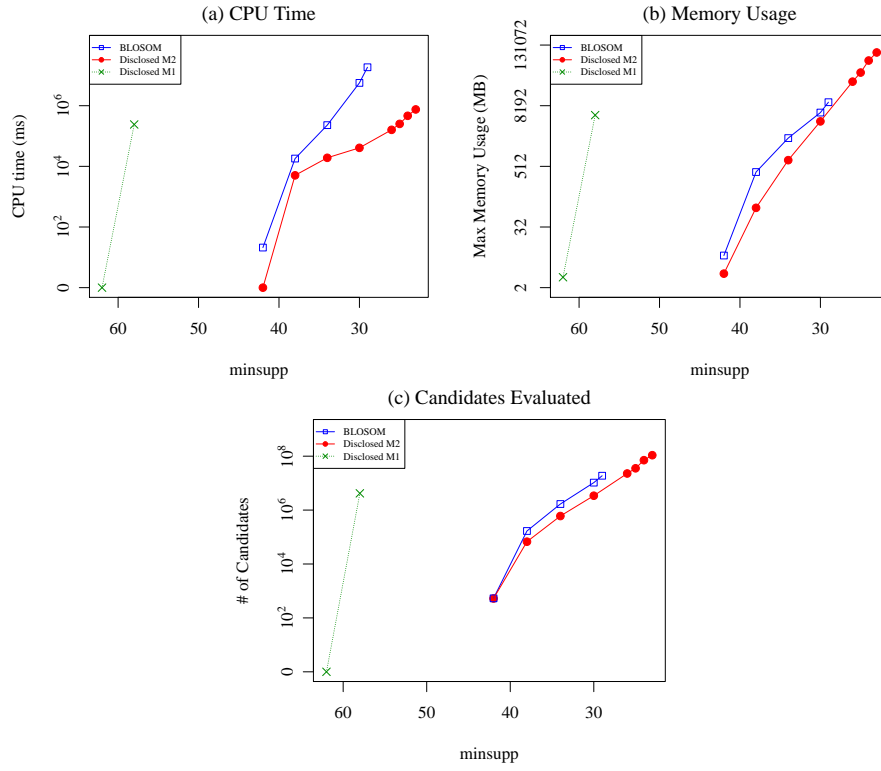
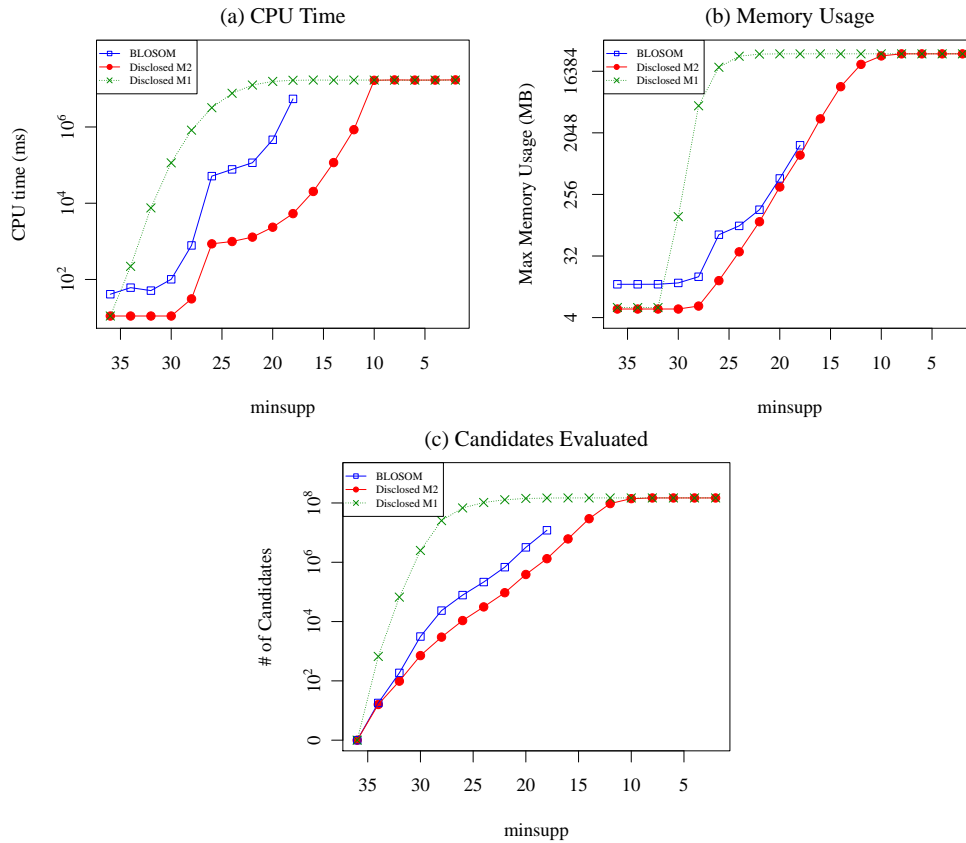


Figure A-10: Performance measures for the Leukemia data set. Disclosed M1 refers to Disclosed’s performance under model1 experiment restrictions, while Disclosed M2 refers to model2





