Anton Paar

Quality Control of Glucose Infusions

Glucose infusions are widely used in clinical applications as they deliver energy to the human body. Their quality can quickly be determined by polarimetric measurements.

Glucose infusions give fresh energy

Glucose, also referred to as dextrose, is a sugar which serves as energy for human body functions. It is naturally present in body fluids. It is frequently used in both adults and children to restore blood glucose concentrations in the treatment of hypoglycemia resulting from insulin excess or from other causes. Patients with low glucose levels in the blood can show symptoms of hunger, reduced brain function, aggressive behavior, even shock. Infusions of glucose must be administered to restore glucose to normal levels. Moreover, intravenous glucose infusions are used in order to dilute medicines before injecting them.

The quality of glucose infusions can easily be determined by measurement of the specific rotation. The concentration which is written on the glucose infusion solution is entered into the MCP 100 and the resulting specific rotation is directly shown on the screen. The specific rotation of glucose at 20 °C must be around +52.7 ml·°/(dm·g).

The MCP 100 modular and compact

The new MCP 100 contains the proven technology of Anton Paar in a greatly reduced footprint. It is ideal for analyzing the quality of optically active substances used for clinical applications.

- **Automatic:** No human errors as the measurement is independent from the user.
- **Temperature control:** Accurate polarimetric measurements demand precise temperature control. Unit is equipped with Peltier elements which provide a temperature stability of +/- 0.2 C.
- **Convenient:** Measured data is automatically saved and can easily be exported to a printer, server or USB.
- **Reliable:** Compliance with national and international pharmacopoeias
- **Safe:** No manual data input as automatic adjustments and calibrations are done with Toolmaster quartz control plates.

Good to know

The quality of glucose infusions can easily be controlled by the measurement of the optical rotation. The MCP 100 is ideal for this application.

Other Anton Paar instruments relevant for the application

Along with the MCP 100, the MCP family from Anton Paar contains a variety of models with unique features that can offer an ideal solution to every customer.

Do you have any questions?

Contact Anton Paar directly:

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