

Table 1: HHV of Ethanol, *i*-pentanol, and Gasoline

Compound	Ethanol [1]	<i>i</i> -pentanol[1]	Gasoline [2]
HHV [MJ/kg]	29.67	37.73	48.46

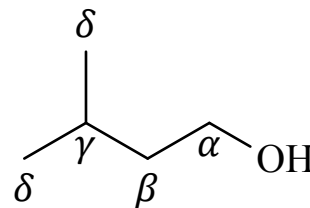


Figure 1: Skeletal structure of *i*-pentanol

0.1 Structure of *i*-Pentanol

i-Pentanol (3-methyl-1-butanol) is a five-carbon alcohol whose skeletal structure is shown in Fig. 1. *i*-Pentanol can be produced biologically, and offers several similar advantages as the butanol isomers as compared to ethanol. Table 1 compares the HHV of ethanol, *i*-pentanol, and gasoline.

0.2 *i*-Pentanol Experiments