



Retention time Table for Carbomix Phases

Compound	Carbomix H-NP5				Carbomix H-NP10				Carbomix Ca-NP5				Carbomix Ca-NP10				Carbomix Pb-NP5			Carbomix Pb-NP10		
	8%	5%	8%	10%	8%	5%	8%	10%	8%	5%	8%	10%	8%	5%	8%	8%	5%	8%				
Acetic acid	14.11	17.94	15.33	13.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/				
Adonitol	10.39	13.73	11.76	9.97	14.706	16.7625	14.654	13.67	19.84	21.93	20.07											
Arabinitol	/	/	/	/	/	/	/	16.06	/	/	/											
D(-)-Arabinose	10.36	13.76	11.71	9.89	13.6045	15.5905	13.3615	12.52	16.03	17.61	16.08											
L(+)-Arabinose	10.35	13.76	11.71	9.89	13.552	15.5945	13.379	12.53	16.02	17.58	16.12											
1,4-Butanediol	19.72	23.35	20.63	19.57	15.428	17.9025	15.412	14.48	16.67	17.66	16.64											
n-Butanol	33.74	35.76	33.79	34.38	24.583	27.14	25.19	/	27.93	28.34	28.09											
t-Butanol	23.21	26.46	23.8	23.43	16.2755	18.6255	16.243	/	16.97	17.71	16.95											
sec-butyl alcohol	28.61	31.29	28.81	28.89	19.8715	22.497	20.095	19.01	21.26	22.35	21.37											
D(+)-Cellobiose	8.34	9.87	9.55	7.87	9.92	10.355	9.055	8.96	11.72	11.92	11.47											
Citric acid	8.6	10.6	9.9	8.17	/	/	/	/	/	/	/											
Erythriol	11.27	14.77	12.62	10.86	15.368	17.3185	15.35	14.47	19.62	21.26	19.77											
Ethanol	20.66	22.82	21.22	20.63	16.515	18.1795	16.394	15.89	17.08	/	17.09											
Formic acid	13.08	16.46	14.3	12.67	/	/	/	/	/	/	/											
D-Fructose	9.81	12.9	11.17	9.36	13.5535	15.4645	13.347	12.45	17.06	18.82	17.22											
Fumaric acid	12.39	17.07	13.77	11.79	/	/	/	/	/	/	/											
Galactitol	10.07	13.31	11.45	9.64	19.624	22.5455	20.343	18.05	31.46	35.88	32.43											
D(+)-Galactose	9.7	12.77	11.05	9.25	12.1835	13.963	11.809	11.2	14.85	16.35	14.88											
D-Glucose	9.36	12	10.64	8.87	11.274	12.554	10.714	10.32	13.29	14.04	13.18											
Glycerol	12.68	16.26	13.98	12.29	15.9965	17.8425	15.974	15.12	19.34	20.59	19.42											
IPA	22.29	24.87	22.87	22.38	16.434	18.447	16.374	15.88	17.16	17.72	17.11											
Lactic acid	11.93	15.69	13.27	11.51	/	/	/	/	/	/	/											
B-Lactose	8.44	10.41	9.71	8.02	10.221	11.092	9.452	9.22	12.35	13.34	12.21											
D-Lyxose	10.07	13.25	11.43	9.61	14.02775	16.167	13.922	13.02	16.5	18.04	16.61											
Maleic acid	8.75	9.32	9.96	8.39	/	/	/	/	/	/	/											
Malic acid	9.59	12.52	10.93	9.13	/	/	/	/	/	/	/											
Maltotetraose	/	/	/	/	/	/	/	/	/	/	/											
Maltitol	8.55	10.72	9.87	8.14	12.4125	15.0435	12.274	11.24	18.16	22.19	18.65											
D(+)-Maltose	8.37	10.15	9.65	7.94	10.064	10.665	9.268	9.09	12.19	12.8	12.01											
Maltotriose	/	/	/	/	/	/	/	8.57	/	/	/											
D-Mannitol	9.95	13.14	11.34	9.52	16.92	19.563	17.2445	15.6	24.23	27.79	24.86											
D(+)-Mannose	9.68	12.68	11.02	9.22	12.422	14.238	12.093	11.45	16.23	18.04	16.37											
D(+)-Melezitose	8.05	9.03	9.26	7.63	9.493	9.404	8.51	8.49	10.92	10.9	10.6											
Methanol	18.45	20.61	19.14	18.36	16.325	17.7215	16.13	15.64	16.79	17.16	16.69											
Oxalic acid dihydrate	7.95	7.53	9.12	7.63	/	/	/	/	/	/	/											
1-Propanol	25.24	27.48	25.63	25.57	19.332	21.2605	19.403	18.95	20.75	21.33	20.76											
1,2-Propylene glycol	15.89	19.45	17	15.6	17.307	18.8945	17.274	/	20.45	20.97	20.45											
Pyruvic acid	/	/	/	/	/	/	/	/	/	/	/											
D(-)-Ribose	10.6	14.04	11.9	10.08	20.842	24.489	21.913	19.23	30.21	34.62	31.1											
D-Sorbitol	10.05	13.3	11.43	9.61	20.632	23.786	21.2095	18.71	33.51	39.07	34.72											
Succinic acid	11.07	15.33	12.49	10.57	/	/	/	/	/	/	/											
D(+)-Sucrose	/	/	/	/	9.9875	10.594	9.175	9.03	11.74	12.12	11.51											
Tartaric	8.93	11.06	10.23	8.49	/	/	/	/	/	/	/											
Triethylene glycol	/	/	/	/	/	/	/	17.21	/	/	/											
Xylitol	10.75	14.27	12.15	10.33	20.0725	23.067	20.79	18.66	30.7	35.15	31.54											
D-Xylose	9.75	12.74	11.11	9.31	12.1335	13.6325	11.692	11.19	14.17	14.94	14.1											
Rhamnose	10.09	13.41	11.46	9.64	12.4475	14.172	12.088	/	14.75	15.76	14.79											
Trehalose	8.37	10.14	9.64	7.95	9.9815	10.5605	9.158	/	11.8	12.25	11.58											
Xylose	/	/	/	/	/	15.6985	/	/	/	/	/											
Propanoic acid	16.04	20.68	17.27	15.65	/	/	/	/	/	/	/											
n-butyric acid	18.87	24.7	20.17	18.51	/	/	/	/	/	/	/											
Isobutyric acid	17.52	23.21	18.83	17.14	/	/	/	/	/	/	/											
Butane tetracarboxylic acid	8.43	10.6	9.73	8	/	/	/	/	/	/	/											
Sodium acetate	14.11	17.95	15.34	13.7	/	/	/	/	/	/	/											
Sodium nitrite	/	/	/	/	/	/	/	/	/	/	/											
Sodium Pyrosulfite	12.37	12.07	12.93	/	/	/	/	/	/	/	/											

