Summary

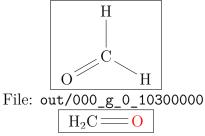
September 20, 2021

Contents

0.1	Loaded Graphs		
	0.1.1	Formaldehyde	2
	0.1.2	Glycolaldehyde	2
0.2	Loade	d Rules	2
	0.2.1	Keto-enol isomerization ->	2
	0.2.2	Keto-enol isomerization <	3
	0.2.3	Aldol Addition ->	4
	0.2.4	Aldol Addition <	1
	0.2.5	DG Hyper, dg_0	6
0.3	Produ	ct Graphs	6
	0.3.1	p_{0,0}	6
	0.3.2	p_{0,1}	7
	0.3.3	p_{0,2}	7
	0.3.4	p_{0,3}	8
	0.3.5	p_{0,4}	8
	0.3.6	p_{0,5}	S
	0.3.7	p_{0,6}	Ĝ
	0.3.8	p_{0,7}	10
	0.3.9	p_{0,8}	10
	0.3.10	p_{0,9}	11
	0.3.11	p_{0,10}	11
	0.3.12	p_{0,11}	12
	0.3.13	p_{0,12}	12
	0.3.14	p_{0,13}	13
			13
	0.3.16	p_{0,15}	14
	0.3.17	p_{0,16}	14
	0.3.18	p_{0,17}	15
0.4	Flow Solutions, id 0		
	0.4.1	Solution 0	15

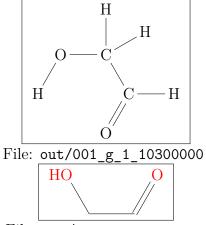
0.1 Loaded Graphs

0.1.1 Formaldehyde



File: out/000_g_0_11310100

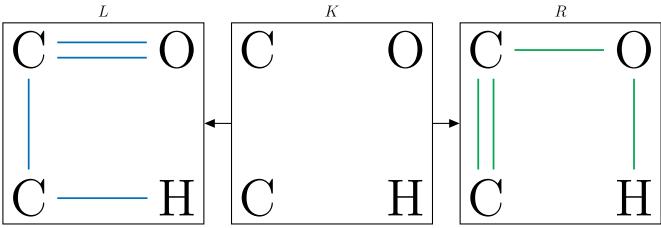
0.1.2 Glycolaldehyde



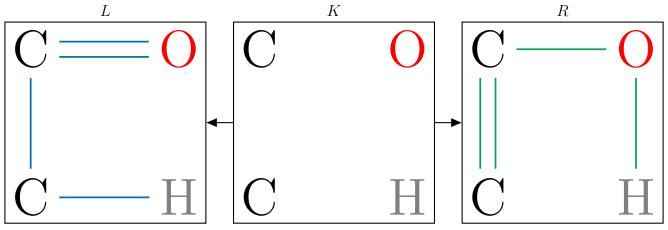
File: out/001_g_1_11310100

0.2 Loaded Rules

0.2.1 Keto-enol isomerization ->



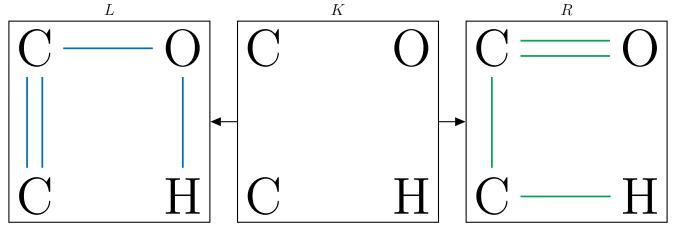
Files: $out/003_r_0_10300000_\{L, K, R\}$



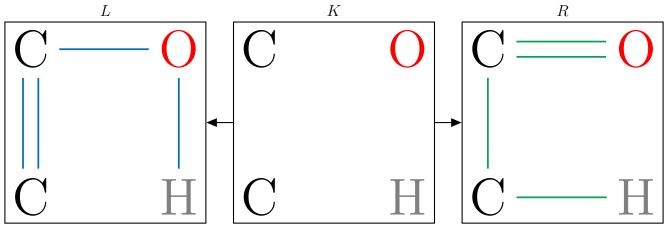
Files: out/004_r_0_11300100_{L, K, R}

$$\begin{aligned} |\{e \in \text{outEdges}(1) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`O'}\} \\ \}| = 1 \end{aligned}$$

