# Venous blood sampling

## Coagulation analysis

### Sodium citrate

Trisodium citrate is used as an anticoagulant for coagulation investigations. It works as an anticoagulant by forming complexes with metal ions such as calcium, thereby inhibiting the coagulation cascade. Anticoagulation with trisodium citrate is reversible.

BD Vacutainer® Citrate Tubes contain buffered trisodium citrate in accordance with recommendations:

- 0.105 M or 0.109 M of buffered trisodium citrate solution, equivalent to 3.2% trisodium citrate
- 0.129 M of buffered trisodium citrate solution, equivalent to 3.8% trisodium citrate

Following blood collection, the blood to additive ratio will be 9:1.

BD Vacutainer® Citrate Tubes are also suitable for carrying out special test procedures such as the platelet function assay PFA-100®*.

### Fill line marking

The significance of the correct ratio of blood to additive for coagulation samples is well documented.[27] The correct fill amount is critical for correct coagulation analysis. All BD Vacutainer® plastic coagulation Tubes have a mark indicating the minimum fill level.

### BD Vacutainer® Citrate Tubes

The plastic citrate tubes made from polyethylene terephthalate (PET) and polypropylene (PP) feature innovative tube geometry that minimises tube headspace and associated platelet activation to optimise activated partial thromboplastin time (APTT) monitoring of unfractionated heparin patients.

BD Vacutainer® Citrate Tubes are used worldwide and in many analytical coagulation systems:[25,26]

- Clinically proven in multi-centre clinical trials for coagulation testing across all major patient populations.
- Evaluated with the most widely used coagulation analytical systems.

## BD Vacutainer® Plus Citrate Tube draw volume guide

**Note:** The Quantity of blood drawn into evacuated tubes varies with altitude, ambient temperature, barometric pressure, tube age, venous pressure and filling technique.

minimalaus užpildymo žyma 360 laipsnių, t. y. per visą mėgintuvėlio diametrą, išgraviruota ant mėgintuvėlio korpuso

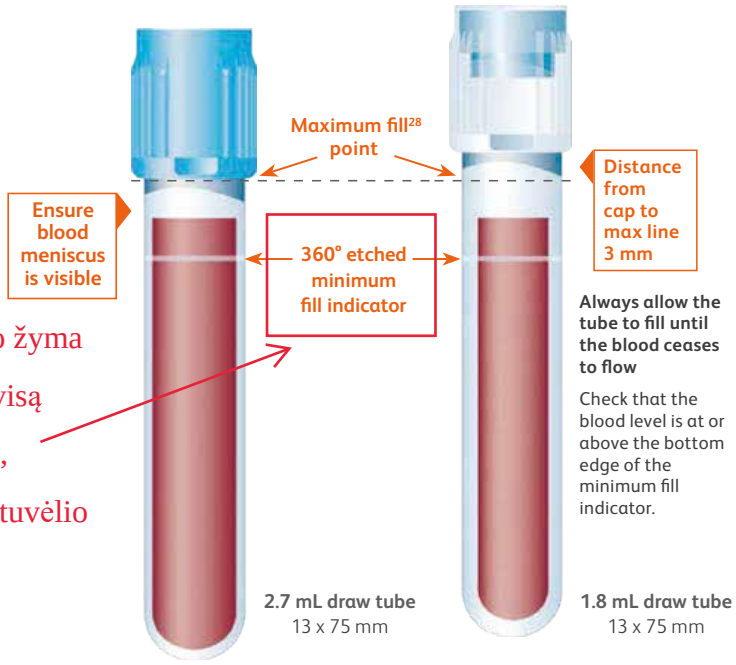


Image is for illustrative purposes only and is not actual size

* PFA-100 is a registered trade mark of Siemens.

# Venous blood sampling

## Coagulation analysis

**Centrifugation conditions**

For coagulation analyses, different plasma specifications can be obtained from the citrated blood:

- Platelet-poor plasma:
  Plastic tubes: 2,000-2,500 g for 10-15 minutes at 18-25°C

### BD Vacutainer® Citrate Tubes

| | Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|---|
| | 363047 | 1.8 | 13 x 75 | Trisodium citrate (0.109 M, 3.2%) | None | PET/PP | Paper | BD Hemogard™ | |
| | 363097 | 1.8 | 13 x 75 | Trisodium citrate (0.129 M, 3.8%) | None | PET/PP | Paper | BD Hemogard™ | |
| 1.5 | 368273 | 1.8 | 13 x 75 | Trisodium citrate (0.109 M, 3.2%) | None | PET/PP | See thru | BD Hemogard™ | |
| | 363093 | 1.8 | 13 x 75 | Trisodium citrate (0.109 M, 3.2%) | None | PET/PP | Block | BD Hemogard™ | |
| | 363048 | 2.7 | 13 x 75 | Trisodium citrate (0.109 M, 3.2%) | None | PET/PP | Paper | BD Hemogard™ | |
| | 363079 | 2.7 | 13 x 75 | Trisodium citrate (0.129 M, 3.8%) | None | PET/PP | Paper | BD Hemogard™ | |
| | 363095 | 2.7 | 13 x 75 | Trisodium citrate (0.109 M, 3.2%) | None | PET/PP | Block | BD Hemogard™ | |
| 1.6 | 364305 | 2.7 | 13 x 75 | Trisodium citrate (0.109 M, 3.2%) | None | PET/PP | See thru | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

# Venous blood sampling

## Serum analysis

### Serum tubes, without separator

Serum tubes are available in glass and plastic (PET) variants. In glass tubes, the surface acts as a clot activator. In plastic tubes, silica particles are added as the clot activator. These tubes are labelled with the acronym CAT (clot activator tube).

### Clotting times

The recommended minimum clotting time for the serum tubes is 60 minutes.

