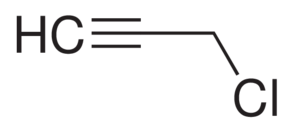
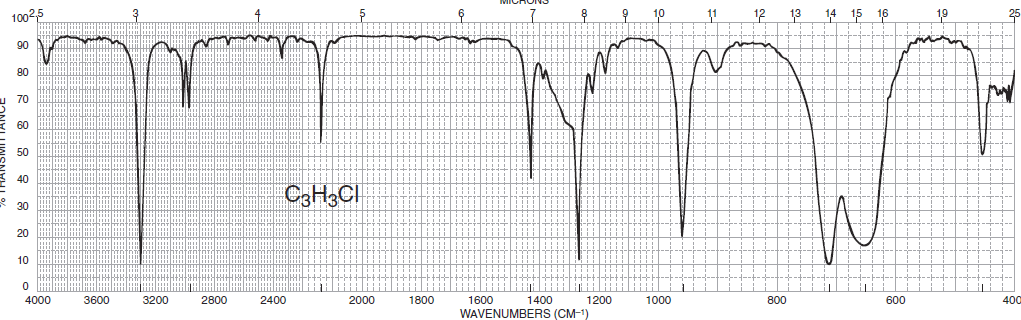
**EXERCÍCIOS DE INFRAVERMELHO 2013 – Parte 1**

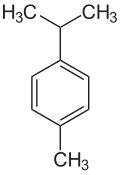
1 – Para cada espectro, indique e explique as principais bandas de absorção, de acordo com a respectiva estrutura.

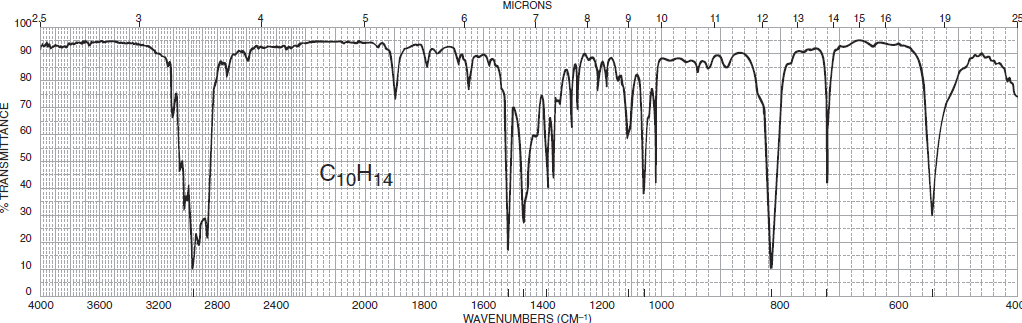
a)

  **ν** ≡C-H, **ν** CH2, **δ** CH2

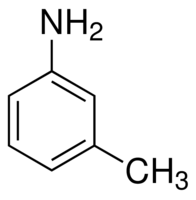
****

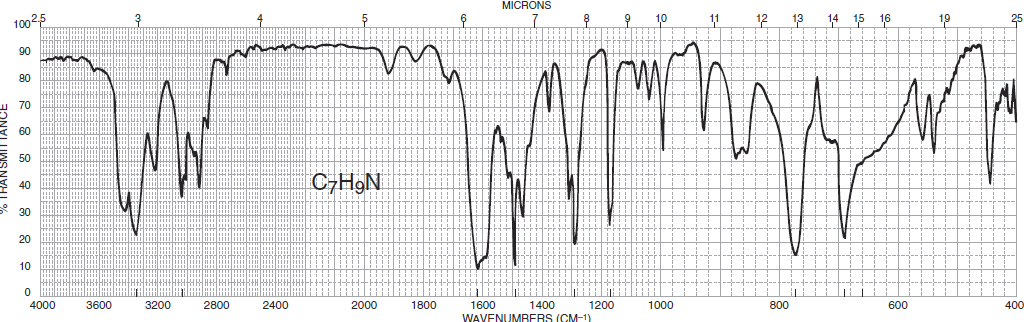
b)

