Table 6.3. Energy storage density for chemical fuels. (Using data from [308])

energy storage fuel	storage density (J/m^3)	storage density (J/kg)
ATP	1.4×10^8	1.0×10^5
H_2 gas, 10^3 atm.	4.9×10^9	1.2×10^8
nitroglycerine	1.0×10^{10}	6.3×10^6
glycine (amino acid)	1.0×10^{10}	6.5×10^6
wood	1.1×10^{10}	1.9×10^7
urea	1.4×10^{10}	1.1×10^7
methanol	1.8×10^{10}	2.2×10^7
vegetable protein	2.3×10^{10}	1.7×10^7
acetone	2.4×10^{10}	3.1×10^7
glucose	2.4×10^{10}	1.6×10^7
glycogen (starch)	2.5×10^{10}	1.8×10^7
animal protein	2.5×10^{10}	1.8×10^7
carbohydrate	2.6×10^{10}	1.7×10^7
gasoline	2.8×10^{10}	4.4×10^7
butane	3.0×10^{10}	4.9×10^7
fat	3.3×10^{10}	3.9×10^7
cholesterol (lipid)	4.2×10^{10}	3.9×10^7
H_2 solid (10^5 atm.)	7.2×10^{10}	1.2×10^8
diamond	1.2×10^{11}	3.3×10^7

Note that $10^{10}\,J/m^3 = 2.39\,kcal/cm^3$ and $10^7\,J/kg = 2.39\,kcal/g$.