

NOTHING CAN MAKE A PARTY MORE FUN THAN LUMO GLOW STICKS. BUT HOW DO THEY WORK?

## glow on!

### EXPLANATION:

*Simply put — it is a chemical reaction producing light without heat. The glow stick itself is a flexible plastic tube containing two separate liquids that are kept apart until the glow stick is activated.*

### THE GLOWSTICK INCLUDES:

**Hydrogen peroxide solution:** Inside the glow stick, there is a solution of hydrogen peroxide, which acts as the activator.

**Phenyl oxalate ester:** Inside the plastic tube is a small glass vial. This contains phenyl oxalate ester and a fluorescent dye. The dye gives the glow stick its colour when it reacts with the chemicals reaction. The different dye produce different colours of light

### HOW IT WORKS:

When you bend the glow stick, you break the vial and it allows the hydrogen peroxide to mix with the phenyl oxalate ester.

This reaction creates energy, which excites the dye molecules. This causes them to release photons (light).

**THIS PROCESS IS CALLED CHEMILUMINESCENCE, WHERE CHEMICAL ENERGY IS DIRECTLY CONVERTED INTO LIGHT.**

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