** ν** CH3**, ν** Ar-H**, δ** CH3**, δ** Ar-H

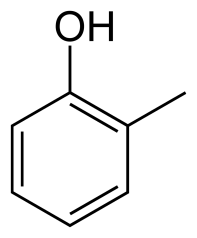
****

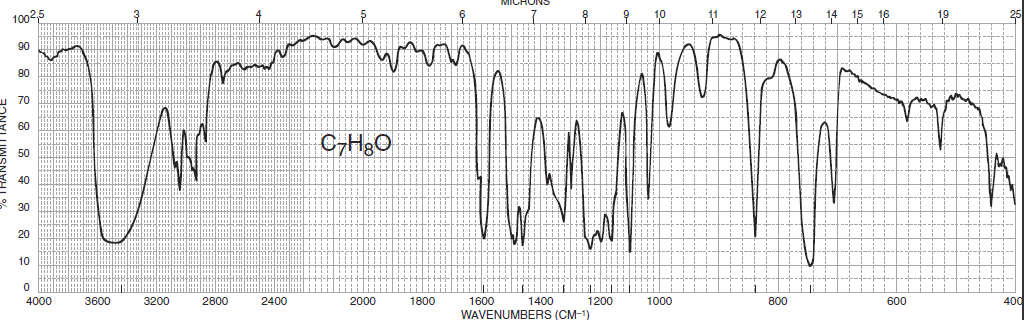
c)

 **ν** Ar-H, **ν** CH3, **δ** CH3, **δ** Ar-H

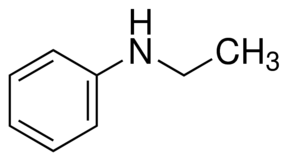
****

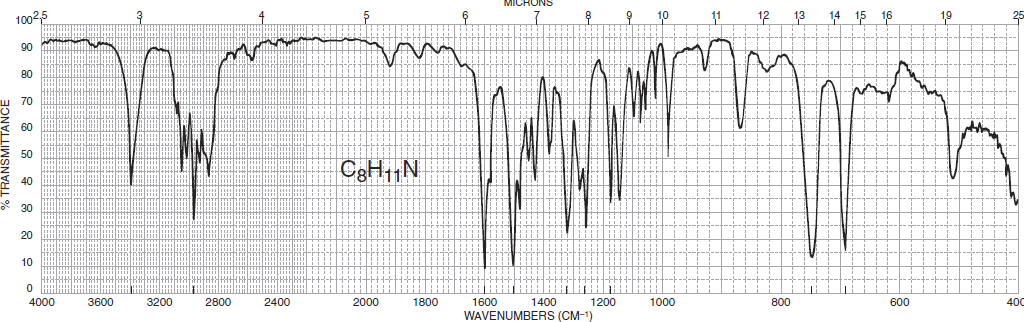
d)C7H8O

 **ν** Ar-H, **ν** CH3, **δ** CH3, **δ** Ar-H

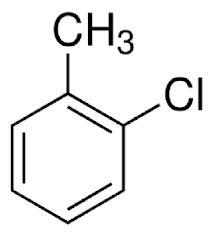
****

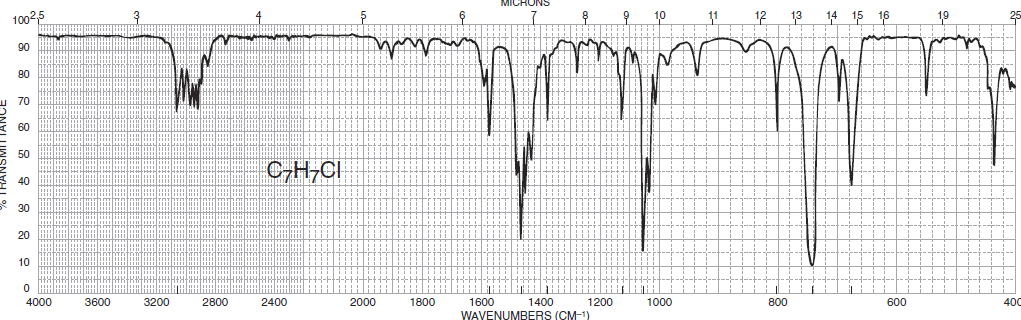
e)

