

Constants

$$h = 6.63 \times 10^{-34} \text{ J}\cdot\text{s}$$

$$c = 3 \times 10^8 \text{ m/s}$$

h is Planck's Constant

c is speed of light

Purpose for flame test

To identify a metal by its color

When is color emitted?

When the electron comes back to its groundstate

Harmful and little effect radiations

Gamma Rays Long Radio waves

X rays Microwaves

UV or UltraViolet IR or Infrared

Formulas

$$c = \lambda \nu \text{ (}\lambda \text{ is lambda)}$$

$$E = h\nu$$

E is energy

ν is frequency

λ is lambda

How an electron emits a photon

Heat or electricity is applied to an atom, and the electron absorbs the energy and then gets excited; leaves its ground state, and comes back to its nucleus due to it being attracted, and then releases energy; Photon

Conversions

$$1\text{m} = 1 \times 10^9 \text{ nm}$$

$$1\text{kHz} = 1 \times 10^3 \text{ Hz}$$

$$1\text{mHz} = 1 \times 10^6 \text{ Hz}$$

mole of a photon

$$(6.02 \times 10^{23})(6.63 \times 10^{-34})(\nu)$$

Multiply this exactly how this is once you get your ν and you will get your mole of a photon for the problem.



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cheatography.com/chemisforsheet/

Published 9th March, 2022.

Last updated 9th March, 2022.

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