## Tables with the results of the experiments to assess the performance of Disclosed

### Good data sets

Table A-15: This table contains raw performance results for the GDS963 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm's time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm's exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
1	1	DisclosedM2	36	00:02.20	0.01	0	7904	0
6	8	DisclosedM2	33	00:00.02	0.01	0	7904	0
144	178	DisclosedM2	30	00:00.02	0.01	0	7920	0
4173	4536	DisclosedM2	27	00:00.04	0.03	0	7904	0
70765	72747	DisclosedM2	24	00:00.39	0.38	0	22416	0
500873	501082	DisclosedM2	21	00:10.90	10.88	0.01	10336	0
524287	524287	DisclosedM2	18	07:35.76	455.19	0.49	8416	0
524287	524287	DisclosedM2	15	07:35.57	455.06	0.43	8416	0
524287	524287	DisclosedM2	12	07:35.67	453.97	0.42	8416	0
524287	524287	DisclosedM2	9	07:34.29	453.81	0.4	8416	0
524287	524287	DisclosedM2	6	07:40.08	459.51	0.48	8416	0
524287	524287	DisclosedM2	3	07:34.57	454.07	0.42	8416	0
1	1	BLOSUM	36	00:00.44	0.09	0.03	20496	0
6	8	BLOSUM	33	00:00.26	0.09	0.03	20496	0
144	393	BLOSUM	30	00:00.31	0.11	0.02	20576	0
4173	19849	BLOSUM	27	00:00.54	0.37	0.04	25104	0
70765	578627	BLOSUM	24	00:12.37	12.19	0.08	103888	0
500873	9740327	BLOSUM	21	27:06.88	1625.24	1.08	1157904	0
524287	11424319	BLOSUM	18	03:20:53	12006.44	28.18	32844048	0
524287	11424319	BLOSUM	15	03:20:53	12010.09	28.83	32844032	0
524287	11424319	BLOSUM	12	03:21:03	12012.51	28.28	32844064	0
524287	11424319	BLOSUM	9	03:20:49	12013.99	28.75	32844048	0
524287	11424319	BLOSUM	6	03:20:52	12016.89	28.5	32844064	0
524287	11424319	BLOSUM	3	03:21:03	12027.99	28.77	32844064	0
1	1	DisclosedM1	36	00:00.06	0.02	0	8416	0
1975	1975	DisclosedM1	33	00:01.98	1.97	0	8416	0
62359	62359	DisclosedM1	30	00:56.56	56.48	0.06	8432	0
310763	310763	DisclosedM1	27	04:28.70	268.4	0.25	8416	0
499055	499055	DisclosedM1	24	07:11.26	430.81	0.38	8432	0
523943	523943	DisclosedM1	21	07:34.25	453.74	0.43	8416	0
524287	524287	DisclosedM1	18	07:35.38	454.86	0.44	8416	0
524287	524287	DisclosedM1	15	07:38.02	457.48	0.46	8416	0
524287	524287	DisclosedM1	12	07:40.81	460.27	0.47	8416	0
524287	524287	DisclosedM1	9	07:38.93	458.37	0.48	8416	0
524287	524287	DisclosedM1	6	07:34.85	454.32	0.46	8416	0
524287	524287	DisclosedM1	3	07:33.53	453.01	0.45	8416	0

Table A-16: This table contains raw performance results for the GDS2200 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	15	00:00.19	0	0	9376	0
0	0	DisclosedM2	14	00:00.01	0	0	9376	0
0	0	DisclosedM2	13	00:00.01	0	0	9360	0
0	0	DisclosedM2	12	00:00.01	0	0	9344	0
1	1	DisclosedM2	11	00:00.01	0	0	9408	0
9	11	DisclosedM2	10	00:00.01	0	0	9376	0
36	38	DisclosedM2	9	00:00.01	0	0	9408	0
86	88	DisclosedM2	8	00:00.01	0.01	0	9456	0
143	146	DisclosedM2	7	00:00.02	0.01	0	9488	0
180	184	DisclosedM2	6	00:00.07	0.06	0	9984	0
231	237	DisclosedM2	5	00:00.15	0.14	0	10240	0
905	931	DisclosedM2	4	00:00.84	0.82	0.01	10944	0
1942	2044	DisclosedM2	3	00:02.20	2.19	0	11520	0
3734	4050	DisclosedM2	2	00:04.00	3.98	0.01	12160	0
4882	5346	DisclosedM2	1	00:04.93	4.92	0	12464	0
0	0	BLOSUM	15	00:00.27	0.06	0.04	19984	0
0	0	BLOSUM	14	00:00.18	0.08	0.03	19984	0
0	0	BLOSUM	13	00:00.16	0.06	0.03	19984	0
0	0	BLOSUM	12	00:00.16	0.07	0.03	19984	0
1	1	BLOSUM	11	00:00.18	0.08	0.03	19984	0
9	16	BLOSUM	10	00:00.22	0.07	0.03	20048	0
36	131	BLOSUM	9	00:00.18	0.08	0.03	20352	0
86	505	BLOSUM	8	00:00.21	0.09	0.04	20848	0
143	1290	BLOSUM	7	00:00.32	0.23	0.03	22128	0
180	1762	BLOSUM	6	00:02.40	2.3	0.03	33168	0
231	2193	BLOSUM	5	00:03.70	3.57	0.04	39152	0
905	5602	BLOSUM	4	00:09.75	9.58	0.07	91680	0
1942	12979	BLOSUM	3	00:20.53	20.34	0.09	189328	0
3734	25834	BLOSUM	2	00:35.13	34.85	0.13	307616	0
4882	31128	BLOSUM	1	00:42.72	42.39	0.21	368288	0
1	1	DisclosedM1	15	00:00.06	0.01	0	9728	0
16	16	DisclosedM1	14	00:00.06	0.05	0	9712	0
121	121	DisclosedM1	13	00:00.25	0.25	0	9840	0
496	496	DisclosedM1	12	00:00.77	0.76	0	10288	0
1305	1325	DisclosedM1	11	00:01.65	1.64	0	10704	0
2454	2544	DisclosedM1	10	00:02.69	2.68	0	10848	0
3583	3793	DisclosedM1	9	00:03.57	3.57	0	11248	0
4363	4698	DisclosedM1	8	00:04.08	4.07	0	11456	0
4738	5157	DisclosedM1	7	00:04.28	4.28	0	11696	0
4858	5313	DisclosedM1	6	00:04.36	4.36	0	11744	0
4881	5345	DisclosedM1	5	00:04.36	4.35	0	11840	0
4883	5348	DisclosedM1	4	00:04.36	4.35	0	11856	0
4883	5348	DisclosedM1	3	00:04.39	4.38	0	11840	0
4883	5348	DisclosedM1	2	00:04.37	4.36	0	11840	0
4883	5348	DisclosedM1	1	00:04.37	4.36	0	11840	0