  **ν** Ar-H, **ν** CH2, **ν** CH3, **δ** CH2, **δ** CH3,  **δ** Ar-H

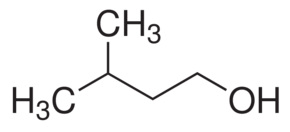
****

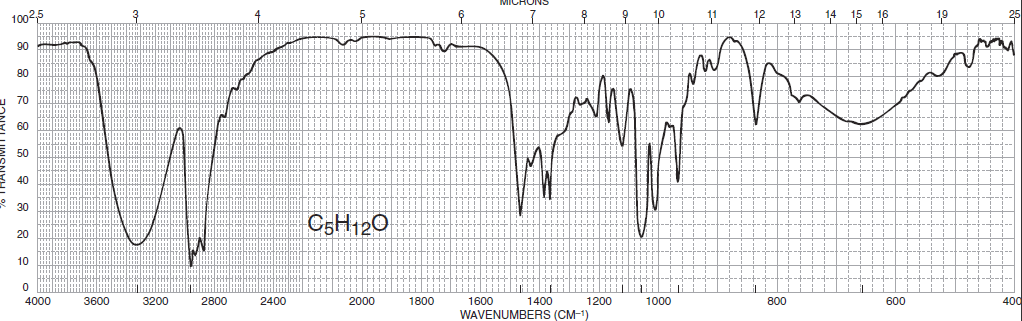
f)

  **ν** Ar-H**, ν** CH3, **δ** CH3, **δ** Ar-H

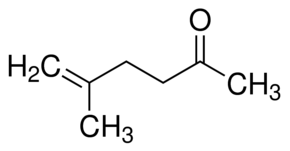
****

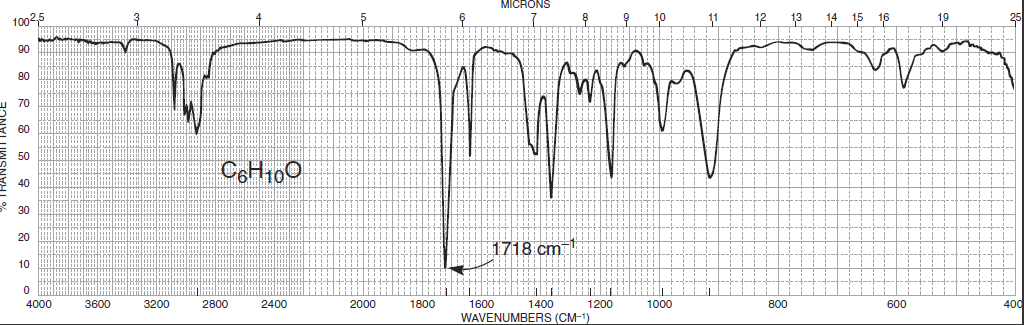
g)

 **ν** CH3, **ν** CH2, **ν** CH, **δ** CH2, **δ** CH3

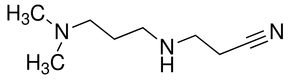
****

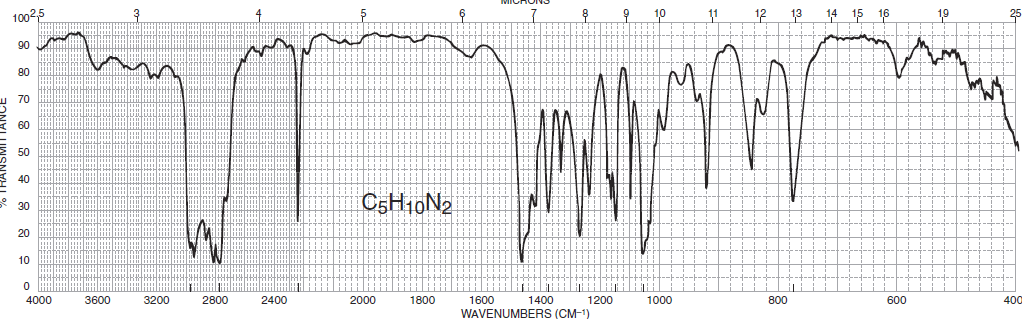
h)

