Ethanol Combustion Activity

In this course, it is important to practice use of your skills in balancing reaction equations. This is the basis for quantifying potential heat release as well as initiating calculations related to equilibrium modeling. Here you are asked to find the A/F ratio on both a molar and mass basis for stoichiometric combustion of ethanol C_2H_5OH in air (21% Oxygen and 79% Nitrogen).

    a) Write a balanced chemical reaction equation.

    b) Find the A/F ratio on a molar basis.

    c) Find the A/F ratio on a mass basis.

        The atomic mass of carbon is 12 g/mol
        The atomic mass of the hydrogen atom is 1 g/mol
        The atomic mass of the oxygen atom is 1 g/mol
        The atomic mass of the nitrogen atom is 1 g/mol