Condition: 100 mM Na_3PO_4 in D_2O adjusted to pH = 7.4 with DCl.

K_{rel} measured by competition of guest **1** (p-xylenediammonium) and a second guest **XX** for a limiting quantity of CB[7]. Monitored by ^1H NMR spectroscopy.

$$CB[7] + \mathbf{1} \underset{}{\overset{K_{a1}}{\rightleftharpoons}} CB[7]\bullet\mathbf{1}$$

K_{a1} is not known. $K_{a1} = \dfrac{[CB[7]\bullet\mathbf{1}]}{[CB[7]]\ [\mathbf{1}]}$

$$CB[7] + \mathbf{XX} \overset{K_{a2}}{\rightleftharpoons} CB[7]\bullet\mathbf{XX}$$

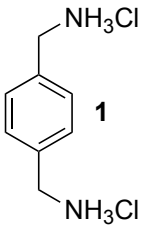
K_{a2} is not known. $K_{a2} = \dfrac{[CB[7]\bullet\mathbf{XX}]}{[CB[7]]\ [\mathbf{XX}]}$

$$\frac{K_{a2}}{K_{a1}} = \frac{\dfrac{[CB[7]\bullet\mathbf{XX}]}{[CB[7]]\ [\mathbf{XX}]}}{\dfrac{[CB[7]\bullet\mathbf{1}]}{[CB[7]]\ [\mathbf{1}]}} = \frac{[CB[7]\bullet\mathbf{XX}]\ [\mathbf{1}]}{[CB[7]\bullet\mathbf{1}]\ [\mathbf{XX}]}$$

$$CB[7]\bullet\mathbf{1} + \mathbf{XX} \underset{}{\overset{K_{rel}}{\rightleftharpoons}} CB[7]\bullet\mathbf{XX} + \mathbf{1}$$

$$K_{rel} = \frac{[CB[7]\bullet\mathbf{XX}]\ [\mathbf{1}]}{[CB[7]\bullet\mathbf{1}]\ [\mathbf{XX}]}$$

$K_{rel} = K_{a2} / K_{a1}$



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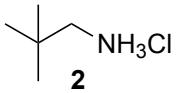

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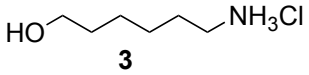

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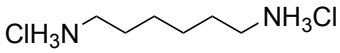

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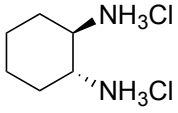
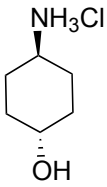


R,R-**5**



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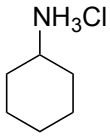

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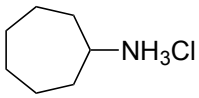

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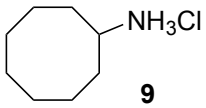

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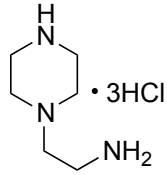

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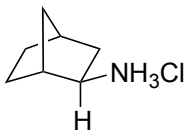
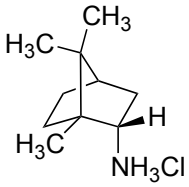
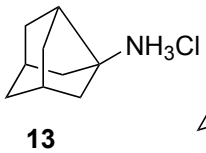


11
exo-2-aminonorbornane
racemic



endo-**12**



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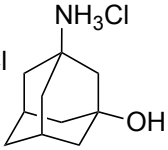

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