

Internal standard: 17.0 mg
 MW of standard: 168.19 mg/mmol
 Sample: 20.4 mg
 MW of sample: 256.94 mg/mmol

Molar ratio:

$$[1.59/2]/[9/9] = 0.795$$

$$[1.57/2]/[9/9] = 0.785$$

$$[3.22/4]/[9/9] = 0.805$$

$$[1.46/2]/[9/9] = 0.730$$

Average molar ratio: 0.779

$$wt\% = \frac{mg_{Std} \cdot MW_{cpd} \cdot molar\ ratio \cdot P_{Std}}{mg_{cpd} \cdot MW_{Std}} \cdot 100$$

$$= \frac{17.0\ mg \cdot 256.94\ \frac{mg}{mmol} \cdot 0.779 \cdot 1}{20.4\ mg \cdot 168.19\ \frac{mg}{mmol}} \cdot 100$$

= 99.2

Calculated 99.2% purity of product.