0.2.2 Keto-enol isomerization <-



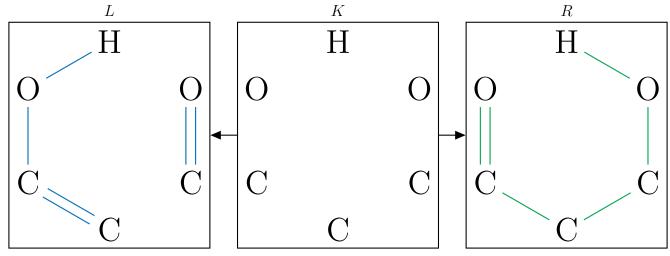
Files: out/007_r_1_10300000_{L, K, R}



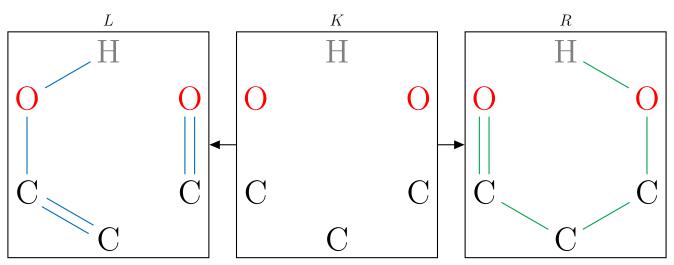
Files: out/008_r_1_11300100_{L, K, R}

$$\begin{aligned} |\{e \in \text{outEdges}(1) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`0'}\} \\ \}| = 1 \end{aligned}$$

0.2.3 Aldol Addition ->



Files: out/011_r_2_10300000_{L, K, R}

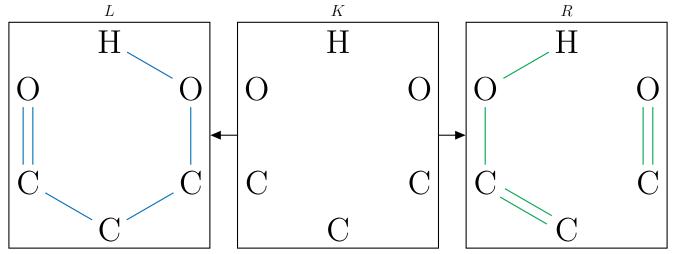


Files: $out/012_r_2_11300100_{L, K, R}$

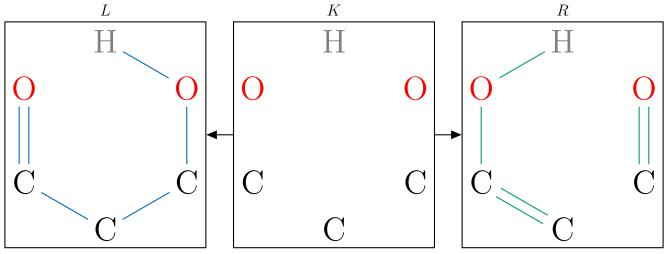
```
\begin{aligned} |\{e \in \text{outEdges}(1) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`0'}\} \\ \}| = 1 \end{aligned}
```

$$\begin{aligned} |\{e \in \text{outEdges}(5) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`O'}\} \\ \}| = 1 \end{aligned}$$

0.2.4 Aldol Addition <-



Files: $out/015_r_3_10300000_{L, K, R}$

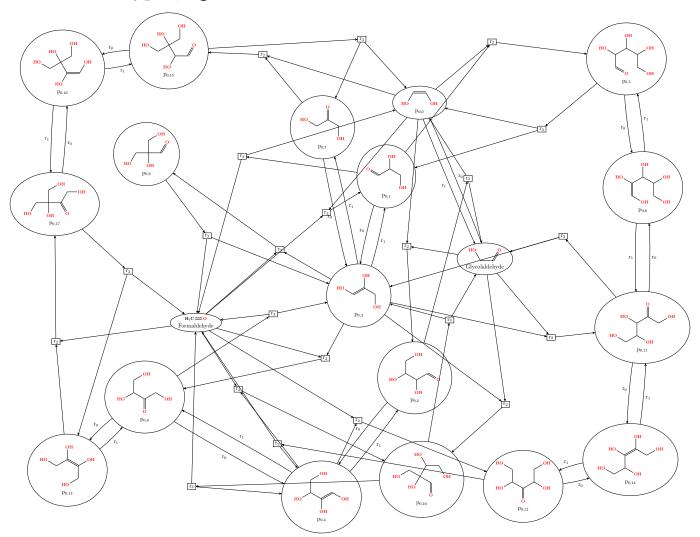


Files: out/016_r_3_11300100_{L, K, R}

```
\begin{aligned} |\{e \in \text{outEdges}(1) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`0'}\} \\ \}| = 1 \end{aligned}
```

$$\begin{aligned} |\{e \in \text{outEdges}(5) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`0'}\} \\ \}| = 1 \end{aligned}$$