  **ν** =CH2, **ν** CH2, **ν** CH3, **δ** CH2, **δ** CH3

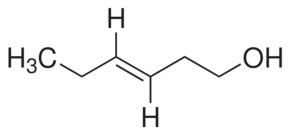
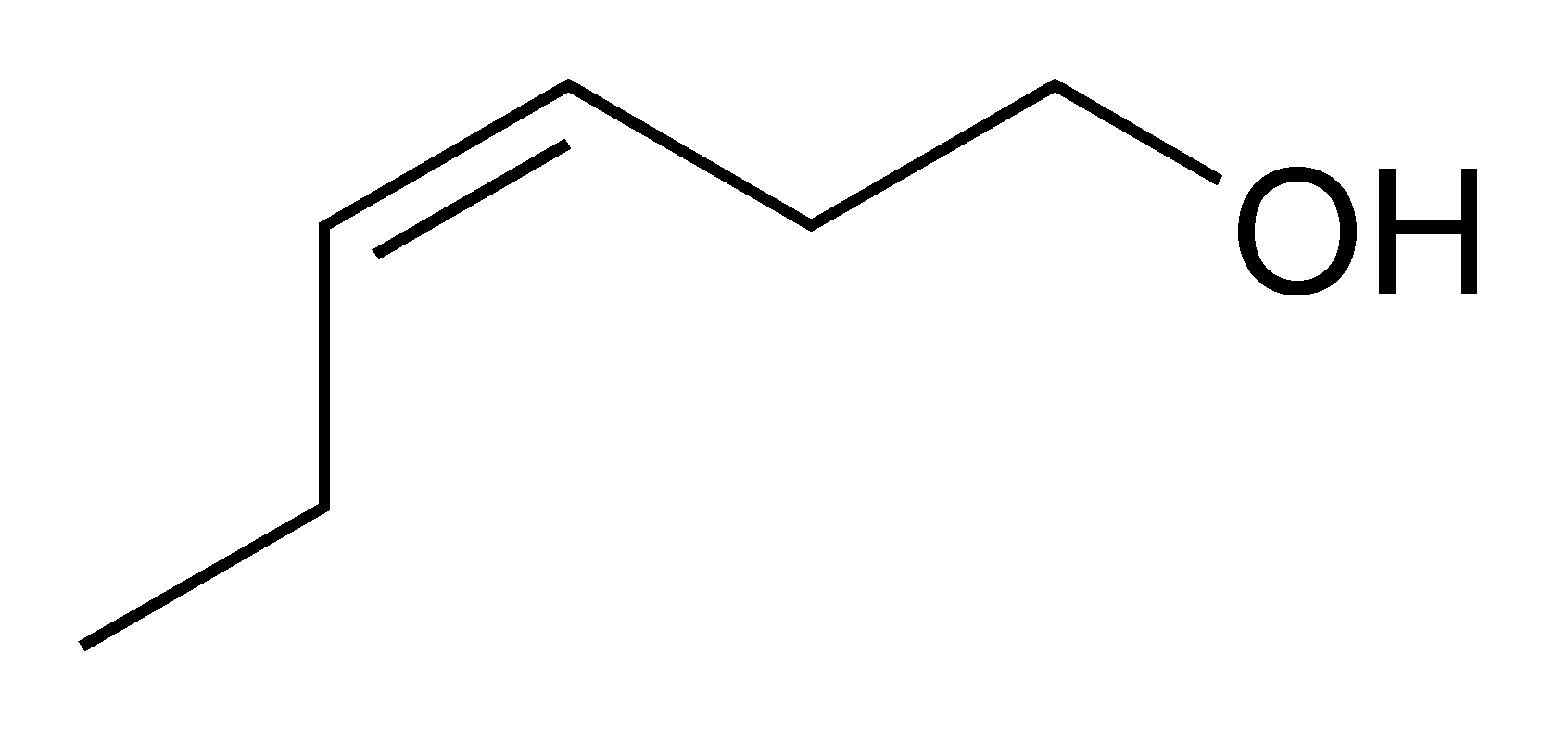
****

