



## Object 2: The glucose meter



### What is it?

A glucose meter is a machine designed to measure the concentration of glucose (sugar) in the blood. It is mainly used by people with diabetes so that they know how much medication to take to keep their blood sugar within a normal range. Very high or low blood sugar can be dangerous.

### When was it invented?

The first glucose meter was developed in 1970 and was called the Ames Reflectance Meter (ARM). It used paper sticks that changed colour when exposed to glucose and gave a numerical readout on a display panel. The machine wasn't perfect but it was the forerunner of the modern glucose meters that are used by millions of people with diabetes today.

### How has it changed modern pathology?

Modern glucose meters are light, cheap and accurate if used carefully. The reading enables someone with diabetes to increase or reduce the amount of medication they take or inject to keep their blood sugar stable. Modern meters are small and light so they can be used anywhere; at home, school or work – minimising hospital visits and allowing people to live as normal a life as possible. Clinical biochemists are the pathologists and scientists who measure and interpret the levels of substances, such as glucose, in the blood. They have led the development of point of care testing (tests done close to the patient) as well as hospital laboratory services.

### Where can I see a glucose meter?

To see a range of glucose meters, why not visit your local science centre or museum? The [Science Museum](#) in London, for example, has several glucose meters on display.

### How can I find out more about it?

[Diabetes UK](#) has more information on diabetes and the use of glucose monitors for self-testing.