



Fluorescence sensor technology

Healthcare wearables such as CGM devices, which are used for continuous blood glucose monitoring, make use of a special form of sensor technology. The miniaturised sensor is encased in biocompatible materials. The basis for measuring the blood glucose value is a fluorescence-based technology.

The sensor, which is usually inserted on the back of the upper arm by a doctor or, if necessary, by means of an auto-applicator, measures the glucose level in the interstitial fluid, which binds reversibly to the glucose-indicating polymer. The technology enables automatic and continuous measurement and display of blood glucose levels without the patient having to actively initiate this.

Pioneers in the field of blood glucose measurement by sensors are Eversense, Dexcom and Abbott. The companies' sensor technology is based on miniaturised, thin sensors that are placed under the skin by means of an applicator and transmit real-time data on blood glucose levels and their changes via Bluetooth to the smartphone via a transmitter placed on the skin above the sensor. By regularly scanning the sensor, a comprehensive glycaemic profile can be created and stored.

The wearable CGM system from Eversense is currently the most innovative and, above all, the most durable glucose device. Unlike competing products from Abbott or Dexcom, the insert is inserted by a doctor, but can remain under the skin for up to 180 days without being replaced. In comparison, the sensors from Abbott and Dexcom have to be replaced after a maximum of 14 days.

Clinical studies show a significant improvement in diabetes management and increased satisfaction of affected persons. Immediately after insertion, the sensor measures reliably and accurately and immediately reports any abnormalities through slight vibrations on the arm.

INNOVATIVE TECHNOLOGICAL APPROACHES

- ◇ **Company:**
Ascensia Diabetes Care
- ◇ **Technological base:**
Fluorescence sensor,
transmitter & app
- ◇ **Product:**
Eversense - CGM system
for measuring and
monitoring blood
glucose levels
- ◇ **Special features:**
application period of up
to half a year, sensor is
inserted under the skin
and transmits data in
real time
- ◇ **Website:**
[https://www.diabetes.
ascensia.de/eversense/
eversense-cgm-system/](https://www.diabetes.ascensia.de/eversense/eversense-cgm-system/)

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