

On the left side of this particular ether we have two carbons, which is an ethyl group, and on the right side, we have a CH₃. The common name for it is called ethyl methyl ether, and the IUPAC name is CH₃CH₂OCH₃.

To draw the Lewis structure for this molecule, let's start with the left side, which is a methyl group, a carbon with three hydrogen atoms. The longest chain is a three-carbon chain, which will be called propane. The only way in which the carbon atom will have four bonds is to put a double bond between the carbon and the oxygen. Instead of saying pentane, we're going to drop off the e and replace it with an -ol. It's pentanol now. We don't need to say one pentanol because the aldehyde functional group is always at the end of the chain, so the one is always going to be there unless it's a substituent.

Carboxylic acid is a weak acid consisting of a carbonyl group and a hydroxyl group (or an -OH group). The functional group is sometimes represented as -RCOOH or -CO₂H. The formal charge is determined by subtracting the sum of bonds and dots from the number of valence electrons in the free element. Oxygen, for example, has 6 valence electrons and 1 lone pair.

Examples:

- Ethylamine has the structure shown below:
 - NH₂-CH₂-CH₃
- The structure of an amide is similar to an amine, but it has a carbonyl group (-CO-) between the R group and the NH₂ group.

Formal Charge:

In the case of the amide structure shown above, oxygen has a total of three bonds and one lone pair (or two dots). Thus, its formal charge is +1 (6-5=1) when it has three bonds.