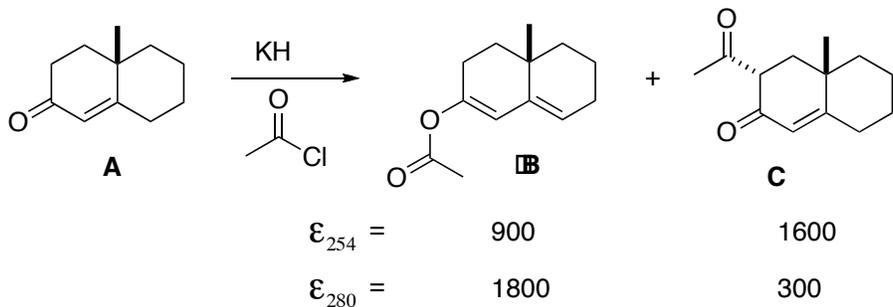


Ultraviolet Practice #4

You have reacted **A** to make a mixture of **B** and **C**, which have absorptivities as shown. A sample of the mixture (pure **B** plus pure **C**) shows absorbance at 245 nm and 260 nm as indicated. What percent **C** is the mixture?



observed: $A_{254} = 0.80$

observed: $A_{280} = 1.10$

$$0.80 = 900 [B] + 1600 [C]$$

$$1.10 = 1800 [B] + 300 [C]$$

$$-0.5 = -2900 [C]$$

$$[C] = .000172$$

$$\%C = 17/77 = 22\%$$

$$0.80 = 900 [B] + .276$$

$$[B] = .00060$$