THE ENERGY CONTENT IN A MOLE OF NORMAL C1 TO C11 FUEL ACOHOLS

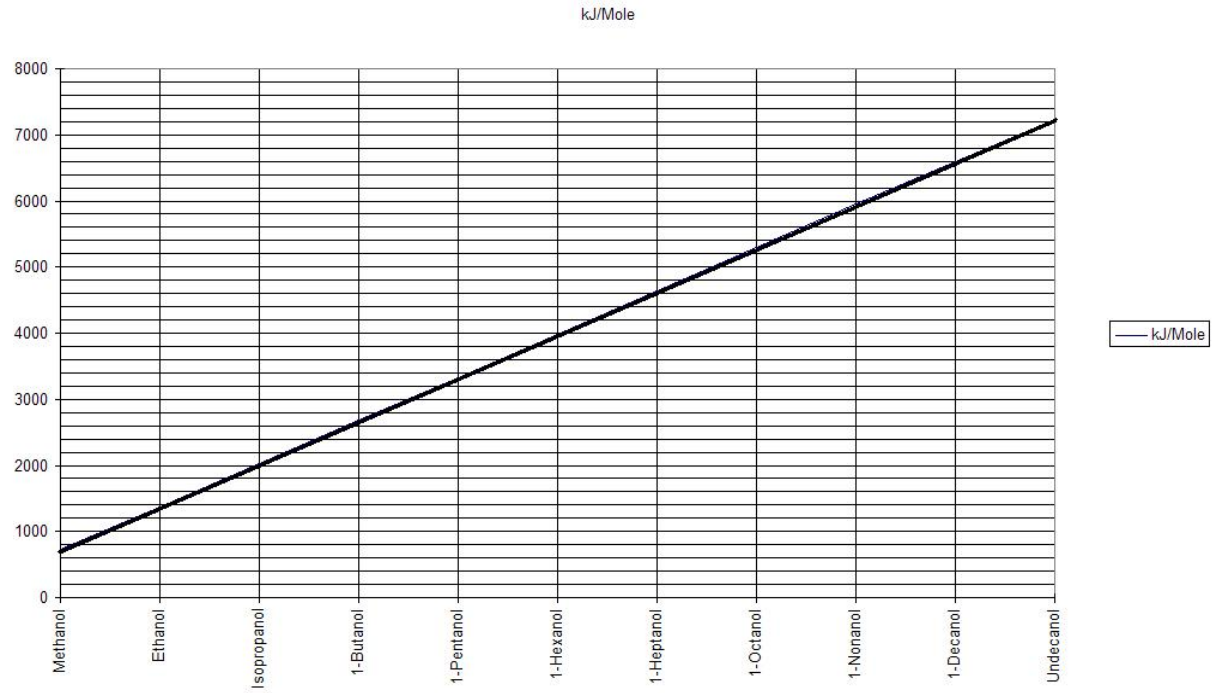



Fig. 1 The energy contained in a single mole of various fuel alcohols in kJ/Mole.

