

VACUETTE® GLUCOMEDICS

The new tubes by Greiner Bio-One for effective glycolysis inhibition by direct sample stabilisation

The process for diagnosing Diabetes Mellitus or Gestational Diabetes has recently undergone some changes. Thus the reliable stabilisation of blood sugar levels directly after sampling is an important precondition for the accuracy of the analysis results. Various guidelines (American Association of Clinical Chemistry, American Diabetes Association, Deutsche Diabetes Gesellschaft) have dealt with this subject in numerous articles and publications¹. The aim is to set higher quality standards for pre-analysis by ensuring effective glycolysis inhibition, thus increasing the accuracy of the diagnosis.

The new **VACUETTE®** GLUCOMEDICS tube by Greiner Bio-One was specially developed for this application. The additive mixture in the tube stabilises the blood sample immediately after sampling and thus impedes the breakdown of glucose over time (glycolysis). The combination of sodium EDTA, sodium fluoride, citric acid and sodium citrate acidifies the whole blood sample, resulting in the immediate and complete inhibition of glycolysis, thus setting it apart from conventional sodium fluoride tubes.

The glucose concentration of whole blood and/or plasma samples is kept constant at room temperature for up to 24 hours at the "in-vivo value" (almost 100% of the original value)². The dosed liquid additives ensure the easy mixing of the additive with the whole blood sample. To make up for the dilution effect of the additive, the analysis result must be multiplied by 1.16. This is required to achieve the "in-vivo glucose concentration" in the plasma.

With the new **VACUETTE®** GLUCOMEDICS tube, Greiner Bio-One makes use of its proven vacuum technology. The GLUCOMEDICS tube is a "sandwich tube" with a safety cap. The inner tube is made of polypropylene (PP) and reliably prevents the evaporation of the additive mixture. The outer tube is made of polyethylene terephthalate (PET). PET is important for maintaining the vacuum.

The **VACUETTE®** GLUCOMEDICS tube has a capacity of 2 ml and was first marketed in May 2013.



VACUETTE® GLUCOMEDICS tube

Picture: © Greiner Bio-One

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Sources

1. Guidelines and Recommendations of Laboratory Analysis in the Diagnosis and Management of Diabetes Mellitus, Clinical Chemistry 57:6 (2011)
2. Stability of glucose concentration using **VACUETTE**[®] GLUCOMEDICS blood collection tubes

Greiner Bio-One International AG

Greiner Bio-One is specialized in the development, production and distribution of high quality laboratory products made from plastic. The company is a technological partner for hospitals, laboratories, universities, research institutes and the diagnostic, pharmaceutical and biotechnology industries. Greiner Bio-One consists of four business units: Preanalytics, BioScience, Diagnostics and OEM. Today the company generates a turnover of 364 Mio. Euro. Greiner Bio-One is a member of the Greiner Group based in Kremsmünster (Austria).

Further information from:

Peter Föttinger, Marketing Director

T: 0043 7583 6791-1150

E-Mail: peter.foettinger@gbo.com