

# Product Information

## VACUETTE® SECONDARY Tubes

### General Information



#### Intended Use

**VACUETTE® SECONDARY** Tubes are used as a secondary container for aliquoting, storing and transporting blood, blood components and urine from the primary tube in the clinical laboratory and for the analysis on laboratory analysers.

The choice of tube depends on the analyser and the intended use.

#### Description

The tubes have a dimension of 13x75mm, are made of inert plastic (PET or PP), are unsterile and not evacuated. They are additive-free and intended for single use, with a maximum capacity of 5ml.

2 special items **VACUETTE® SECONDARY** Tube SIMPLEX RD and BC are available, exclusively intended for use with Beckman Coulter (BC) and Roche PVT (RD).

#### Centrifugation of tubes

A study was carried out in order to see if the tubes can withstand a higher centrifugation setting if required.

80 samples for **VACUETTE® SECONDARY** PET tubes and 80 samples for **VACUETTE® SECONDARY** PP tubes were filled with 5 ml of NaCl solution (density 1080 g/cm<sup>3</sup>). The tubes were then centrifuged at 4400g for 10 minutes and at 4400g for 30 minutes in a cooled Eppendorf Centrifuge 5804R. Afterwards all samples were visually checked for damage to tube material.

**Result:** All tubes were visually examined after centrifugation. None of the tubes showed any breakage or leakage.

For the full study, see: "Evaluation of **VACUETTE® SECONDARY** Tubes" on [www.gbo.com](http://www.gbo.com)

#### Use on Analyzers



Example of transferring **VACUETTE® SECONDARY** Tubes SIMPLEX into an analyzer tube container.

Follow the manufacturer's analyser manual for the correct handling.

**VACUETTE® SECONDARY** Tube SIMPLEX inner cartons contain removable flaps. The perforated flaps can be opened to facilitate the pouring of tubes into some analysers. Refer to the instrument assay's instructions for use for information on the correct sample material, the correct storage, freezing, thawing and stability.

# Product Information

## VACUETTE® SECONDARY Tubes

### Temperature Resistance

A clinical evaluation of the **VACUETTE® SECONDARY** PET Tubes and the **VACUETTE® SECONDARY** PP Tubes was carried out to assess the performance of heat and cold resistance.

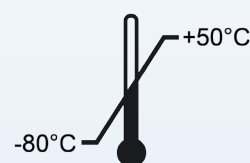
For the freezing tests for each tube type, 200 tubes were filled with 1-3 ml of Lithium Heparin Plasma. All tubes were placed into a metal rack (from manufacturer Lactan) and samples were frozen first at -20°C for 2 hours. A more gentle freezing process can be achieved by keeping the samples in the refrigerator for at least 2 hours before freezing. Afterwards all samples were placed in a freezer at -80 °C for two weeks and for three months. After two weeks half of the samples were removed followed by the other half after three months and were thawed in the refrigerator (4 °C – 8 °C) overnight. Prior to visual examination of the tube material for any breakage, the samples were taken out of the refrigerator to reach room temperature.

For the heat resistance testing, 100 empty PP tubes were heated up to 121°C for 20 minutes. PET tubes were constantly stored at 50°C in a warming cabinet for three months.

**Result:** After two weeks and three months freezing at -80°C, the tubes were thawed according to the protocol and none of the tubes showed any breakage or leakage stored in the metal rack. None of the **VACUETTE® SECONDARY** PP tubes showed any breakage of tubes after heat application (121°C for 20 min). For **VACUETTE® SECONDARY** PET tubes heat application of 50 °C for three months showed no influence on tube material.

For the full study, see: “Evaluation of **VACUETTE® SECONDARY** Tubes“ on [www.gbo.com](http://www.gbo.com)

Tube Type	Temperature
<b>Temperature Resistance</b>	
<b>VACUETTE® SECONDARY</b> Tube MULTIPLEX, PP, 13x75mm, without cap	-80°C to + 121°C
<b>VACUETTE® SECONDARY</b> Tube MULTIPLEX, PET, 13x75mm, without cap	-80°C to + 50°C
<b>VACUETTE® SECONDARY</b> Tube SIMPLEX, PP 13x75mm, without cap	-80°C to +121°C
<b>VACUETTE® SECONDARY</b> Tube MULTIPLEX, PP 13x75mm, <b>with safety cap</b>	-80°C to + 50°C
<b>VACUETTE® SECONDARY</b> Tube SIMPLEX, PET 13x75mm, without cap	-80°C to + 50°C
<b>VACUETTE® SECONDARY</b> Tube SIMPLEX RD PET 13x75mm, without cap	-80°C to + 50°C
<b>VACUETTE® SECONDARY</b> Tube SIMPLEX BC, PET 13x75mm, without cap	-80°C to + 50°C



Common temperature for ALL **VACUETTE® SECONDARY** Tubes .

### Safe Transport

If storing of the sample is required, PET secondary tubes can be easily re-capped with **VACUETTE®** Snap Caps available in various colours. PP tubes are more easily closed with **VACUETTE®** Safety Caps.

However, for safe transport according the to IATA Dangerous Goods Regulation (PI 650), the tubes must be closed with Standard **VACUETTE®** Safety Caps.

Biological samples must be packed properly in order to minimise the risk of exposure.

Tubes should be the leak-proof primary receptacle and must withstand an internal pressure test without leakage of 95kPa which can only be guaranteed with **VACUETTE®** Safety Caps.

For more information on safe transport see the "**VACUETTE®** Transport Line“ brochure on [www.gbo.com](http://www.gbo.com)