Table A-17: This table contains raw performance results for the GDS2545 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
1	1	DisclosedM2	68	00:00.24	0.03	0.01	12320	0
28	168	DisclosedM2	61	00:00.23	0.22	0	12560	0
32	208	DisclosedM2	54	00:00.25	0.25	0	12544	0
32	208	DisclosedM2	47	00:00.25	0.25	0	12544	0
32	208	DisclosedM2	40	00:00.25	0.24	0.01	12544	0
32	208	DisclosedM2	33	00:00.25	0.25	0	12544	0
41	304	DisclosedM2	26	00:00.34	0.33	0	12576	0
33098	49151	DisclosedM2	19	00:50.15	50	0.14	542256	0
53041	78787	DisclosedM2	12	02:28.74	148.31	0.4	1675552	0
55899	83027	DisclosedM2	5	02:36.91	156.45	0.41	1941952	0
1	1	BLOSUM	68	00:00.58	0.2	0.04	59872	0
3	3	BLOSUM	67	00:00.33	0.14	0.05	61104	0
131071	131071	BLOSUM	66	00:06.08	5.59	0.18	294192	0
NA	NA	BLOSUM	65	06:00:06	6702.3	106.5	127295376	124
1	1	DisclosedM1	171	00:00.19	0.03	0.01	12816	0
53840	79761	DisclosedM1	164	02:27.13	146.67	0.4	1845920	0
55050	81796	DisclosedM1	157	02:34.04	153.5	0.44	1895280	0
55335	82201	DisclosedM1	150	02:35.17	154.68	0.43	1909664	0
55887	83010	DisclosedM1	143	02:37.37	156.87	0.43	1931744	0
55897	83025	DisclosedM1	136	02:36.91	156.38	0.43	1941984	0
55899	83027	DisclosedM1	129	02:37.30	156.85	0.4	1941984	0
55899	83027	DisclosedM1	122	02:37.00	156.48	0.41	1941952	0
55899	83027	DisclosedM1	115	02:37.04	156.57	0.39	1941968	0
55899	83027	DisclosedM1	108	02:36.44	155.92	0.48	1941952	0
55899	83027	DisclosedM1	101	02:37.87	157.35	0.44	1941968	0
55899	83027	DisclosedM1	94	02:37.39	156.89	0.43	1941952	0
55899	83027	DisclosedM1	87	02:36.86	156.39	0.43	1941968	0
55899	83027	DisclosedM1	80	02:37.21	156.73	0.43	1941952	0
55899	83027	DisclosedM1	73	02:36.49	155.96	0.43	1941968	0
55899	83027	DisclosedM1	66	02:36.88	156.37	0.45	1941952	0
55899	83027	DisclosedM1	59	02:37.59	157.08	0.47	1941952	0
55899	83027	DisclosedM1	52	02:36.93	156.42	0.45	1941968	0
55899	83027	DisclosedM1	45	02:37.15	156.65	0.41	1941952	0
55899	83027	DisclosedM1	38	02:36.54	156.04	0.45	1941968	0
55899	83027	DisclosedM1	31	02:36.56	156.06	0.43	1941968	0
55899	83027	DisclosedM1	24	02:36.80	156.31	0.45	1941952	0
55899	83027	DisclosedM1	17	02:36.95	156.48	0.43	1941952	0
55899	83027	DisclosedM1	10	02:36.73	156.26	0.43	1941952	0
55899	83027	DisclosedM1	3	02:36.90	156.39	0.47	1941952	0

