

# Enzyme Data

<b>BCC-Nr.</b>	<b>051</b>																																				
<b>Enzyme</b>	<b>Alcohol-Dehydrogenase</b>																																				
<b>EC-No.</b>	1.1.1.1																																				
<b>T<sub>opt</sub></b>	83°C, recommended 65-90°C																																				
<b>pH<sub>opt</sub></b>	7.8, recommended 7-8																																				
<b>Stability</b>	t <sub>1/2</sub> (70°C) = 45 min																																				
<b>Activity and substrate specificity</b>	<p>- spec. activity 225 U/g (Ethanol)</p> <p>- K<sub>m</sub> 3,6 mM (Ethanol)</p> <p><u>Substrates</u></p> <p>- ethanol (225 U/g), phenylethanol (234 U/g), 1-propanol (77 U/g), 2-propanol (110 U/g), pentanol (86 U/g), 2-aminoethanol (142 U/g), 2,3-butanediol (115 U/g)</p>																																				
<b>Additives</b>	<table border="1"><thead><tr><th>Compound</th><th>Concentration</th><th>Rel. activity (%)</th></tr></thead><tbody><tr><td>None</td><td>–</td><td>100</td></tr><tr><td>Acetone</td><td>50% (v/v)</td><td>18</td></tr><tr><td>DMSO</td><td>50% (v/v)</td><td>71</td></tr><tr><td>Ethanol</td><td>50% (v/v)</td><td>41</td></tr><tr><td>Isopropanol</td><td>50% (v/v)</td><td>12</td></tr><tr><td>Methanol</td><td>50% (v/v)</td><td>70</td></tr><tr><td>Tert. Butanol</td><td>50% (v/v)</td><td>8</td></tr><tr><td>Heptane</td><td>90% (v/v)</td><td>1</td></tr><tr><td>Hexadecane</td><td>90% (v/v)</td><td>29</td></tr><tr><td>Isooctane</td><td>90% (v/v)</td><td>2</td></tr><tr><td>Toluene</td><td>90% (v/v)</td><td>3</td></tr></tbody></table>	Compound	Concentration	Rel. activity (%)	None	–	100	Acetone	50% (v/v)	18	DMSO	50% (v/v)	71	Ethanol	50% (v/v)	41	Isopropanol	50% (v/v)	12	Methanol	50% (v/v)	70	Tert. Butanol	50% (v/v)	8	Heptane	90% (v/v)	1	Hexadecane	90% (v/v)	29	Isooctane	90% (v/v)	2	Toluene	90% (v/v)	3
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<b>Compound</b>	<b>Concentration</b>	<b>Rel. activity (%)</b>
None	–	100
Al <sup>3+</sup>	10 mM	70
Ca <sup>2+</sup>	10 mM	94
Co <sup>2+</sup>	10 mM	94
Cr <sup>3+</sup>	10 mM	92
Cu <sup>2+</sup>	10 mM	98
Fe <sup>3+</sup>	10 mM	101
K <sup>+</sup>	10 mM	71
Mg <sup>2+</sup>	10 mM	89
Mn <sup>2+</sup>	10 mM	91
Na <sup>+</sup>	10 mM	87
Ni <sup>2+</sup>	10 mM	54
Zn <sup>2+</sup>	10 mM	103
CHAPS	10% (w/v)	41
SDS	10% (w/v)	5
Triton-X100	10% (v/v)	22
Tween20	10% (v/v)	18
Tween80	10% (v/v)	11
DTT	10 mM	114
EDTA	10 mM	105
Pefabloc	10 mM	68
PMSF	10 mM	92
Urea	1 M	105
	3 M	83
	5 M	59