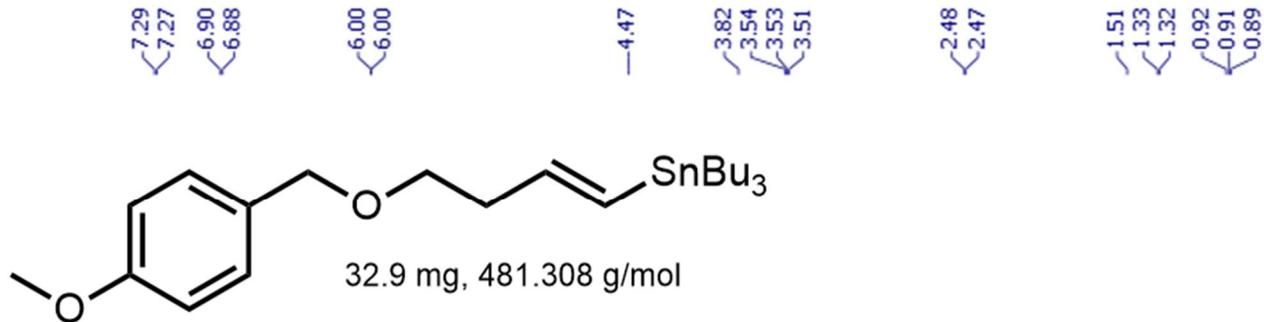


<sup>1</sup>H qNMR data of compound 2  
(500 MHz, CDCl<sub>3</sub>)



**Molar ratio:**

$[0.63/2]/[4/4] = 0.32$	$[0.61/2]/[4/4] = 0.31$
$[0.64/2]/[4/4] = 0.32$	$[0.63/2]/[4/4] = 0.32$
$[0.62/2]/[4/4] = 0.31$	$[1.77/6]/[4/4] = 0.30$
$[0.63/2]/[4/4] = 0.32$	$[1.77/6]/[4/4] = 0.30$
$[0.94/3]/[4/4] = 0.31$	$[4.37/15]/[4/4] = 0.29$

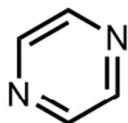
**Average molar ratio: 0.31**

$$\text{wt}\% = \frac{mg_{std} \times MW_{cpd} \times \text{molar ratio} \times P_{std}}{mg_{cpd} \times MW_{std}} \times 100$$

$$= \frac{17.2 \text{ mg} \times 481.308 \frac{\text{g}}{\text{mol}} \times 0.31 \times 1}{32.9 \text{ mg} \times 80.09 \frac{\text{g}}{\text{mol}}} \times 100$$

$$= 97.4$$

**Calculated 97.4% purity of product.**



pyrazine 17.2 mg  
80.09 g/mol