Table A-18: This table contains raw performance results for the GDS2821 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	26	00:02.97	0.05	0.01	24064	0
9	9	DisclosedM2	24	00:00.07	0.06	0	24080	0
126	130	DisclosedM2	22	00:00.07	0.06	0	24080	0
751	785	DisclosedM2	20	00:00.07	0.06	0.01	24112	0
3116	3299	DisclosedM2	18	00:00.20	0.19	0	24368	0
17427	17892	DisclosedM2	16	00:02.60	2.57	0.02	25712	0
50181	50639	DisclosedM2	14	00:03.25	3.22	0.02	25760	0
65953	65973	DisclosedM2	12	00:09.43	9.38	0.03	25952	0
66154	66174	DisclosedM2	10	00:57.47	57.35	0.1	26288	0
66277	66297	DisclosedM2	8	02:44.17	163.73	0.39	96368	0
66277	66297	DisclosedM2	6	02:42.86	162.37	0.4	96384	0
66277	66297	DisclosedM2	4	02:43.03	162.64	0.35	96368	0
66277	66297	DisclosedM2	2	02:43.33	162.9	0.38	96384	0
0	0	BLOSUM	26	00:00.87	0.35	0.15	52096	0
9	15	BLOSUM	24	00:00.72	0.35	0.13	52096	0
126	500	BLOSUM	22	00:00.63	0.36	0.16	52240	0
751	6650	BLOSUM	20	00:01.55	1.22	0.16	54016	0
3116	30632	BLOSUM	18	00:22.05	21.69	0.15	69360	0
17427	287152	BLOSUM	16	06:57.33	416.6	0.36	309088	0
50181	1361604	BLOSUM	14	09:20.95	560.26	0.4	344336	0
65953	2357798	BLOSUM	12	18:34.43	1113.19	0.83	690400	0
66154	2380316	BLOSUM	10	01:23:04	4979.41	3.9	3777136	0
66277	2381837	BLOSUM	8	04:17:18	15420.52	11.27	10935888	0
66277	2381837	BLOSUM	6	04:17:11	15415.01	11.08	10934176	0
66277	2381837	BLOSUM	4	04:17:12	15416.98	11.04	10934192	0
66277	2381837	BLOSUM	2	04:17:11	15416.12	11.21	10935808	0
0	0	DisclosedM1	26	00:00.09	0.06	0.01	26576	0
26	26	DisclosedM1	24	00:00.20	0.19	0	26592	0
1015	1035	DisclosedM1	22	00:02.88	2.86	0.01	26592	0
7455	7475	DisclosedM1	20	00:20.79	20.74	0.03	26592	0
27023	27043	DisclosedM1	18	01:09.43	69.3	0.11	43056	0
51343	51363	DisclosedM1	16	02:07.31	127.07	0.21	72160	0
63719	63739	DisclosedM1	14	02:36.42	156.14	0.25	91232	0
66105	66125	DisclosedM1	12	02:42.27	161.93	0.31	96400	0
66263	66283	DisclosedM1	10	02:41.60	161.26	0.3	96368	0
66277	66297	DisclosedM1	8	02:41.91	161.59	0.29	96352	0
66277	66297	DisclosedM1	6	02:42.42	162.07	0.31	96368	0
66277	66297	DisclosedM1	4	02:43.31	162.94	0.33	96368	0
66277	66297	DisclosedM1	2	02:42.61	162.27	0.3	96368	0

Table A-19: This table contains raw performance results for the GDS2941 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
1	1	DisclosedM2	15	00:00.23	0.01	0	9728	0
16	16	DisclosedM2	14	00:00.02	0.02	0	9776	0
63	63	DisclosedM2	13	00:00.02	0.01	0	9872	0
153	153	DisclosedM2	12	00:00.02	0.02	0	9952	0
260	260	DisclosedM2	11	00:00.04	0.03	0	10112	0
338	338	DisclosedM2	10	00:00.06	0.05	0	10256	0
373	373	DisclosedM2	9	00:00.11	0.1	0	10400	0
388	388	DisclosedM2	8	00:00.25	0.24	0	10640	0
400	403	DisclosedM2	7	00:00.37	0.36	0	10672	0
400	403	DisclosedM2	6	00:00.37	0.36	0	10672	0
400	403	DisclosedM2	5	00:00.37	0.36	0	10672	0
400	403	DisclosedM2	4	00:00.37	0.36	0	10672	0
400	403	DisclosedM2	3	00:00.37	0.36	0	10672	0
400	403	DisclosedM2	2	00:00.37	0.36	0	10688	0
400	403	DisclosedM2	1	00:00.37	0.37	0	10688	0
1	1	BLOSUM	15	00:00.33	0.08	0.05	19104	0
16	30	BLOSUM	14	00:00.37	0.11	0.06	20624	0
63	201	BLOSUM	13	00:00.35	0.22	0.06	22048	0
153	835	BLOSUM	12	00:01.09	0.94	0.06	24384	0
260	2215	BLOSUM	11	00:03.54	3.41	0.05	28832	0
338	3746	BLOSUM	10	00:07.61	7.45	0.07	30624	0
373	4416	BLOSUM	9	00:13.20	13.05	0.06	36128	0
388	4801	BLOSUM	8	00:23.70	23.5	0.07	52016	0
400	4938	BLOSUM	7	00:31.77	31.57	0.1	63520	0
400	4938	BLOSUM	6	00:31.71	31.52	0.08	63664	0
400	4938	BLOSUM	5	00:31.74	31.53	0.09	63520	0
400	4938	BLOSUM	4	00:31.81	31.54	0.08	63520	0
400	4938	BLOSUM	3	00:31.81	31.54	0.08	63504	0
400	4938	BLOSUM	2	00:31.73	31.53	0.09	63520	0
400	4938	BLOSUM	1	00:31.72	31.55	0.09	63520	0
1	1	DisclosedM1	15	00:00.08	0.02	0	10688	0
16	16	DisclosedM1	14	00:00.05	0.04	0	10688	0
73	73	DisclosedM1	13	00:00.10	0.1	0	10672	0
167	170	DisclosedM1	12	00:00.19	0.18	0	10656	0
272	275	DisclosedM1	11	00:00.28	0.27	0	10688	0
349	352	DisclosedM1	10	00:00.34	0.33	0	10672	0
385	388	DisclosedM1	9	00:00.36	0.36	0	10672	0
399	402	DisclosedM1	8	00:00.37	0.36	0	10672	0
400	403	DisclosedM1	7	00:00.37	0.36	0	10672	0
400	403	DisclosedM1	6	00:00.37	0.36	0	10672	0
400	403	DisclosedM1	5	00:00.37	0.36	0	10672	0
400	403	DisclosedM1	4	00:00.37	0.36	0	10672	0
400	403	DisclosedM1	3	00:00.37	0.36	0	10688	0
400	403	DisclosedM1	2	00:00.37	0.36	0	10672	0
400	403	DisclosedM1	1	00:00.37	0.36	0	10688	0

