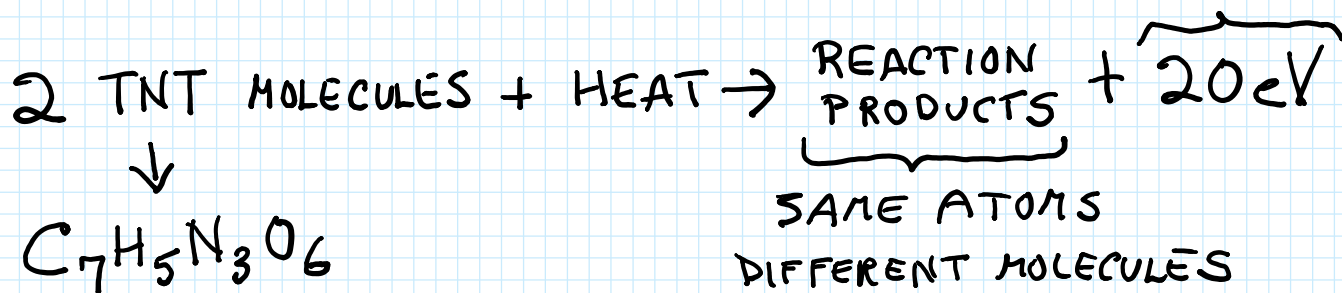


AN ENERGETIC CHEMICAL REACTION KE OF REACTION PRODUCTS



$$7 \times 12 + 5 \times 1 + 3 \times 14 + 6 \times 16$$

↓

$$\Rightarrow 227 \text{ NUCLEONS OF MASS} \rightarrow 10 \text{ eV OF ENERGY}$$

$$\Rightarrow \frac{10 \text{ eV} \cdot \frac{1.6 \times 10^{-19} \text{ J}}{\text{eV}}}{(3 \times 10^8 \text{ m/s})^2} = 1.78 \times 10^{-35} \frac{\text{kg} \cdot \cancel{\text{m}^2/\text{s}^2}}{\cancel{\text{m}^2/\text{s}^2}}$$

OF "LOST" MASS

IN THIS REACTION

THAT IS

$$\frac{1.78 \times 10^{-35} \cancel{\text{kg}}}{227 \cancel{\text{ nucleons}} \cdot 1.67 \times 10^{-27} \frac{\cancel{\text{kg}}}{\cancel{\text{ nucleon}}}} = \frac{1}{21.3 \text{ BILLION}}$$

A TINY FRACTION OF MASS WAS "LOST"