### Centrifugation conditions

≤1300 g for 10 minutes at 18-25°C

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® Serum Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 368492 | 2.0* | 13 x 75 | Silica (clot activator) | None | PET | Paper | BD Hemogard™ | |
| 368271 | 2.0* | 13 x 75 | Silica (clot activator) | None | PET | See thru | BD Hemogard™ | |
| 369032 | 4.0 | 13 x 75 | Silica (clot activator) | None | PET | Paper | BD Hemogard™ | |
| 365904 | 4.0 | 13 x 75 | Silica (clot activator) | None | PET | See thru | BD Hemogard™ | |
| 367624 | 5.0 | 13 x 75 | No additive | None | Glass | Paper | BD Hemogard™ | |
| 367614 | 5.0 | 13 x 75 | Silicone coated | None | Glass | Paper | BD Hemogard™ | |
| 368815 | 6.0 | 13 x 100 | Silica (clot activator) | None | PET | Paper | BD Hemogard™ | |
| 367819 | 6.0 | 13 x 100 | Silica (clot activator) | None | PET | See thru | BD Hemogard™ | |
| 367896 | 10.0 | 16 x 100 | Silica (clot activator) | None | PET | Paper | BD Hemogard™ | |

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All tubes are supplied in boxes of 100 units / cases of 1,000
*Partial-draw tube

# Venous blood sampling

## Serum analysis

### BD Vacutainer® RST (Rapid Serum Tube)

This tube combines the advantages of a thrombin-based clot activator with a gel barrier, enabling rapid results and extended stability.

The main advantages of BD Vacutainer® Rapid Serum Tubes(RST) versus other serum tubes:

- High-quality serum production.[28]
- Five-minute clotting time after the blood sample is taken.
- Reduced haemolysis, red cell hang-up and fibrin, compared to a comparator serum tube.[28]
- Stable barrier between serum and clotted blood during transportation and storage, therefore better analyte stability.
- Workflow optimisation: short centrifugation time, sample processing and archiving in the primary tube.

### Clotting times

The minimum recommended clotting time for BD Vacutainer® RST is 5 min between 23 and 27°C.

### Centrifugation conditions

4,000 g for 3 minutes at 23-27°C or
2,000 g for 4 minutes at 23-27°C or
1,500-2,000 g for 10 minutes at 23-27°C

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® RST Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 368774 | 5.0 | 13 x 100 | Thrombin-based medical clotting agent | Gel | PET | Paper | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

## BD Vacutainer® Thrombin Tubes (no separator)

The thrombin-based clot activator enables rapid clotting of the blood.

### Clotting times

The minimum recommended clotting time for the thrombin tubes is 5 minutes.

### Centrifugation conditions

≤1300 g for 10 minutes at 18-25°C

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 367817 | 4.8 | 13 x 75 | Thrombin | None | PET | Paper | BD Hemogard™ | |
| 367811 | 6.0 | 13 x 100 | Thrombin | None | PET | Paper | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

# Venous blood sampling

## Serum analysis

### BD Vacutainer® SST™ II *Advance* Tubes

These tubes contain a gel barrier that separates the serum from the blood clot following centrifugation, preventing contamination of the serum. For example, in serum certain analytes such as potassium, phosphorus and glucose should be separated from the cells within a short time period - otherwise the results will be significantly impacted. Clinical evaluation of special chemistries such as therapeutic drugs, proteins, peptides, steroids and vitamins demonstrates a high degree of stability within the BD SST™ II *Advance*.[29,30,31]

The main advantages of gel tubes versus non-gel tubes are:

- Stable barrier between serum and clotted blood during transportation and storage, leading to better analyte stability.
- Better sample quality.
- Workflow optimisation: short centrifugation time, sample processing and archiving in the primary tube.
- No requirement for secondary tubes, reducing the possibility of misidentification.

### Further information

Clinical and technical information is available on request.

### Clotting times

The minimum recommended clotting time for BD Vacutainer® SST™ II *Advance* Tubes is 30 minutes.

Krešėjimo laikas - 30 min.

### Centrifugation conditions

1,300-2,000 g for 10 minutes at 18-25 °C

# Venous blood sampling

## BD Vacutainer® SST™ II *Advance* Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additives | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 366882 | 2.5* | 13 x 75 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 367957 | 3.5 | 13 x 75 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 368498 | 3.5 | 13 x 75 | Silica (clot activator) | Gel | PET | See thru | BD Hemogard™ |  |
| 368965 | 3.5 | 13 x 75 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 368879 | 4.0 | 13 x 100 | Silica (clot activator) | Gel | PET | See thru | BD Hemogard™ |  |
| 367955 | 5.0 | 13 x 100 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 366566 | 5.0 | 13 x 100 | Silica (clot activator) | Gel | PET | See thru | BD Hemogard™ |  |
| 368968 | 5.0 | 13 x 100 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 366444 | 6.0 | 16 x 100 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 367953 | 8.5 | 16 x 100 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |
| 366644 | 8.5 | 16 x 100 | Silica (clot activator) | Gel | PET | See thru | BD Hemogard™ |  |
| 366468 | 8.5 | 16 x 100 | Silica (clot activator) | Gel | PET | Paper | BD Hemogard™ |  |

All tubes are supplied in boxes of 100 units / cases of 1,000

* Partial-draw tube

# Venous blood sampling

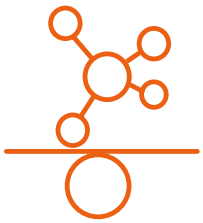
## Serum

### Turnaround time[32]

Before centrifugation, serum samples require between 5 to 60 minutes to coagulate and several factors affect the process.

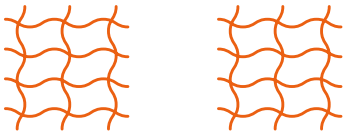
### Sample quality[34-39]

- Serum is an acellular sample
- Coagulation processes increase the analytical variance
- Potassium levels are slightly elevated by the clotting process
- Long-term stability is high for the majority of analytes



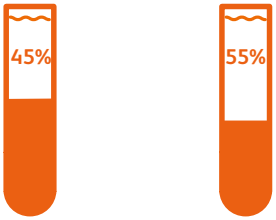
### Fibrin Formation[40]

Inadequate clotting may result in fibrin formation during and after centrifugation, which may interfere with some tests.




### Sample yield[22]

With serum samples, 44.3% mean yield from whole blood volume can be harvested.




## Plasma

### Turnaround time[33]

The anticoagulation action of heparin allows for immediate centrifugation of the specimen.

### Sample quality[34-39]

- Plasma contains residual cells
- Analytical variance is reduced
- Potassium levels are unaffected by anticoagulation
- Analyte stability is often shorter than in serum samples

### Fibrin formation[40]

Fibrin artefacts are generally not present in plasma samples. Cold storage can activate coagulation.

