

Enzymatic Isomerization of Glucose and Xylose in Ionic Liquids

Supporting information

Tim Ståhlberg, John M Woodley and Anders Riisager

Table S1. Water content of the ionic liquids used measured by Karl Fischer.

IL	H ₂ O (wt%) 1st measurement	H ₂ O (wt%) 2nd measurement	H ₂ O (wt%) 3rd measurement	H ₂ O (wt%) Mean value
<i>N,N</i> -Dimethylethanolammonium formate	0.60	0.59	0.61	0.60
<i>N,N</i> -Dimethylethanolammonium propionate	13.81	13.78	13.67	13.75
<i>N,N</i> -Dimethylethanolammonium decanoate	0.93	1.04	1.01	0.99
Choline propionate	5.48	5.51	5.44	5.48
<i>N,N</i> -Dimethylbutylammonium propionate	7.98	7.97	7.95	7.97
<i>N</i> -Methylpiperidinium acetate	1.07	1.03	1.07	1.06
DBAO	1.62	1.64	1.65	1.64
<i>N,N</i> -Dimethylisopropanol-ammonium propionate	1.32	1.35	1.33	1.33
[Choline][OAc]	8.93	9.12	9.3	9.12
[EMIm][OAc]	0.23	0.23	0.21	0.22
[BMIm][OAc]	0.65	0.66	0.69	0.67

Table S2. Water content of the ionic liquids used before and after the addition of extra water.

IL	H ₂ O (wt%) Before H ₂ O-addition	H ₂ O (wt%) 100 μ L H ₂ O	H ₂ O (wt%) 200 μ L H ₂ O
<i>N,N</i> -Dimethylethanolammonium formate	0.60	10.54	20.48
<i>N,N</i> -Dimethylethanolammonium propionate	13.75	22.38	31.00
<i>N,N</i> -Dimethylethanolammonium decanoate	0.99	10.89	20.79
Choline propionate	5.48	14.93	24.38
<i>N,N</i> -Dimethylbutylammonium propionate	7.97	17.17	26.37
<i>N</i> -Methylpiperidinium acetate	1.06	10.95	20.85
DBAO	1.64	11.47	21.31
<i>N,N</i> -Dimethylisopropanol-ammonium propionate	1.33	11.20	21.07
[Choline][OAc]	9.12	18.21	27.29
[EMIm][OAc]	0.22	10.20	20.18
[BMIm][OAc]	0.67	10.60	20.53