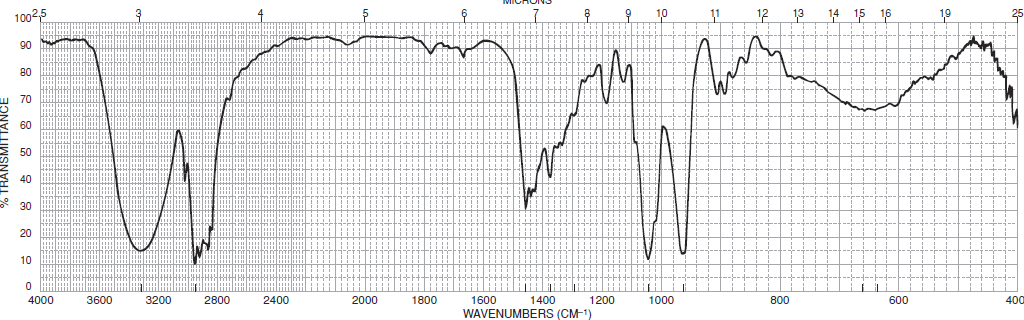


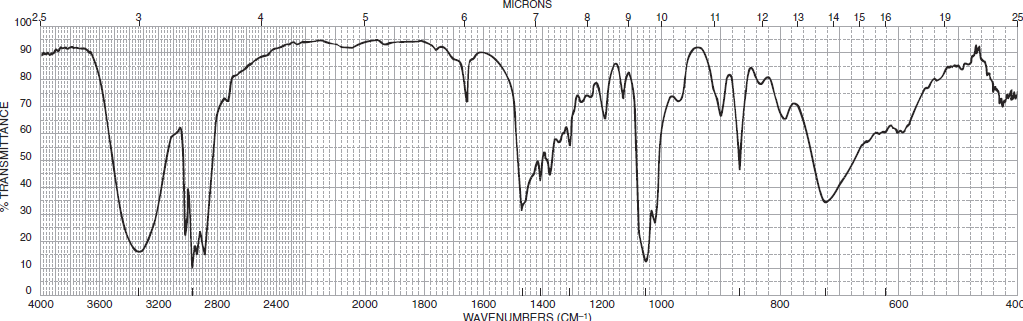
 **ν** CH3, **ν** CH2, **δ** CH2, **δ**CH3

****

2 - A seguir, apresentam-se os espectros infravermelhos dos ***cis*-** e ***trans-*3-hexen-1ol**. Determine uma estrutura para cada um deles.

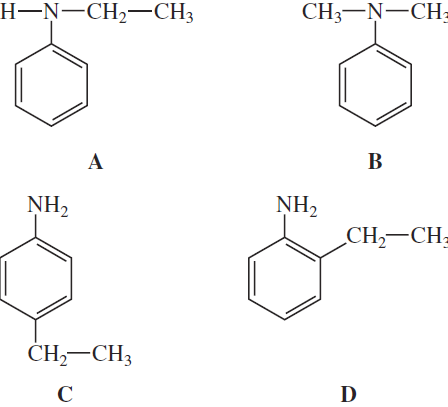
****a

****

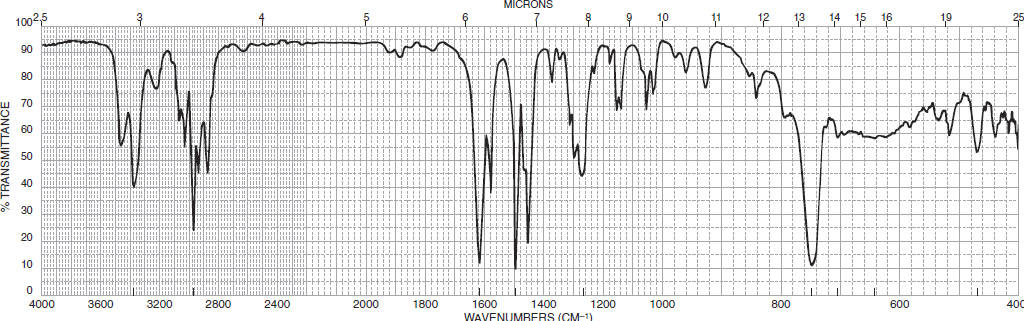
4 – Entre as estruturas abaixo, escolha a que melhor se adapta ao espectro

infravermelho apresentado:

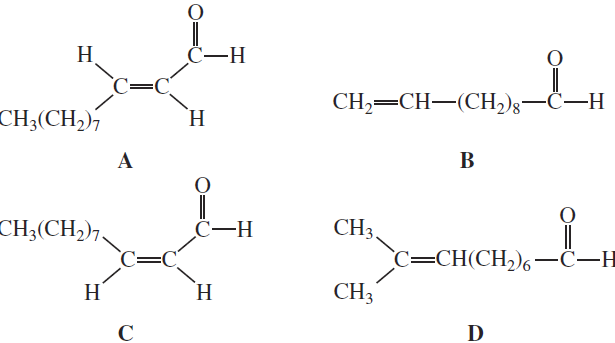
**a)**

****

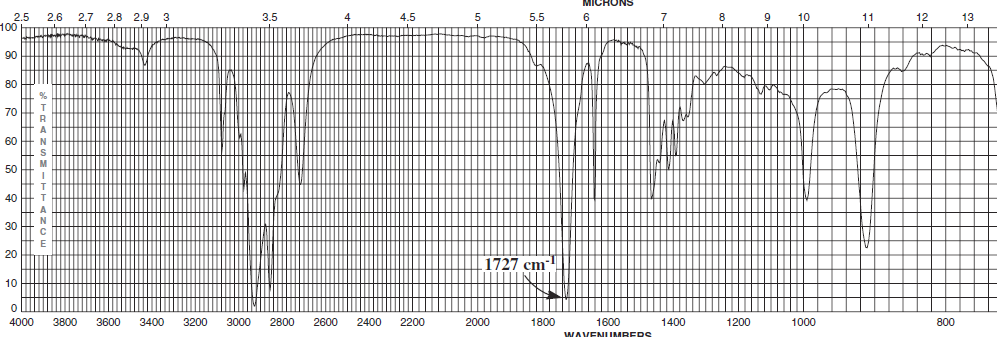
Observar **ν**NH e **δ** Ar-H

****d

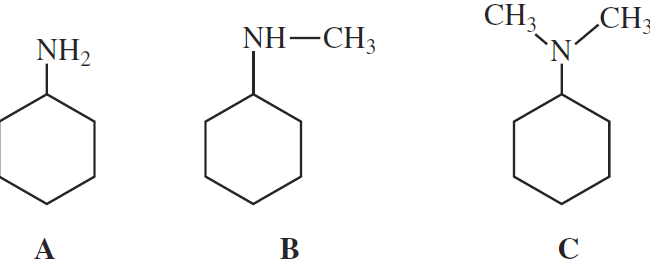
b**)**

****

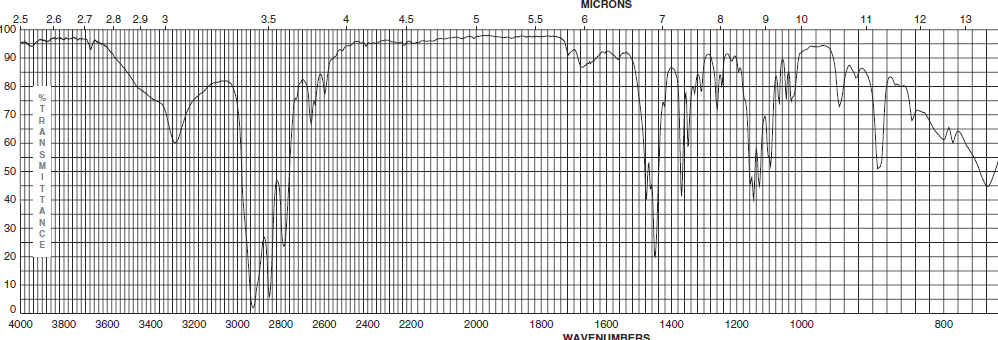
Observar **ν** =CH, **ν** CHO, **δ** CH3, *cis*, *trans* ou normal

****b

c**)**

****

Observar **ν**NH2, **ν** NH

****

b

d**)**

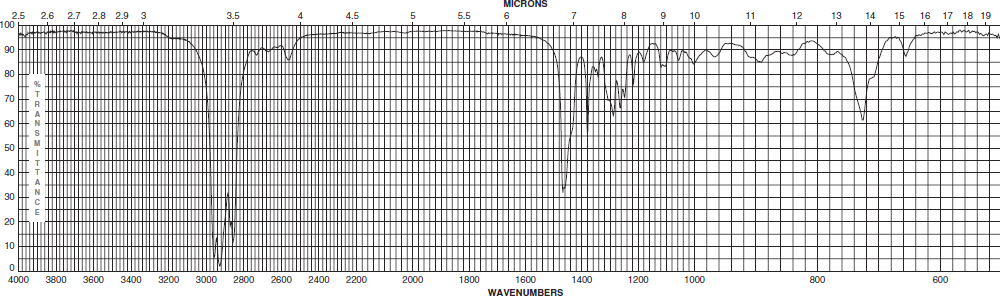
**CH3-CH2-CH2-S-CH2-CH2-CH3 CH3(CH2)4CH2-S-H**