### Sample yield[23]

With plasma samples, 55.2% mean yield from whole blood volume can be harvested.

### Serum or plasma? An old question waiting for new answers

"There is an ongoing debate on what type of sample a clinical laboratory should use. While serum is still considered the gold standard and remains the required sample matrix for some assays, laboratories must consider turnaround time, which is an important metric for laboratory performance and, more importantly, plays a critical role in patient care. In addition, a body of evidence emphasises the choice of plasma samples in order to prevent modifications of some measurements due to the coagulation process and related interferences. Advantages and disadvantages of serum and plasma are discussed on the basis of current literature and evidence. In addition, data are provided on the current utilisation of the matrix (serum or plasma) in Italy and in other countries. Finally, a rationale for a possible shift from serum to plasma is provided."[41]

# Venous blood sampling

## Plasma analysis

### Lithium Heparin/Sodium Heparin

BD Vacutainer® Plasma Tubes for clinical chemistry are available with spray-dried sodium heparin or lithium heparin additives. Heparin acts as an anticoagulant by creating a complex with antithrombin III. This complex inhibits thrombin and the activated factor X and thus prevents coagulation.

Optimal anticoagulation is achieved in these tubes by using 17 IU pharmaceutical-grade heparin per mL of blood. The lithium heparin in BD Vacutainer® Tubes is spray dried onto the inner walls to achieve the best possible solubility. For clinical chemistry, lithium heparin is generally preferred over sodium heparin. Išdžiovintas purškiant - sausas priedas ant sienelių

### Tube mixing

To avoid micro-clotting, mix the BD Vacutainer® Heparin Tube with 8-10 inversions immediately after the blood sample has been taken.

### Centrifugation conditions

≤1300 g for 10 minutes at 18-25°C.

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® Heparin Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 368494 | 2.0* | 13 x 75 | Lithium heparin | None | PET | Paper | BD Hemogard™ | |
| 368272 | 2.0* | 13 x 75 | Lithium heparin | None | PET | See thru | BD Hemogard™ | |
| 368884 | 4.0 | 13 x 75 | Lithium heparin | None | PET | Paper | BD Hemogard™ | |
| 368496 | 4.0 | 13 x 75 | Lithium heparin | None | PET | See thru | BD Hemogard™ | |
| 367869 | 4.0 | 13 x 75 | Sodium Heparin | None | PET | Paper | BD Hemogard™ | |
| 368886 | 6.0 | 13 x 100 | Lithium heparin | None | PET | Paper | BD Hemogard™ | |
| 368889 | 6.0 | 13 x 100 | Lithium heparin | None | PET | See thru | BD Hemogard™ | |
| 367876 | 6.0 | 13 x 100 | Sodium Heparin | None | PET | Paper | BD Hemogard™ | |
| 367526 | 10.0 | 16 x 100 | Lithium heparin | None | PET | Paper | BD Hemogard™ | |
| 368480 | 10.0 | 16 x 100 | Sodium Heparin | None | Glass | Paper | Conventional | |

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All tubes are supplied in boxes of 100 units / cases of 1,000

* Partial-draw tube

# Venous blood sampling

## Plasma analysis

**BD Vacutainer® Barricor™ Plasma Blood Collection Tubes**

BD Vacutainer® Barricor™ is a revolutionary blood collection tube that delivers a consistently fast, clean and high-quality plasma sample to enable the most accurate results.

The design complements the BD Vacutainer® Blood Collection Tubes, and continues the BD heritage of ensuring best practice in the collection, transportation and processing of blood samples.

BD Barricor™ product features have been designed to ensure optimal performance. The cutting-edge mechanical separator speeds up throughput and enables workflow optimisation by harnessing the power of plasma.

### Accuracy

BD Barricor™ is an innovative technology that provides greater confidence in the accuracy of laboratory results across a broad range of analytes enabling clinicians to act on reliable and credible results to deliver cutting-edge care and service.

- Prolonged stability and reduced interference for enhanced therapeutic drug monitoring[42]
- Longer stability of analytes versus current plasma gel separator tubes and reduced temperature sensitivity in storage[43]

### Quality

BD Barricor™ mechanical separator technology delivers a leading-edge collection and analytical process by eliminating separator artefacts that interfere with testing, or could lead to instrument downtime. This innovation helps deliver the highest diagnostic quality and patient care.

- Superior sample quality compared to plasma gel tubes – 47% fewer platelets count versus BD Vacutainer® PST™ II Tubes[45]
- Positive impact on KPI such as haemolysis rate[46]

### Fast diagnosis

BD Barricor™ delivers a faster time–to–result for all patients with no clotting time and a reduction in centrifugation time of up to 7 minutes.

- Separation in 3 minutes at 4000g[44]
- Reduction of turnaround time (TAT), allowing compliance with key performance indicators (KPI)

### Efficiency

BD Barricor™ has been designed to ensure optimal performance across the sample and laboratory workflow, providing opportunities for improving the total cost of operations.

- Greater range of analytes can be tested in a single tube
- Mechanical separator eliminates the risk of gel contamination of the sampling probe; causing probe blockages, leading to analyser downtime and maintenance

# Venous blood sampling

## Plasma analysis

### Tube mixing

To avoid micro-clotting, mix the BD Vacutainer® Barricor™ Tube with 8 inversions immediately after the blood sample has been taken.