Conditions:
 Carbomix H-NP10
 Mobile phase : 2.5 mM H2SO4
 Flow rate : 0.6 mL/min
 Detector : RID
 Column Tem. : 80°C
 Injection Volume : 10 µL (3 injections)

Carbomix H-NP5
 Mobile phase : 2.5 mM H2SO4
 Flow rate : 0.6 mL/min
 Detector : RID
 Column Tem. : 55°C
 Injection Volume : 10 µL (3 injections)

Carbomix Ca-NP10
 Mobile phase : H2O
 Flow rate : 0.6 mL/min
 Detector : RID
 Column Tem. : 85°C
 Injection Volume : 10 µL (3 injections)

Carbomix Ca-NP5
 Mobile phase : H2O
 Flow rate : 0.6 mL/min
 Detector : RID
 Column Tem. : 85°C
 Injection Volume : 10 µL (3 injections)

Carbomix Pb-NP10
 Mobile phase : H2O
 Flow rate : 0.6 mL/min
 Detector : RID
 Column Tem. : 75°C
 Injection Volume : 10 µL (3 injections)

Carbomix Pb-NP5
 Mobile phase : H2O
 Flow rate : 0.6 mL/min
 Detector : RID
 Column Tem. : 75°C
 Injection Volume : 10 µL (3 injections)