

Answer on Question#39723, Chemistry, Other

how many happy meals would you need to eat to give you the same energy as 1 gallon of gasoline?

Solution:

Gasoline contains about 42.4 MJ/kg (120 MJ/US gal, 11.8 kWh/kg) quoting the lower heating value. (<http://en.wikipedia.org/wiki/Gasoline>);

Different types of Happy Meals in different countries contain from 257 to 919 kcal (1075 – 3845 kJ). For example, Happy Meal with 4 Chicken McNuggets, carrot sticks, diet cola and Apple Slices contains the least energy – 257 kcal. The most energy containing Happy Meal is the one with Cheeseburger, Kids Fries, Fanta and milk cocktail. It contains 919 kcal.

a) $120\,000 / 3\,845 = 31$;

b) $120\,000 / 1\,075 = 112$;

Answer: 31 – 112