### Centrifugation conditions

4000 x g (RCF) for 3min. 3000 x g (RCF) for 5 min. at 18–25 °C or alternative centrifugation conditions.[24]

For infectious disease testing, centrifuge at 3,000 g for 10 minutes.[47]

See www.bd.com/ifu

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® Barricor™ Tubes

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| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 1.14 365050 | 3 | 13 x 75 | Lithium heparin | Mechanical separator* | PET | Paper | BD Hemogard™ | |
| 365054 | 3 | 13 X 75 | Lithium heparin | Mechanical separator* | PET | See thru | BD Hemogard™ | |
| 365055 | 3 | 13 X 75 | Lithium heparin | Mechanical separator* | PET | Block | BD Hemogard™ | |
| 365053 | 3.5* | 13 X 100 | Lithium heparin | Mechanical separator* | PET | Paper | BD Hemogard™ | |
| 365087 | 3.5* | 13 x 100 | Lithium heparin | Mechanical separator* | PET | Block | BD Hemogard™ | |
| 365049 | 4.5 | 13 x 100 | Lithium heparin | Mechanical separator* | PET | Paper | BD Hemogard™ | |
| 365052 | 4.5 | 13 X 100 | Lithium heparin | Mechanical separator* | PET | See thru | BD Hemogard™ | |
| 365051 | 4.5 | 13 X 100 | Lithium heparin | Mechanical separator* | PET | Block | BD Hemogard™ | |
| 365081 | 5 | 13 X 100 | Lithium heparin | Mechanical separator* | PET | See thru | BD Hemogard™ | |
| 365056 | 5.5 | 13 X 100 | Lithium heparin | Mechanical separator* | PET | Paper | BD Hemogard™ | |
| 365057 | 5.5 | 13 X 100 | Lithium heparin | Mechanical separator* | PET | See thru | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

* Partial-draw tube

# Venous blood sampling

## Plasma analysis

### BD Vacutainer® PST™ II Tubes

These tubes contain a gel barrier and spray-dried lithium heparin additive. The inert barrier separates the plasma from the blood cells during centrifugation, preventing contamination of the plasma. For example, in plasma certain analytes such as potassium, phosphorus and glucose should be separated from the cells within a few hours, otherwise the results will be significantly impacted. Clinical evaluation of special chemistries such as therapeutic drugs, proteins, peptides, steroids and vitamins demonstrates a high degree of stability within BD PST™ II Tubes.[48-50]

The main advantages of gel tubes versus non-gel tubes are:

- Stable barrier between plasma and clotted blood during transportation and storage, therefore better analyte stability.
- Better sample quality.
- Workflow optimisation: short centrifugation time, sample processing and archiving in the primary tube.
- No requirement for secondary tubes, reducing the possibility of misidentification.

### Effects of temperature

BD Vacutainer® PST™ II Tubes should be stored at 4-25°C and protected from direct sunlight during storage. Cooling of the tube by or during centrifugation can affect the movement. The optimum separation of sediment and plasma is achieved at a temperature of 20-25°C.

### Tube mixing

To avoid micro-clotting, mix the BD Vacutainer® PST™ II Tube with 8-10 inversions immediately after the blood sample has been taken.

### Centrifugation conditions

1,300-2,000 g for 10 minutes at 18-25°C.

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® PST™ II Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 367374 | 3.0 | 13 x 75 | Lithium heparin | Gel | PET | Paper | BD Hemogard™ | |
| 368497 | 3.0 | 13 x 75 | Lithium heparin | Gel | PET | See thru | BD Hemogard™ | |
| 367376 | 4.5 | 13 x 100 | Lithium heparin | Gel | PET | Paper | BD Hemogard™ | |
| 366567 | 4.5 | 13 x 100 | Lithium heparin | Gel | PET | See thru | BD Hemogard™ | |
| 367378 | 8.0 | 16 x 100 | Lithium heparin | Gel | PET | Paper | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

# Venous blood sampling

## Glucose analysis

### Glucose and Lactate determination

BD Vacutainer® Glucose Stabilisation Tubes all contain a sodium fluoride antiglycolytic agent and are available with either potassium oxalate, disodium EDTA or sodium heparin anticoagulant.

Glucose values in unpreserved blood samples decrease quickly after collection as glucose is metabolised by the blood cells. The sodium fluoride additive stops the enzymatic activity of the glycolytic pathway.

### HbA1c determination

One advantage of the Fluoride/EDTA tube over the Fluoride/Oxalate tube is that the HbA1c marker can be determined from the same tube, so there is no need to take an additional sample.

### Tube mixing

To avoid micro-clotting, mix the BD Vacutainer® Glucose Tube with 8-10 inversions immediately after the blood sample has been taken.


### Centrifugation conditions

≤1300 g for 10 minutes at 18-25°C

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® Tubes for glucose and lactate determination

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| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 368920 | 2.0* | 13 x 75 | Sodium fluoride (2.5 mg/mL) / Potassium oxalate (2.0 mg/mL) | None | PET | Block | BD Hemogard™ | |
| 368520 | 2.0* | 13 x 75 | Sodium fluoride (1.5 mg/mL) / Disodium EDTA (3.0 mg/mL) | None | PET | Block | BD Hemogard™ | |
| 367933 | 2.0 | 13 x 75 | Sodium fluoride (1.5 mg/mL) / Disodium EDTA (3.0 mg/mL) | None | PET | See thru | BD Hemogard™ | |
| 368921 | 4.0 | 13 x 75 | Sodium fluoride (2.5 mg/mL) / Potassium oxalate (2.0 mg/mL) | None | PET | Paper | BD Hemogard™ | |
| 368521 | 4.0 | 13 x 75 | Sodium fluoride (1.5 mg/mL) / Disodium EDTA (3.0 mg/mL) | None | PET | Paper | BD Hemogard™ | |
| 367764 | 5.0 | 13 x 75 | Sodium fluoride (4.0 mg/mL) / Sodium heparin (28I U/mL) | None | Glass | Paper | BD Hemogard™ | |
| 368201 | 5.0 | 13 x 100 | Sodium fluoride (2.5 mg/mL) / Potassium oxalate (2.0 mg/mL) | None | PET | Paper | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

* Partial-draw tube

# Venous blood sampling

## Haematology

### EDTA

EDTA (ethylenediaminetetraacetic acid) salts are used to anticoagulate whole blood for haematological investigations, as the cellular components of the blood are particularly well preserved by EDTA. The anticoagulation is achieved by the EDTA forming complexes with metal ions such as calcium, therefore inhibiting the coagulation cascade. Anticoagulation with EDTA is irreversible.

The EDTA concentration in BD Vacutainer® Tubes is 1.8 mg/mL of whole blood, as recommended by the International Council Society of Haematology (ICSH).[51] The ICSH recommends dipotassium EDTA salt ($K_2$EDTA) for haematological investigations. BD Vacutainer® plastic (PET) Tubes are available with spray dried $K_2$EDTA and $K_3$EDTA.

Išdžiovintas purškiant - sausas priedas ant sienelių

### Tube mixing

To avoid micro-clotting, mix the EDTA tube with 8-10 inversions immediately after the blood sample has been taken.

