The IR spectra of the five compounds listed are shown. Identify the compound and give the wavenumber and bond type for the key signals that helped you identify that compound.

butanoic acid, butanone, butan-2-ol, 2-methylbut-1-ene, butylamine

**butanone**

\[ \text{C}=\text{O} \]  

1680-1750 cm\(^{-1}\)

**butan-2-ol**

alcohol \( \text{O-H} \)  

3230-3550 cm\(^{-1}\)

**butylamine**

\[ \text{N-H} \]  

3300-3500 cm\(^{-1}\)

**2-methylbut-1-ene**

\[ \text{C}=\text{C} \]  

1620-1680 cm\(^{-1}\)

**butanoic acid**

acid \( \text{O-H} \)  

2500-3000 cm\(^{-1}\)