Table A-20: This table contains raw performance results for the Leukemia data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
1	1	DisclosedM2	36	00:00.27	0.01	0	5472	0
10	16	DisclosedM2	34	00:00.01	0.01	0	5472	0
76	98	DisclosedM2	32	00:00.01	0.01	0	5472	0
628	713	DisclosedM2	30	00:00.01	0.01	0	5472	0
2784	2993	DisclosedM2	28	00:00.03	0.03	0	6048	0
10062	10823	DisclosedM2	26	00:00.87	0.86	0	14272	0
29335	31243	DisclosedM2	24	00:01.00	0.99	0	37744	0
88512	94131	DisclosedM2	22	00:01.32	1.29	0.02	104288	0
362098	387599	DisclosedM2	20	00:02.42	2.35	0.07	337376	0
1237178	1322328	DisclosedM2	18	00:05.56	5.34	0.22	989152	0
5726741	6135148	DisclosedM2	16	00:21.05	20.37	0.67	3368288	0
28005300	29459000	DisclosedM2	14	01:58.56	116.45	2.08	9968128	0
92829621	95432271	DisclosedM2	12	14:15.50	850.05	5.18	21183952	0
135608761	139976931	DisclosedM2	10	04:40:30	16802.5	25.38	28175008	0
143217133	147745342	DisclosedM2	8	04:46:33	17163.41	25.86	30205440	0
143217133	147745342	DisclosedM2	6	04:43:41	16991.45	24.9	30205440	0
143217133	147745342	DisclosedM2	4	04:44:01	17011.65	25.22	30205440	0
143217133	147745342	DisclosedM2	2	04:47:11	17201.15	25	30205456	0
1	1	BLOSUM	36	00:00.23	0.04	0.02	12608	0
10	18	BLOSUM	34	00:00.15	0.06	0.01	12608	0
76	186	BLOSUM	32	00:00.20	0.05	0.02	12624	0
628	3128	BLOSUM	30	00:00.21	0.1	0.01	13200	0
2784	23429	BLOSUM	28	00:00.88	0.78	0.01	16272	0
10062	78016	BLOSUM	26	00:51.51	51.35	0.05	67296	0
29335	215039	BLOSUM	24	01:17.48	77.25	0.06	90640	0
88512	682875	BLOSUM	22	01:55.46	115.24	0.08	156544	0
362098	3182844	BLOSUM	20	07:42.85	462.33	0.28	449776	0
1237178	11983647	BLOSUM	18	01:30:57	5455.73	0.75	1378256	0
NA	NA	BLOSUM	16	06:00:00	21595.35	0.93	1473296	124
1	1	DisclosedM1	36	00:00.03	0.01	0	5760	0
667	667	DisclosedM1	34	00:00.22	0.22	0	5744	0
66712	66712	DisclosedM1	32	00:07.56	7.54	0.01	5744	0
2467143	2501200	DisclosedM1	30	01:54.72	114.54	0.16	123840	0
24360790	25391450	DisclosedM1	28	13:47.17	825.03	1.91	5228848	0
64872572	67870810	DisclosedM1	26	53:28.02	3200.35	7.09	19191200	0
99506956	103660802	DisclosedM1	24	02:07:44	7649.05	13.75	27859216	0
123885168	128364873	DisclosedM1	22	03:30:08	12586.21	19.56	29954048	0
137508766	142033517	DisclosedM1	20	04:21:33	15667.74	23.35	30191408	0
142243064	146771163	DisclosedM1	18	04:39:49	16761.83	24.87	30205088	0
143133411	147661619	DisclosedM1	16	04:44:37	17048.55	25.67	30205440	0
143214181	147742390	DisclosedM1	14	04:42:47	16939.01	25.16	30205440	0
143217106	147745315	DisclosedM1	12	04:43:51	17002.97	25.8	30205456	0
143217133	147745342	DisclosedM1	10	04:43:52	17004.64	24.95	30205440	0
143217133	147745342	DisclosedM1	8	04:42:42	16934.54	24.4	30205456	0
143217133	147745342	DisclosedM1	6	04:43:04	16956.85	24.55	30205440	0
143217133	147745342	DisclosedM1	4	04:43:06	16958.55	25.21	30205456	0
143217133	147745342	DisclosedM1	2	04:43:47	16998.61	25.91	30205440	0