### Further information

Clinical and technical information is available on request.

## BD Vacutainer® $K_2$EDTA Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 362072 | 3.0* | 13 x 75 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ | |
| 368841 | 2.0* | 13 x 75 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ | |
| 368274 | 2.0* | 13 x 75 | $K_2$EDTA | None | PET | See Thru | BD Hemogard™ | |
| 368856 | 3.0* | 13 x 75 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ | |
| 368499 | 3.0* | 13 x 75 | $K_2$EDTA | None | PET | See Thru | BD Hemogard™ | |
| 368861 | 4.0 | 13 x 75 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ | |
| 367862 | 4.0 | 13 x 75 | $K_2$EDTA | None | PET | See Thru | BD Hemogard™ | |
| 367864 | 6.0 | 13 x 100 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ | |
| 365900 | 6.0 | 13 x 100 | $K_2$EDTA | None | PET | See Thru | BD Hemogard™ | |
| 367525 | 10.0 | 16 x 100 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ | |

1.4

1.3

1.12

All tubes are supplied in boxes of 100 units / cases of 1,000
* Partial-draw tube

# Venous blood sampling

## Haematology

### EDTA-dependent pseudothrombocytopaenia

Pseudothrombocytopaenia (PCTP) is a rare phenomenon that occurs when auto-antibodies cause platelet clumping in whole blood stored in EDTA Tubes.[52,53] EDTA-induced platelet clumping results in false low platelet counts that may lead to an incorrect diagnosis of bleeding diathesis.[52,53] Platelet clumps may also be mistaken for white blood cells and cause false high white blood cell counts.[54]

The simplest way to correct EDTA-dependent PCTP is by taking another blood sample and analysing it immediately, since platelet clumping increases over time.[55] Another way to avoid this problem is by choosing another anticoagulant *(e.g., acid citrate dextrose (ACD) or sodium citrate)*.[56-59] When determining cell counts, please keep in mind that some anticoagulants dilute the blood.

## BD Vacutainer® $K_3$EDTA Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 367836 | 2.0* | 13 x 75 | $K_3$EDTA | None | PET | Block | BD Hemogard™ | |
| 368857 | 3.0* | 13 x 75 | $K_3$EDTA | None | PET | Block | BD Hemogard™ | |
| 368270 | 4.0 | 13 x 75 | $K_3$EDTA | None | PET | See thru | BD Hemogard™ | |
| 368860 | 4.0 | 13 x 75 | $K_3$EDTA | None | PET | Block | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000
* Partial-draw tube

# Venous blood sampling

## Speciality Tubes

### BD Vacutainer® Crossmatch Tubes

BD Vacutainer® Crossmatch Tubes are available with either EDTA or clot activator additives. The BD Vacutainer® Crossmatch Tube is identified by:

- a pink cap
- a large block label

## BD Vacutainer® Crossmatch Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 366164 | 4.0 | 13 x 75 | $K_2$EDTA | None | PET | Crossmatch | BD Hemogard™ | |
| 367941 | 6.0 | 13 x 100 | $K_2$EDTA | None | PET | Crossmatch | BD Hemogard™ | |
| 368817 | 6.0 | 13 x 100 | Silica (clot activator) | None | PET | Crossmatch | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

### Blood group determination

The anticoagulant Acid Citrate Dextrose (ACD) is used for erythrocyte conservation. ACD is available in two solutions, A and B, each with different mixture ratios.

| Anticoagulant | ACD solution A | ACD solution B |
|---|---|---|
| $Na_3$ citrate | 3.30 mg/mL | 1.89 mg/mL |
| Citric acid | 1.20 mg/mL | 0.69 mg/mL |
| Dextrose | 3.68 mg/mL | 2.10 mg/mL |
| Potassium sorbate | 0.03 mg/mL | 0.03 mg/mL |

The figures represent the final concentration in the blood in each case.

## BD Vacutainer® Tubes for blood group determination

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 367756 | 6.0 | 13 x 100 | ACD solution B | None | Glass | Paper | BD Hemogard™ | |
| 366645 | 8.5 | 16 x 100 | ACD solution A | None | Glass | Paper | Conventional | |

All tubes are supplied in boxes of 100 units / cases of 1,000

# Venous blood sampling

## Speciality tubes

### Trace element determination

BD Vacutainer® Tubes for trace element determination contain controlled amounts of specific elements for trace element analysis. Maximum concentrations are defined for the trace elements antimony, arsenic, lead, chromium, iron, cadmium, calcium, copper, magnesium, manganese, mercury, selenium and zinc that could be extracted by blood from the tube itself or the stopper.

Every production batch is checked and only released if the given maximum value is not exceeded. The values given take into account the use of a straight BD Blood Collection Needle.

**BD Vacutainer® Trace Element Tube Contamination Upper Limits**

| Analyte | Glass µg/L | PET µg/L | Analyte | Glass µg/L | PET µg/L |
|---|---|---|---|---|---|
| Antimony | 0.8 | -* | Lead | 2.5 | 0.3 |
| Arsenic | 1.0 | 0.2 | Magnesium | 60 | 40 |
| Cadmium | 0.6 | 0.1 | Manganese | 1.5 | 1.5 |
| Calcium | 400 | 150 | Mercury** | - | 3.0 |
| Chromium | 0.9 | 0.5 | Selenium | - | 0.6 |
| Copper | 8.0 | 5.0 | Zinc | 40 | 40 |
| Iron | 60 | 25 | | | |

* BD Vacutainer® trace element PET Tubes should not be used for antimony testing.

** Water extraction analysed by cold vapour, all others ICP-MS

## BD Vacutainer® Tubes for trace element determination

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 368380 | 6.0 | 13 x 100 | Silica (clot activator) | None | PET | Paper | BD Hemogard™ |  |
| 368381 | 6.0 | 13 x 100 | $K_2$EDTA | None | PET | Paper | BD Hemogard™ |  |
| 367735 | 7.0 | 13 x 100 | Sodium heparin | None | Glass | Paper | BD Hemogard™ |  |

All tubes are supplied in boxes of 100 units / cases of 1,000

## BD Vacutainer® $K_3$EDTA/Aprotinin Tubes

BD Vacutainer® $K_3$EDTA Tubes contain Aprotinin, a protein stabiliser

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 361017 | 5.0 | 13 x 75 | Aprotinin (250 IU)/$K_3$EDTA | None | Glass | Paper | BD Hemogard™ |  |

All tubes are supplied in boxes of 100 units / cases of 1,000

### BD Vacutainer® EST Tubes

BD Vacutainer® EST Tubes do not have any additives and are suitable as a secondary tube for anticoagulated blood samples, for example for taking plasma samples from blood bags. The BD Vacutainer® EST™ Tube can also be used as a discard tube.

