



4. Report the following information of your sample of **purified** product (obtained *after* crystallization from 95% ethanol).
- a) the mass (**grams**) of product that you obtained: \_\_\_\_\_
- b) the **melting point range** of your purified product: \_\_\_\_\_
5. Report the **percentage yield** of your sample of purified product. Show your calculation, including a complete setup with cancellation of units. Use the actual yield that you reported in **4a**, above.
6. Attach a copy of your infrared spectrum of your product. Assign all relevant peaks in the infrared spectrum.
7. Be sure to submit a sample of your product with your report. Use a properly labeled sample vial.

### ANSWER THE FOLLOWING QUESTIONS

1. Under a different set of reaction conditions, a product was isolated that had a prominent peak at  $3385\text{ cm}^{-1}$ . Draw the structure that you would expect for this compound.

2. Draw a mechanism for each of the three steps in the preparation of the 6-ethoxycarbonyl-3,5-diphenyl-2-cyclohexenone.