A B

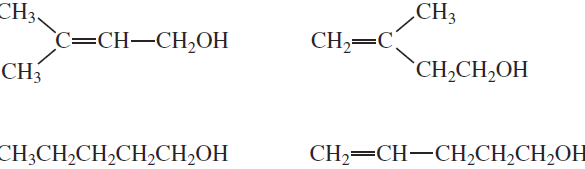
**CH3(CH2)4CH2-O-H CH3-CH2-CH2-O-CH2-CH2-CH3**

C D

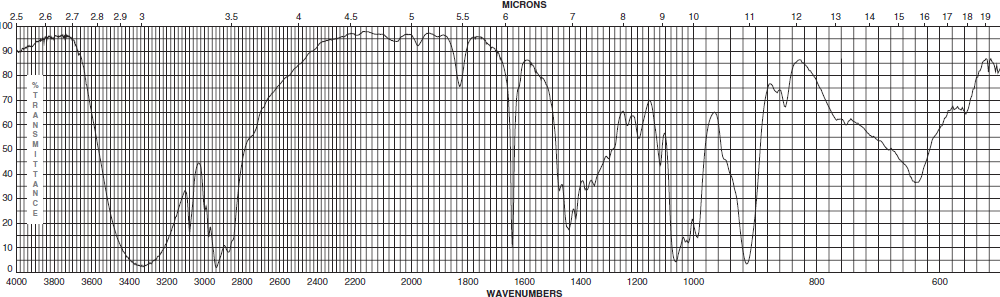
Observar **ν** OH, **ν** SH

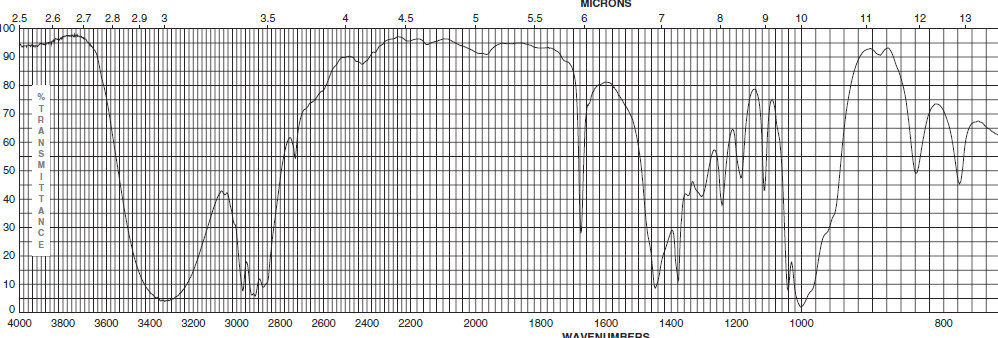
****

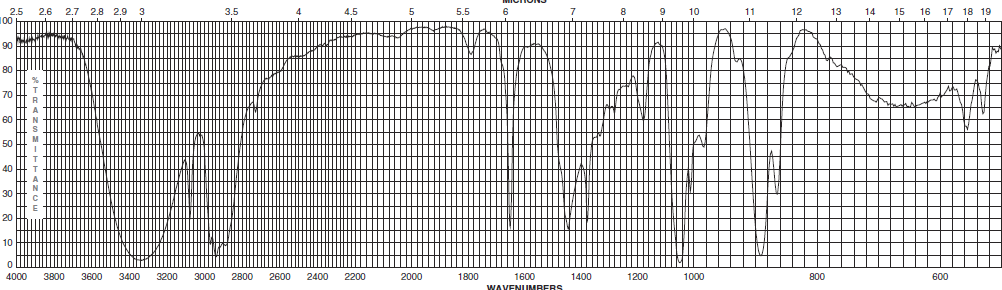
3 – Atribua uma estrutura para cada um dos espectros apresentados. Escolha entre os seguintes alcoóis de cinco carbonos.

****

Observar **ν** =CH2, **ν** CH3, **ν** CH2, **δ** CH2, **δ** CH3

****c

****a

****

b