## BD Vacutainer® EST Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 362725 | 3.0 | 13 x 75 | No additive | None | PET | See thru | BD Hemogard™ |  |

All tubes are supplied in boxes of 100 units / cases of 1,000

# Cell and biomarker preservation

## BD Vacutainer® CPT™ Blood Collection Tubes

**BD Vacutainer® CPT™ (Cell Preparation Tube)**

The BD CPT™ containing FICOLL™* and separation gel is a one-step system that provides a simple method for isolating peripheral blood mononuclear cells (PBMCs) - lymphocytes and monocytes, from whole blood.

The tube provides a sample-to-yield solution, eliminating stages of blood transfer, preparation of FICOLL™ and manual gradient separation. Waiting time is significantly reduced as centrifugation can be carried out with the brakes enabled.

The tube can yield up to 1.3 million lymphocytes and monocytes per mL of whole blood with centrifugation times of 15 or 20 minutes. The BD CPT™ Tube enables:

- Preparation and consistency
  - Standardised process when compared to manual FICOLL™ gradient separations
  - Reproducibility between sample preparations and technical operators
  - Less blood exposure for laboratory staff
- Faster separations
  - Blood draw to centrifuge - FICOLL™ is contained in the tube enabling fast gradient separation
  - Reduce waiting times during centrifugation with brakes enabled
- Post separation
  - The gel barrier provides clear cell separation and no aliquoting or additional tubes are required
  - Separated sample can be transported in BD CPT™ Tube
  - Cells are stable in the BD CPT™ Tube for up to 24 hours, depending on downstream application

The BD CPT™ Tube is CE marked for *in vitro* diagnostic use.

**Further information**

Clinical and technical information is available on request.

**Centrifugation conditions****

Sodium Heparin 1,500-1,800 g for 15 minutes at 18-25°C
Sodium Citrate 1,500-1,800 g for 20 minutes at 18-25°C

## BD Vacutainer® CPT™ Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 362781 | 4.0 | 13 x 100 | Sodium citrate 0.45 mL 0.1 M/1.0 mL FICOLL™ | Gel | Glass | Transparent | Conventional | |
| 362782 | 8.0 | 16 x 125** | Sodium citrate 1.0 mL 0.1 M/2.0 mL FICOLL™ | Gel | Glass | Transparent | Conventional | |
| 362780 | 8.0 | 16 x 125** | Sodium heparin 132 USP Units in 1.0 mL PBS/2.0 mL FICOLL™ | Gel | Glass | Transparent | Conventional | |

All tubes are supplied in cases of 60 units

Available to buy online at www.bdbiosciences.com - search CPT

* FICOLL is a registered trademark of GE Healthcare Companies.
** Please note: These tubes are longer than conventional blood collection tubes. Please ensure that the tubes are free to swing when placing them into the centrifuge.

# Cell and biomarker preservation

## PAXgene® Blood ccfDNA Tube

### PAXgene® Blood ccfDNA Tube

The PAXgene® Blood ccfDNA Tube was developed by PreAnalytix, a joint venture between QIAGEN and BD.

The PAXgene® Blood ccfDNA Tube is a plastic, evacuated tube intended for the collection, storage and transport of human blood and stabilisation of DNA. This tube is used to isolate circulating cell-free DNA (ccfDNA) from plasma and/or genomic DNA (gDNA) from a nucleated cellular fraction.

The PAXgene® Blood ccfDNA Tube ensures:

- Immediate stabilisation of ccfDNA and/or gDNA for the following duration and temperature ranges:[60]

| | |
|---|---|
| Length of stabilization of whole blood | • 2-37°C for up to 3 days<br>• 2-30°C for up to 7 days<br>• 2-25°C for up to 10 days<br>Do not store blood-filled tubes below 2°C. |
| ccfDNA stabilization in plasma in secondary tube | • 2-25 °C for up to 3 days<br>• 2-8°C for up to 7 days<br>Plasma can be stored frozen at -20 or -80°C for at least 1 year (long term study ongoing) |
| Stabilization of gDNA in nucleated cellular fraction post centrifugation | • 2-25 °C for up to 3 days<br>• 2-8°C for up to 7 days<br>Nucleated cellular fraction can be stored frozen at -20°C or below for at least 1 year (long-term study ongoing) and is robust against at least three freeze/thaw cycles. |

- Analysis of methlyated markers[60]
  A proprietary non-crosslinking stabilisation chemistry preserves ccfDNA without cross-linking challenges to optimise sensitivity and specificity for genetic biomarker downstream analysis*.
- ccfDNA & gDNA
  Possible extraction from a single tube after centrifugation for parallel analyte analysis.
- Compatibility with NGS and qPCR quantification methods
- Simplified centrifugation protocols, with flexibility at 1600-3000 g (RCF) for 15min.

Performance characteristics established with 18S ribosomal and DYS14 Y-chromosomal ccfDNA fragments in plasma.

For more information please visit www.PreAnalytix.com

The PAXgene® Blood ccfDNA Tube is CE marked for in vitro diagnostic use.

### Further information

Clinical and technical information is available on request.

PreAnalytiX
A QIAGEN / BD Company

## PAXgene® Blood ccfDNA Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 768165 | 10 | 16 x 100 | Proprietary | None | PET | Paper with 2D barcode | BD Hemogard™ |  |

All tubes are supplied in cases of 100 units

*Users must validate use of product for their specific molecular diagnostic assay.

# Cell and biomarker preservation

## PAXgene® Blood RNA Tube

### PAXgene® Blood RNA Tube

The PAXgene® Blood RNA Tube was developed by PreAnalytiX, a joint venture between QIAGEN and BD.