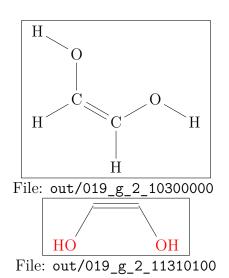
0.2.5 DG Hyper, dg_0



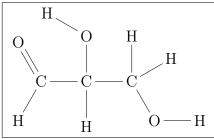
File: out/037_dg_0_11100

0.3 Product Graphs

$0.3.1 p_{0.0}$



$0.3.2 p_{0.1}$



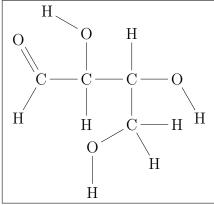
File: out/020_g_6_10300000

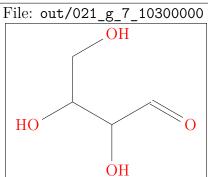
OH

OH

File: out/020_g_6_11310100

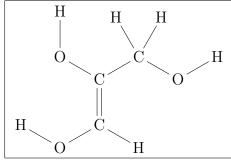
$0.3.3 p_{0.2}$





File: out/021_g_7_11310100

0.3.4 p_{0,3}



File: out/022_g_8_10300000

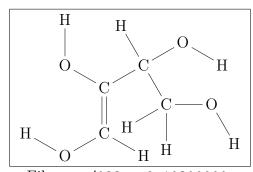
OH

HO

OH

File: out/022_g_8_11310100

$0.3.5 p_{0,4}$



File: out/023_g_9_10300000

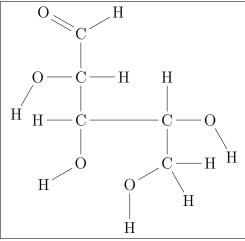
OH

OH

OH

File: out/023_g_9_11310100

$0.3.6 p_{0,5}$



File: out/024_g_10_10300000

OH

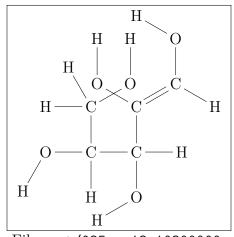
HO

OH

OH

File: out/024_g_10_11310100

$0.3.7 p_{0,6}$



File: out/025_g_18_10300000

OH

HO

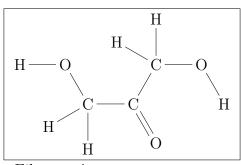
OH

OH

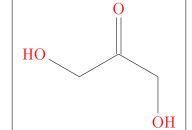
OH

File: out/025_g_18_11310100

$0.3.8 p_{0.7}$

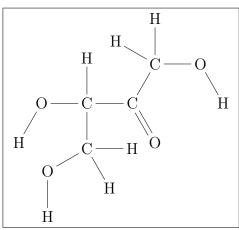


File: out/026_g_20_10300000



 $\overline{\mathrm{File:}\ \mathtt{out/026_g_20_113101}}00$

$0.3.9 p_{0.8}$



File: out/027_g_22_10300000

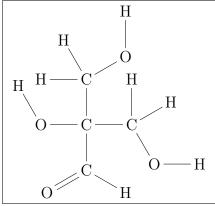
OH

OH

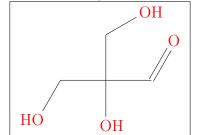
OH

File: out/027_g_22_11310100

$0.3.10 p_{0.9}$

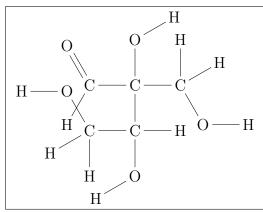


File: out/028_g_26_10300000

