

Dataset	20% CS						KMEANS	GT
	PCCC	PCCC-R	COPKM	CSC	DILS	LCC		
Appendicitis	<b>612.9</b>	<b>612.9</b>	–	<b>612.9</b>	<b>612.9</b>	670.9	451.8	612.9
Breast Cancer	<b>12,214.6</b>	<b>12,214.6</b>	<b>12,214.6</b>	16,270.2	<b>12,214.6</b>	–	11,595.7	12,214.6
Bupa	2,047.3	2,047.3	2,047.3	<b>1,844.4</b>	2,047.3	2,047.3	1,496.1	2,047.3
Circles	<b>600.0</b>	<b>600.0</b>	<b>600.0</b>	<b>600.0</b>	<b>600.0</b>	–	410.4	600.0
Ecoli	<b>1,115.7</b>	<b>1,115.7</b>	–	1,594.0	1,846.0	1,181.5	703.6	1,335.3
Glass	1,410.6	1,410.6	–	1,402.1	1,563.9	<b>1,391.5</b>	811.2	1,429.3
Haberman	891.4	891.4	891.4	<b>870.2</b>	891.4	891.4	701.4	891.4
Hayesroth	551.1	551.1	–	567.8	556.0	<b>550.9</b>	425.9	553.5
Heart	3,120.5	3,120.5	3,120.5	<b>3,080.0</b>	3,120.5	3,120.5	2,941.9	3,120.5
Ionosphere	<b>10,971.5</b>	<b>10,971.5</b>	<b>10,971.5</b>	11,388.9	<b>10,971.5</b>	–	9,086.0	10,971.5
Iris	<b>145.0</b>	<b>145.0</b>	152.7	216.5	220.4	145.2	141.2	167.9
Led7Digit	<b>1,511.0</b>	<b>1,511.0</b>	–	3,164.3	2,921.6	2,020.8	1,103.6	1,511.4
Monk2	2,384.3	2,384.3	2,384.3	<b>2,346.5</b>	2,384.3	–	2,306.5	2,384.3
Moons	322.9	322.9	322.9	<b>314.5</b>	322.9	322.9	249.7	322.9
Movement Libras	18,126.4	<b>18,020.2</b>	–	29,863.8	26,488.2	18,665.1	10,433.8	19,779.5
Newthyroid	<b>550.4</b>	<b>550.4</b>	<b>550.4</b>	900.5	550.9	558.0	462.3	550.9
Saheart	<b>3,927.7</b>	<b>3,927.7</b>	<b>3,927.7</b>	4,083.2	<b>3,927.7</b>	–	3,235.8	3,927.7
Sonar	<b>11,962.9</b>	<b>11,962.9</b>	<b>11,962.9</b>	12,166.3	<b>11,962.9</b>	<b>11,962.9</b>	10,649.6	11,962.9
Soybean	<b>367.1</b>	<b>367.1</b>	<b>367.1</b>	829.6	506.6	<b>367.1</b>	367.1	367.1
Spectfheart	<b>11,268.3</b>	<b>11,268.3</b>	<b>11,268.3</b>	11,359.6	<b>11,268.3</b>	<b>11,268.3</b>	8,983.9	11,268.3
Spiral	<b>564.5</b>	<b>564.5</b>	–	<b>564.5</b>	<b>564.5</b>	<b>564.5</b>	379.7	564.5
Tae	711.8	711.8	–	<b>701.7</b>	714.0	710.4	480.1	713.8
Vehicle	13,334.2	13,334.2	13,334.2	<b>12,899.9</b>	13,471.6	–	5,980.7	13,334.2
Wine	<b>1,290.7</b>	<b>1,290.7</b>	<b>1,290.7</b>	1,413.1	1,664.2	1,299.9	1,279.7	1,300.0
Zoo	<b>559.5</b>	<b>559.5</b>	624.2	1,199.0	763.5	580.5	527.2	579.6
Mean	4,022.5	<b>4,018.2</b>	–	4,810.2	4,486.2	–	3,008.2	4,100.5

Table W12: Minimum Inertia values of the PCCC and the PCCC-R algorithms and the four state-of-the-art algorithms (COPKM, CSC, DILS, LCC) for the constraint sets of size 20% CS. Lower values indicate more coherent clusters. The lowest values are stated in bold. The column KMEANS reports the minimum inertia value obtained with the k-means algorithm. The hyphen indicates that the respective algorithm returned no solution within the time limit of 1,800 seconds.