The PAXgene® Blood RNA Tube contains a proprietary reagent that immediately stabilises RNA. The PAXgene® Blood RNA Tube ensures:

- Immediate stabilisation of cellular RNA in whole blood
  The cellular RNA will be stable for:[61]
  3 days – whole blood at room temperature (18-25°C)
  5 days – refrigerated whole blood (2-8°C)
  11 years – frozen whole blood (–20°C and –70°C)*
- RNA yield
  The yield, dependent upon the sample and the RNA isolation kit, is ≥ 3 µg for > 95% of the samples (healthy subjects with a leukocyte count of 4.8 – 11 x $10^6$/mL)
- RNA quality
  The $A_{260}/A_{280}$ ratio is 1.8-2.2 for 95% of all samples. Genomic DNA contamination is 1% in ≥ 95% of all samples
- Increased traceability
  The PAXgene® Blood RNA Tube has a human readable and 2D barcode label. Each tube has a unique identification code that can be associated to the patient blood specimen

For more information please visit www.PreAnalytiX.com.

The PAXgene® Blood RNA Tube is CE marked for *in vitro* diagnostic use.**

### Further information

Clinical and technical information is available on request.

PreAnalytiX
A QIAGEN / BD Company

## PAXgene® Blood RNA Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 762165 | 2.5 | 16 x 100 | Proprietary | None | PET | Paper with 2D barcode | BD Hemogard™ | |

All tubes are supplied in cases of 100 units

Available to buy online at www.bdbiosciences.com - search PAXgene RNA

**Immediately stabilises RNA**

* Long-term study of blood storage in PAXgene Blood RNA Tubes is ongoing.
** Performance characteristics of the PAXgene Blood RNA System have been established with FOS and IL1B gene transcripts. The user is responsible for establishing appropriate PAXgene Blood RNA System performance characteristics for other target transcripts.

# Cell and biomarker preservation

## PAXgene® Blood DNA Tube

### PAXgene® Blood DNA Tube

The PAXgene® Blood DNA Tube was developed by PreAnalytiX, a joint venture between QIAGEN and BD.

The PAXgene® Blood DNA Tube contains a proprietary EDTA formulation that immediately stabilises genomic DNA (gDNA). The PAXgene® Blood DNA Tube ensures sufficient DNA quantity and quality for molecular diagnostic assays from whole blood.

### Documented DNA stability and performance data

DNA samples purified from the 2.5 mL draw volume tube will have a ratio ($A_{260}/A_{280}$) of 1.7-1.9 and a DNA concentration of ≥ 12.5 ng DNA/µl eluate for 95% of samples and ensure DNA stability after blood collection for:[62]

14 days at room temperature (18-25°C)
28 days refrigerated (2-8°C)
3 days at 35°C

### Increased traceability

The PAXgene® Blood DNA Tube has a human readable and 2D barcode label. Each tube has a unique identification code that can be associated with the patient blood specimen.

For more information please visit www.PreAnalytix.com.

The PAXgene® Blood DNA Tube is CE marked for *in vitro* diagnostic use.

### Further information

Clinical and technical information is available on request.

PreAnalytiX
A QIAGEN / BD Company

## PAXgene® Blood DNA Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 761165 | 2.5 | 13 x 75 | Proprietary | None | PET | Paper with 2D barcode | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

Available to buy online at www.bdbiosciences.com - search PAXgene DNA

# Cell and biomarker preservation

## BD Vacutainer® PPT™ Blood Collection Tubes

**BD Vacutainer® PPT™ (Plasma Preparation Tube)**

The BD Vacutainer® PPT™ Plasma Preparation Tube is used to separate undiluted plasma from whole blood for molecular diagnostic tests. These methods include, but are not limited to, polymerase chain reaction (PCR) or branched DNA (bDNA) amplification techniques. The BD Vacutainer® PPT™ Tube is also applicable to other molecular diagnostic analyses where an undiluted plasma specimen is required. The BD Vacutainer® PPT™ Tube ensures:

- Safe handling of infectious samples and no re-labelling Plasma is prepared in the closed BD Vacutainer® Tube that can be directly transported, eliminating the need for aliquoting from primary BD Vacutainer® Tube to secondary container and re-labelling.

- Whole blood may be stored in the BD PPT™ Tube up to six hours prior to centrifugation. Following centrifugation, the gel barrier prevents plasma from coming into contact with blood cells. Plasma sample stability is dependent on the application.[63,64]

Plasma may be stored frozen in situ in the BD Vacutainer® PPT™ Tube. However, freezing plasma in situ in BD Vacutainer® PPT™ Tubes may be prohibited for some assays and the assay manufacturer's guidelines should be consulted.

The BD Vacutainer® PPT™ Tube is CE marked for *in vitro* diagnostic use.

**Further information**

Clinical and technical information is available on request.

**Centrifugation conditions**

1,100 g for 10 minutes at 18-25°C

## BD Vacutainer® PPT™ Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 362791 | 5.0 | 13 x 100 | $K_2$EDTA | Gel | PET | Paper | BD Hemogard™ | |
| 362795 | 5.0 | 13 x 100 | $K_2$EDTA | Gel | PET | See thru | BD Hemogard™ | |
| 362799 | 8.5 | 16 x 100 | $K_2$EDTA | Gel | PET | See thru | BD Hemogard™ | |

All tubes are supplied in boxes of 100 units / cases of 1,000

Available to buy online at www.bdbiosciences.com - search PPT

# Cell and biomarker preservation

## BD® P100 Tubes for stabilising proteins

The BD® P100 Tube is a plasma protein preservation tube that contains $K_2$EDTA anticoagulant and a broad spectrum protease inhibitor cocktail optimised for human blood. The 8.5 ml BD® P100 Tube also features a mechanical separator which provides high-quality plasma suitable for many downstream protein analysis platforms including mass spectrometry and immunoassays thanks to significant reduction in cellular contamination and increased stability of plasma proteins.

### Centrifugation

For best sample quality, the centrifugation of the BD® P100 Tube should be performed in a swing-out centrifuge as soon as possible after the blood sample has been collected. Use of a fixed 45° angle rotor is possible.