## Bad data sets

Table A-21: This table contains raw performance results for the Embryo data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm's time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm's exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	59	00:00.31	0.01	0	6464	0
0	0	DisclosedM2	55	00:00.01	0.01	0	6480	0
0	0	DisclosedM2	51	00:00.01	0.01	0	6464	0
0	0	DisclosedM2	47	00:00.01	0.01	0	6464	0
49705	52545	DisclosedM2	43	00:00.18	0.17	0	23008	0
1007877	1060559	DisclosedM2	39	08:00.13	479.56	0.49	36288	0
2814817	3341202	DisclosedM2	35	08:51.47	530.7	0.68	610752	0
34909328	40386670	DisclosedM2	31	11:50.99	706.3	4.52	20088064	0
NA	NA	DisclosedM2	27	21:54.44	824.36	67.77	127715344	137
0	0	BLOSUM	59	00:00.39	0.08	0.02	17648	0
0	0	BLOSUM	55	00:00.20	0.08	0.02	17648	0
0	0	BLOSUM	51	00:00.17	0.08	0.02	17648	0
0	0	BLOSUM	47	00:00.21	0.07	0.02	17632	0
49705	130528	BLOSUM	43	00:02.58	2.44	0.06	90688	0
1007877	5271219	BLOSUM	39	02:03:38	7350.12	39.9	44506592	0
NA	NA	BLOSUM	35	06:00:00	21579.72	12.49	47792656	124
1	1	DisclosedM1	59	00:00.04	0.01	0	6752	0
489405	489405	DisclosedM1	55	00:49.37	49.31	0.05	6736	0
NA	NA	DisclosedM1	51	06:00:02	21532.95	56.45	127551824	124

Table A-22: This table contains raw performance results for the GDS2519 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm's time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm's exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
1	1	DisclosedM2	51	00:02.43	0.05	0	16192	0
49	622	DisclosedM2	47	00:00.06	0.05	0	16384	0
177	1336	DisclosedM2	43	00:00.06	0.05	0	16400	0
202	1485	DisclosedM2	39	00:00.06	0.05	0	16416	0
265	1678	DisclosedM2	35	00:00.07	0.05	0.01	16432	0
201327209	201362587	DisclosedM2	34	23:05.17	1381.15	1.34	24288	0
NA	NA	DisclosedM2	33	06:00:00	21561.6	33.06	16704	124
511	511	BLOSUM	51	00:00.52	0.2	0.06	72384	0
NA	NA	BLOSUM	50	06:00:03	16210.3	78.24	127561616	124
1	1	DisclosedM1	105	00:00.10	0.06	0.01	17152	0
3351	3843	DisclosedM1	101	00:33.61	33.38	0.21	996320	0
4170	4787	DisclosedM1	97	00:43.54	43.24	0.28	1107360	0
713917	714535	DisclosedM1	93	41:46.36	2503.2	2.76	1107360	0
2663268	2663886	DisclosedM1	92	02:35:28	9318.46	8.87	1107360	0
NA	NA	DisclosedM1	91	06:00:00	21574.72	21.91	269664	124



Table A-23: This table contains raw performance results for the Lymphoma data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm's time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm's exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	46	00:02.36	0	0	3536	0
0	0	DisclosedM2	44	00:00.01	0	0	3520	0
0	0	DisclosedM2	42	00:00.00	0	0	3520	0
0	0	DisclosedM2	40	00:00.00	0	0	3520	0
0	0	DisclosedM2	38	00:00.00	0	0	3520	0
0	0	DisclosedM2	36	00:00.01	0	0	3520	0
0	0	DisclosedM2	34	00:00.00	0	0	3504	0
0	0	DisclosedM2	32	00:00.00	0	0	3536	0
0	0	DisclosedM2	30	00:00.00	0	0	3520	0
0	0	DisclosedM2	28	00:00.00	0	0	3520	0
0	0	DisclosedM2	26	00:00.00	0	0	3520	0
0	0	DisclosedM2	24	00:00.00	0	0	3520	0
3	5	DisclosedM2	22	00:00.00	0	0	3520	0
180	309	DisclosedM2	20	00:00.01	0	0	3856	0
2613966	2691647	DisclosedM2	18	08:29.96	507.64	1.98	5561152	0
30259160	31381334	DisclosedM2	16	02:12:53	7936.26	31.47	93252080	0
NA	NA	DisclosedM2	14	06:00:03	21488.66	79.26	127653760	124
0	0	BLOSUM	46	00:00.39	0.01	0.01	10352	0
0	0	BLOSUM	44	00:00.08	0.02	0.01	10352	0
0	0	BLOSUM	42	00:00.06	0.02	0	10352	0
0	0	BLOSUM	40	00:00.05	0.01	0.01	10352	0
0	0	BLOSUM	38	00:00.06	0.02	0.01	10352	0
0	0	BLOSUM	36	00:00.06	0.02	0.01	10352	0
0	0	BLOSUM	34	00:00.06	0.01	0.01	10352	0
0	0	BLOSUM	32	00:00.08	0.01	0.01	10352	0
0	0	BLOSUM	30	00:00.08	0.01	0.01	10352	0
0	0	BLOSUM	28	00:00.07	0.01	0.01	10352	0
0	0	BLOSUM	26	00:00.07	0.01	0.01	10352	0
0	0	BLOSUM	24	00:00.05	0.02	0	10352	0
3	3	BLOSUM	22	00:00.07	0.01	0.01	10352	0
180	303	BLOSUM	20	00:00.07	0.01	0.01	10416	0
2613966	3577587	BLOSUM	18	01:10:11	4170.83	30.19	35226352	0
NA	NA	BLOSUM	16	06:00:00	21557.28	34.18	101524192	124
1	1	DisclosedM1	46	00:00.43	0	0	3680	0
1082	1082	DisclosedM1	44	00:00.54	0.53	0	3824	0
179310	179310	DisclosedM1	42	01:06.54	66.42	0.1	4128	0
10840195	10840195	DisclosedM1	40	53:51.33	3225.23	5.6	12064	0
NA	NA	DisclosedM1	38	06:00:00	21557.81	38.87	117120	124

