

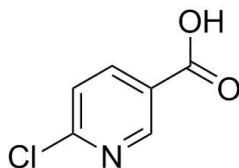
3. This question is about spot cream

- (a) Effective density of tazarotene = $0.90 \text{ g cm}^{-3} \times 0.0005 = 0.00045 \text{ g cm}^{-3}$
= 0.45 g dm^{-3}

Concentration of tazarotene = $0.45 \text{ g dm}^{-3} / 351.46 \text{ g mol}^{-1}$
= 0.00128 M (or 1.28 mM)

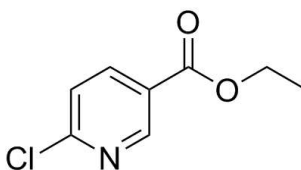
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(b)



1

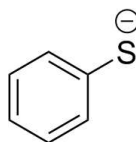
A



1

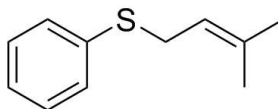
B

(c)



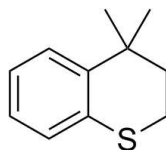
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C



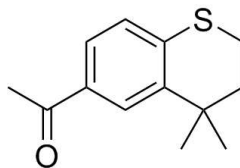
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D



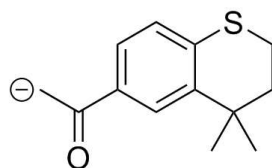
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E

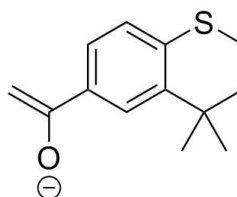


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F

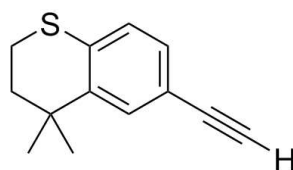


or



1

G⁻



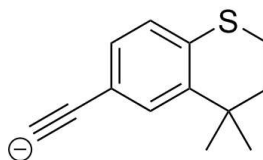
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I

The alkyne C–H bond does not have to be explicitly drawn in (as in normal skeletal structure drawing).

(d) Oxidation Reduction Addition Elimination Substitution 1

(e)

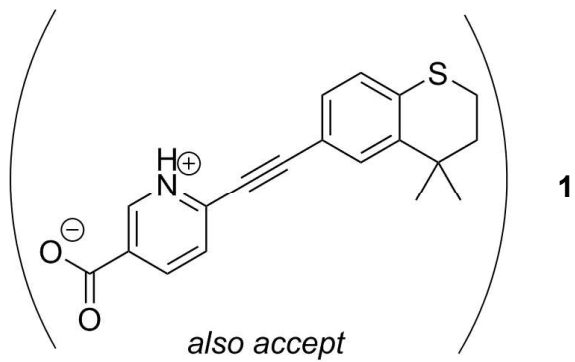
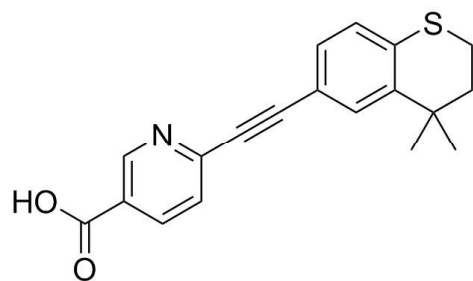


1

J⁻

(f) 20 signals 1

(g)



1

Question Total 13