



Alkanes as
Fuels

a



Alkanes as
Fuels

b₁



Alkanes as
Fuels

b₂



Alkanes as
Fuels

c

To balance an equation

Make sure that the same amount of carbon atoms, hydrogen atoms and oxygen atoms are on each side of the reaction equation. Change the numbers in front of the molecules to balance the equation.

1. Determine how many grams of propane (g) are in 1 L (1000 mL) using the density of propane 0,493 g/mL.

2. Calculate how many moles are in the grams of propane using the formula:

$$n = \frac{m}{M}$$

n = amount of moles (*Stoffmenge*)

m = mass of propane (g) (*Masse*)

M = molar mass of propane (g/mol) (*Molare Masse*)

- a) Use your answer from b (amount in moles) to calculate the amount of energy released from 1 L of propane. The reaction enthalpy is given in kJ per mole. To get the final energy released multiply the reaction enthalpy by the amount of propane (moles).