Table A-24: This table contains raw performance results for the Promoters data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	106	00:00.37	0	0	2656	0
0	0	DisclosedM2	97	00:00.01	0	0	2656	0
0	0	DisclosedM2	88	00:00.00	0	0	2640	0
0	0	DisclosedM2	79	00:00.00	0	0	2656	0
0	0	DisclosedM2	70	00:00.00	0	0	2656	0
0	0	DisclosedM2	61	00:00.00	0	0	2656	0
7	13	DisclosedM2	52	00:00.00	0	0	2656	0
59	120	DisclosedM2	43	00:00.00	0	0	2704	0
363950	933356	DisclosedM2	34	00:04.46	4.17	0.28	1432256	0
84474898	235343665	DisclosedM2	25	12:34.99	715.51	31.4	127563360	0
NA	NA	DisclosedM2	16	24:48.23	1319.84	56.99	127791744	137
0	0	BLOSUM	106	00:00.14	0	0	5488	0
0	0	BLOSUM	97	00:00.02	0	0	5488	0
0	0	BLOSUM	88	00:00.02	0	0	5472	0
0	0	BLOSUM	79	00:00.02	0	0	5488	0
0	0	BLOSUM	70	00:00.02	0	0	5504	0
0	0	BLOSUM	61	00:00.02	0	0	5488	0
7	7	BLOSUM	52	00:00.02	0	0	5488	0
63	63	BLOSUM	43	00:00.02	0	0	5504	0
5028509	8409459	BLOSUM	34	01:13:35	4404.77	7.14	11705312	0
NA	NA	BLOSUM	25	06:00:00	21592.86	3.28	4253744	124
1	1	DisclosedM1	106	00:00.15	0	0	2656	0
390178942	630677318	DisclosedM1	97	38:11.48	2262.89	26.03	117798720	0
NA	NA	DisclosedM1	88	25:17.16	1338.24	57.5	127735504	137

## Average data sets

Table A-25: This table contains raw performance results for the ALL-AML data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm's time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm's exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	38	00:00.01	0	0	4208	0
0	0	DisclosedM2	35	00:00.00	0	0	4224	0
6	10	DisclosedM2	32	00:00.00	0	0	4208	0
236	284	DisclosedM2	29	00:00.01	0	0	4224	0
16867	17500	DisclosedM2	26	00:00.70	0.69	0.01	31392	0
162187	170035	DisclosedM2	23	00:01.91	1.88	0.03	209760	0
847186	900005	DisclosedM2	20	00:05.00	4.81	0.18	917568	0
4772552	5153644	DisclosedM2	17	00:18.93	18.19	0.73	3758880	0
22566556	24260346	DisclosedM2	14	01:22.17	79.59	2.46	12406384	0
256377728	264589442	DisclosedM2	11	48:54.15	2923.69	9.55	32771792	0
NA	NA	DisclosedM2	8	06:00:01	21538.42	56.74	127289504	124
0	0	BLOSUM	38	00:00.25	0.03	0.01	10240	0
0	0	BLOSUM	35	00:00.10	0.03	0.01	10240	0
6	6	BLOSUM	32	00:00.10	0.03	0.01	10240	0
236	570	BLOSUM	29	00:00.13	0.04	0	10416	0
16867	105793	BLOSUM	26	00:08.44	8.35	0.02	59440	0
162187	1548350	BLOSUM	23	02:16.29	136.08	0.09	250480	0
847186	9295971	BLOSUM	20	44:42.67	2681.57	0.46	1035728	0
NA	NA	BLOSUM	17	06:00:00	21595.5	0.93	1445840	124
1	1	DisclosedM1	38	00:00.04	0	0	4368	0
9178	9178	DisclosedM1	35	00:02.00	2	0	4368	0
3349852	3350426	DisclosedM1	32	04:06.47	246.16	0.27	5328	0
215925804	224015049	DisclosedM1	29	01:43:54	6221.27	11.34	20716096	0
NA	NA	DisclosedM1	26	03:14:28	11597.34	65.97	127345392	137

Table A-26: This table contains raw performance results for the Colon data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	62	00:00.40	0	0	3264	0
0	0	DisclosedM2	58	00:00.01	0	0	3264	0
0	0	DisclosedM2	54	00:00.01	0	0	3264	0
0	0	DisclosedM2	50	00:00.01	0	0	3248	0
0	0	DisclosedM2	46	00:00.01	0	0	3248	0
382	525	DisclosedM2	42	00:00.01	0	0	3888	0
59388	67319	DisclosedM2	38	00:05.09	5.06	0.02	78784	0
504221	602511	DisclosedM2	34	00:19.34	19.15	0.17	696192	0
2936932	3415750	DisclosedM2	30	00:41.76	40.82	0.88	4096640	0
20106537	22805305	DisclosedM2	26	02:45.72	160.21	5.26	25219104	0
31636202	35488159	DisclosedM2	25	04:20.09	251.75	7.95	38186112	0
63378186	71045118	DisclosedM2	24	07:59.73	465.05	13.9	66205920	0
97188623	108816158	DisclosedM2	23	12:55.10	753.94	20.13	95649360	0
NA	NA	DisclosedM2	22	06:00:01	21506.05	64.23	127496288	124
0	0	BLOSUM	62	00:00.12	0.02	0	8512	0
0	0	BLOSUM	58	00:00.06	0.02	0	8496	0
0	0	BLOSUM	54	00:00.06	0.02	0	8512	0
0	0	BLOSUM	50	00:00.06	0.01	0.01	8512	0
0	0	BLOSUM	46	00:00.06	0.01	0	8512	0
382	532	BLOSUM	42	00:00.08	0.02	0	8896	0
59388	167582	BLOSUM	38	00:18.43	18.06	0.32	404256	0
504221	1678344	BLOSUM	34	03:50.30	228.67	1.36	1908688	0
2936932	10432938	BLOSUM	30	01:34:17	5651.04	4.61	6130864	0
5360948	18792819	BLOSUM	29	05:08:59	18527.93	7.32	9847472	0
NA	NA	BLOSUM	28	06:00:00	21591.99	3.84	5647392	124
1	1	DisclosedM1	62	00:00.02	0	0	3296	0
3676086	4180698	DisclosedM1	58	04:02.02	240.51	1.42	5457840	0
NA	NA	DisclosedM1	54	06:00:02	21464.09	57.19	127208992	124