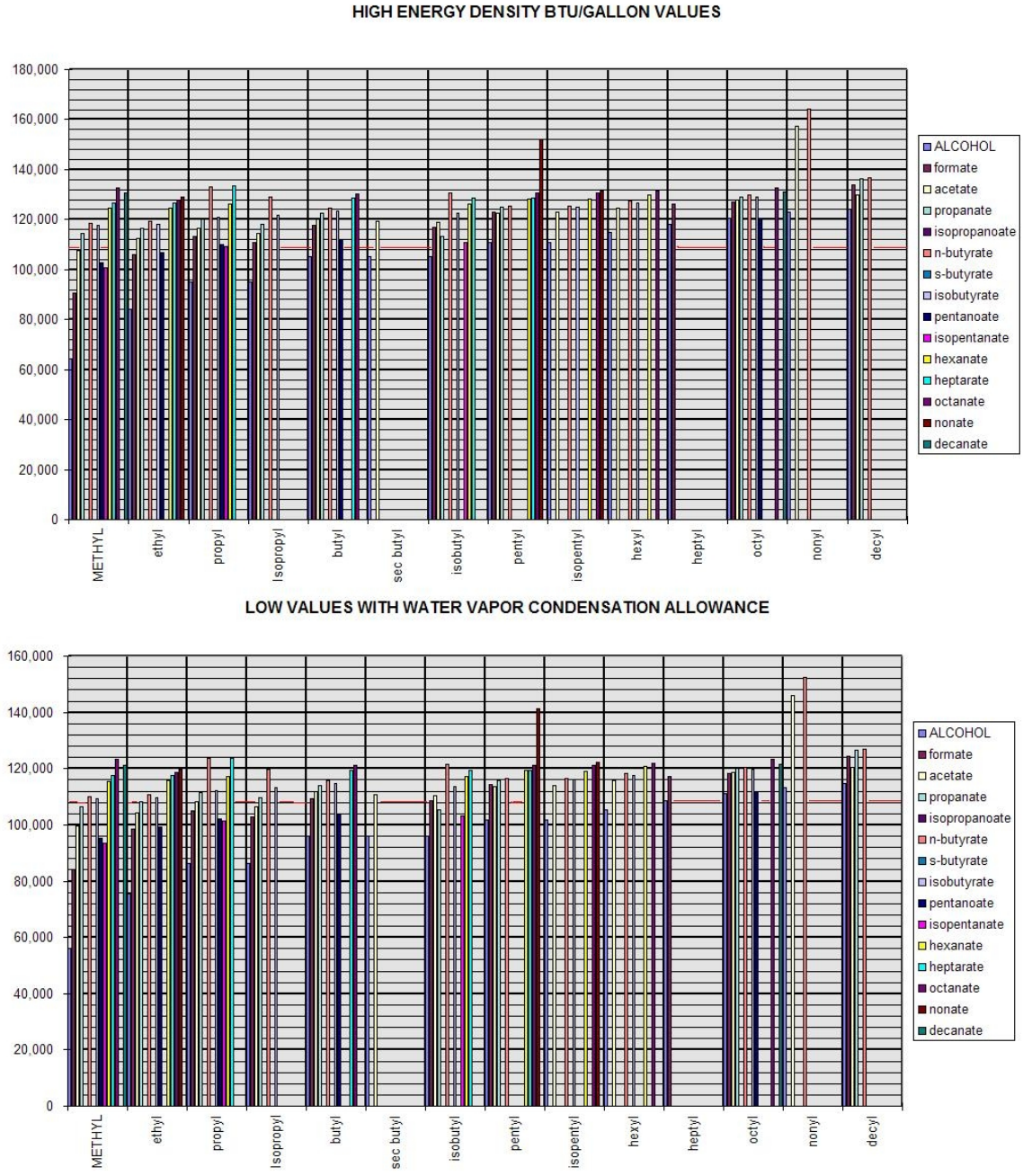
Fig 1 shows the energy per unit mole of the c1 to c10 alcohols. Keep in mind that C9, C10 and C11 should not be used alone, since they have melting points that are too high in cold weather. In blends, that would not likely be a problem as long as the combined gel point or freezing point was sufficiently low. The viscosities also tend to increase with chain length, and c7-c10 may be too viscous without blending in some lower "C" number fractions to control the viscosity

.

There are also many alcohol-ester combinations that can be used individually as fuels or in blends as blended biogasoline components.
This is just like what Biodiesel is already doing. Since we are not limited to long chain heavy hydrocarbons, we can use a lot more than just the methyl esters, that are so popular with the bioDiesel crowd.

I am unaware of any other compilation of potential biogasoline esters so I have developed a matrix of the onses I could identify . The following is a preliminary draft version, so let me know if you see any errors or can add any others to this compliation. It

Fig 2 THE ENERGY DENSITY OF SELECTED FUEL ALCOHOLS AND ESTERS IN BTUs PER GALLON




is by no means meant to be comprehensive, as I am constantly exploring for and discovering new potential biofuels to research.

The ethers, for example are not even included here.

Dimethyl ether is easy to synthesize, and could be a great precursor chemical to convert to many of the biofuel alcohols and esters. This preliminary work is far from complete, so stay tuned for further developments.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With Best regards
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