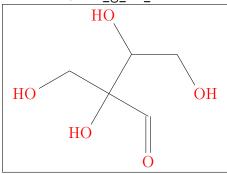


File: out/028_g_26_11310100

$0.3.11 p_{0.10}$

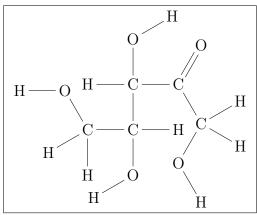


File: out/029_g_27_10300000

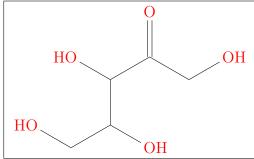


File: out/029_g_27_11310100

$0.3.12 p_{0.11}$

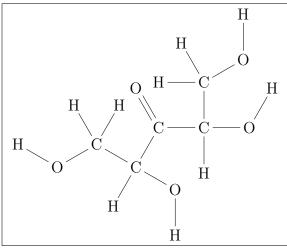


File: out/030_g_32_10300000

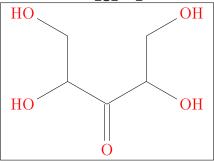


File: out/030_g_32_11310100

$0.3.13 p_{0.12}$

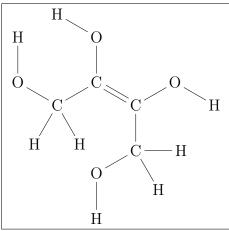


File: out/031_g_41_10300000

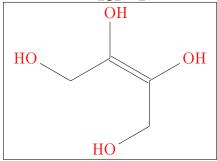


File: out/031_g_41_11310100

$0.3.14 p_{0.13}$

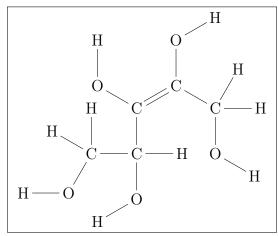


File: out/032_g_51_10300000



File: out/032_g_51_11310100

$0.3.15 p_{0.14}$



File: out/033_g_56_10300000

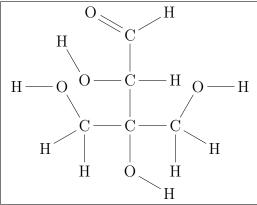
OH

HO

OH

File: out/033_g_56_11310100

$0.3.16 p_{0.15}$



File: out/034_g_87_10300000

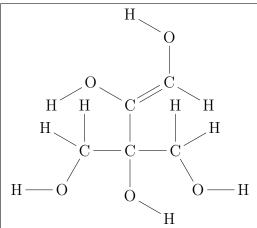
OH

HO

O

File: out/034_g_87_11310100

$0.3.17 p_{0,16}$



File: out/035_g_135_10300000

OH

HO

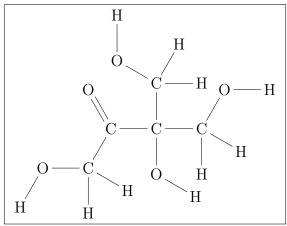
OH

HO

OH

File: out/035_g_135_11310100

$0.3.18 p_{0,17}$



File: out/036_g_150_10300000

OH

OH

OH

File: out/036_g_150_11310100

0.4 Flow Solutions, id 0

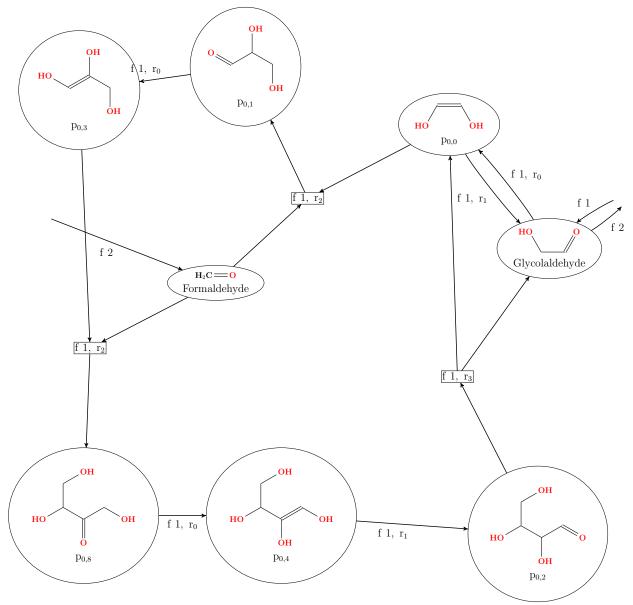
0.4.1 Solution 0

Overall Data

Objective value (integral): 12

Vertex/Graph In Out OA Formaldehyde 2 0 0 Glycolaldehyde 1 2 1

Filtered Graph



 $File: \ \mathtt{out/041_dg_0_11100_f_0_0_filt}$