Table A-27: This table contains raw performance results for the GDS2250 data set. *Number of patterns* refers to the number of disjunctive closed itemsets found with the given minimum support threshold (*MinSupp*). *Number of candidates* refers to the number of candidates evaluated by the algorithm. The algorithms are BLOSUM, DisclosedM2 and DisclosedM1, for Disclosed with model2 and model1 respectively. *Elapsed time* is the wall-clock time measured for the algorithm. *CPU time* is the algorithm’s time (in seconds) on CPU. *System time* is the CPU time (in seconds) spent by the system on behalf of the algorithm. *Max. Memory* is the maximum amount of main memory used by the algorithm. Both time and memory were measured with *GNU time* program. Finally, *Status* refers to the algorithm’s exit status; 0 if the algorithm terminates with no problem; 124 if the algorithm *times out* (experiments were limited to six hours); 137 if the algorithm was terminated (*killed*) by the system.

Number of Patterns	Number of Candidates	Algorithm	MinSupp	Elapsed time	CPU time	System time	Max. Memory (KB)	Status
0	0	DisclosedM2	47	00:00.16	0.06	0.01	23776	0
0	0	DisclosedM2	45	00:00.06	0.05	0	23776	0
0	0	DisclosedM2	43	00:00.06	0.05	0	23776	0
0	0	DisclosedM2	41	00:00.06	0.05	0	23776	0
0	0	DisclosedM2	39	00:00.06	0.05	0.01	23776	0
0	0	DisclosedM2	37	00:00.06	0.05	0	23776	0
0	0	DisclosedM2	35	00:00.06	0.05	0	23776	0
7	12	DisclosedM2	33	00:00.06	0.05	0	23792	0
201	242	DisclosedM2	31	00:00.06	0.05	0	23808	0
730	854	DisclosedM2	29	00:00.06	0.06	0	23792	0
7760	8770	DisclosedM2	27	00:00.10	0.09	0	23792	0
60402	63349	DisclosedM2	25	00:00.44	0.43	0	25568	0
242793	243157	DisclosedM2	23	00:03.41	3.39	0.01	23808	0
1048938	1049661	DisclosedM2	21	03:45.74	225.53	0.16	23872	0
16818665	16847565	DisclosedM2	19	01:45:33	6324.08	7.89	5319920	0
17553283	17730121	DisclosedM2	17	02:35:09	9296.18	12.25	7514608	0
24484125	26195291	DisclosedM2	15	02:49:52	10172.24	16.36	26093552	0
68853856	78868374	DisclosedM2	13	03:15:01	11650.52	41.39	127530848	0
NA	NA	DisclosedM2	11	02:27:47	8799.57	61.21	127738272	137
0	0	BLOSUM	47	00:00.89	0.35	0.18	82000	0
0	0	BLOSUM	45	00:00.71	0.35	0.16	82000	0
0	0	BLOSUM	43	00:00.69	0.35	0.17	82000	0
0	0	BLOSUM	41	00:00.69	0.34	0.17	81984	0
0	0	BLOSUM	39	00:00.70	0.34	0.17	82000	0
0	0	BLOSUM	37	00:00.68	0.35	0.16	81984	0
0	0	BLOSUM	35	00:00.66	0.35	0.17	81968	0
7	7	BLOSUM	33	00:00.67	0.36	0.17	81984	0
201	493	BLOSUM	31	00:00.70	0.36	0.16	82016	0
730	2419	BLOSUM	29	00:00.70	0.4	0.16	82336	0
7760	40951	BLOSUM	27	00:01.10	0.77	0.16	89776	0
60402	474565	BLOSUM	25	00:08.58	8.21	0.2	153152	0
242793	3641276	BLOSUM	23	04:38.82	277.73	0.49	485744	0
1048938	9800931	BLOSUM	21	01:17:07	4605.57	15.45	13253296	0
NA	NA	BLOSUM	19	06:00:01	20558.03	50.5	127613664	124
1	1	DisclosedM1	47	00:00.11	0.06	0.01	26304	0
1641	1643	DisclosedM1	45	00:16.40	16.37	0.02	29888	0
435621	438159	DisclosedM1	43	25:29.23	1526.32	2.64	1183904	0
NA	NA	DisclosedM1	41	06:00:00	21572.9	23.55	6958384	124