Optimum centrifugation conditions for a 8.5 mL tube:
2,500 g for 20 minutes

If 2,500 g cannot be achieved:
1,600 g for 30 minutes or
1,100 g for 30 minutes

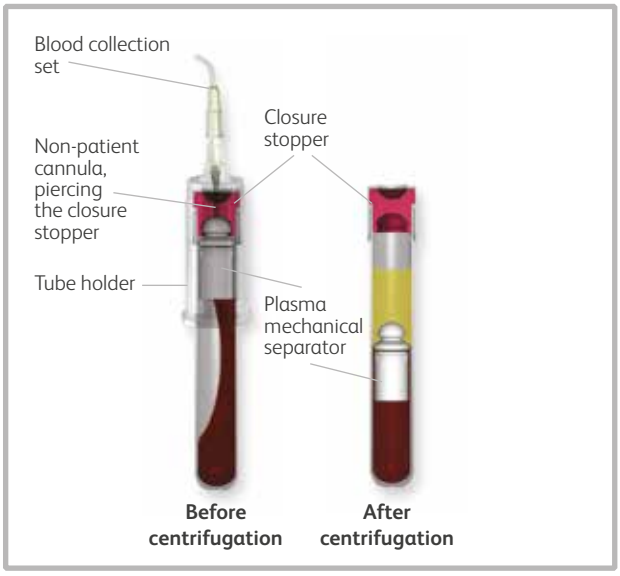
Optimum centrifugation conditions for a 2.0 mL tube:
1,000 - 3,000 g for 10 minutes

The BD® P100 plasma protein tube is for Research Use Only (RUO). Not for use in diagnostic procedures.

### Further information

Clinical and technical information is available on request.

### Mechanical plasma separator in a 8.5 mL tube




## BD® P100 Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 366422 | 2.0 | 13 x 75 | $K_2$EDTA/Protease inhibitor | None | PET | Paper | BD Hemogard™ | |
| 366448 | 8.5 | 16 x 100 | $K_2$EDTA/Protease inhibitor | Mechanical separator* | PET | Paper | BD Hemogard™ | |

tubes are supplied in cases of 20 (366422) and 24 (366448)

Available to buy online at www.bdbiosciences.com - search P100

# Cell and biomarker preservation

## BD® P800 Tubes for measuring plasma metabolic markers

The BD® P800 Tube contains a proprietary cocktail of protease, esterase and dipeptidyl peptidase IV (DPP-IV) inhibitors that immediately solubilises during blood collection. The BD® P800 Tube provides preservation of the incretin peptides released during feeding - glucagon like peptide-1 (GLP-1), gastric inhibitory peptide (GIP), glucagon and oxyntomodulin (OXM).[65] The incretin peptides are associated with metabolic diseases, such as type 2 diabetes and obesity.

### Centrifugation conditions

2.0 mL tubes: 1,100 -1,300 g for 10 minutes
8.5 mL tubes: 1,100 -1,300 g for 20 minutes

### Further information

Clinical and technical information is available on request.

The BD® P800 Tube is for Research Use Only (RUO). Not for use in diagnostic procedures.

### Stability

The table demonstrates the stability of the peptides as a half-life indicator, measured in hours at room temperature, in BD® P800 Tubes, compared to BD Vacutainer® EDTA Tubes:[65]

| Peptide | T ½ EDTA plasma (h) at rt* | T ½ BD® P800 plasma (h) at rt* | T ½ BD® P800 whole blood (h) |
|---|---|---|---|
| GLP-1 (7-36A) | 4-24 | > 96 | 10±0.5h at rt*, 37-96h on ice |
| GLP-1 (7-37) | 4-18 | > 96 | 12±1h at rt*, 41-5h on ice |
| GIP (1-42) | 5-20 | > 96 | n.d |
| OXM | < 24 | > 72 | n.d |
| Glucagon | 5-20 | 45 | n.d |

* Stable for up to 12 hours +/- 3 hours when EDTA Tube is on ice.

## BD® P800 Tubes

| Cat. no. | Draw volume (mL) | Size (mm) | Additive | Separator | Material | Label | Cap closure | Cap colour |
|---|---|---|---|---|---|---|---|---|
| 366420 | 2.0 | 13 x 75 | $K_2$EDTA/Protease, esterase and DPP-IV inhibitor | None | PET | Paper | BD Hemogard™ | |
| 366421 | 8.5 | 16 x 100 | $K_2$EDTA/Protease, esterase and DPP-IV inhibitor | None | PET | Paper | BD Hemogard™ | |

All tubes are supplied in cases of 100

Available to buy online at www.bdbiosciences.com - search P800

**Immediate stabilisation during blood collection**

# Capillary blood sampling

## BD Microtainer® Microtube for Automated Process (MAP) Blood Collection Tubes


**Process optimisation for capillary blood samples**

BD Microtainer® MAP Tubes are for collection, transport and processing of capillary blood from infants, children, geriatrics and emergency patients, whenever only the smallest amounts of blood are required.

The BD Microtainer® MAP Tube for automated processing enables efficient workflow, both on the ward and in the laboratory.

- A capillary blood tube with standard blood collection tube dimensions (13 x 75 mm) and penetrable closure.
- Compatible with haematology analysers without the need for a tube adapter.
- Three clearly visible fill markings ensure the correct sample volume (250-500 µl).
- A standard label can be attached directly to the sample, minimising the risk of misidentification due to missing or incomplete labelling.
- Easy to open with twist-locking mechanism that ensures no leakage.
- Colour marking for identification of the type of sample and the correct positioning of the patient label.

**Further information**

Technical information is available on request.

## BD Microtainer® MAP Tube

| Cat. no. | Description | Closure | Cap colour | Box/Case |
|---|---|---|---|---|
| 363705 | $K_2$EDTA tube for haematology with full size blood collection tube, dimensions 13 x 75 mm | BD Microgard™ | | 50/200 |

**Automated** processing enables efficient **workflow**

# Capillary blood sampling

## BD Microtainer® Tubes

### BD Microtainer®

BD Microtainer® Tubes are for collection, transport and processing of capillary blood from infants, children, geriatrics and emergency patients, whenever only the smallest amounts of blood are required.

In order to ensure tube identification, the tubes are marked with the colour code that corresponds to the venous blood collection tubes. There are fill marks on the tubes that ensure the correct blood to additive ratio.

### BD Microgard™ Closure

The special design of the BD Microgard™ safety closure substantially reduces blood splashing after the tube has been opened.

A larger diameter facilitates tube handling.

In combination with a tube extender, the BD Microtainer® Tubes with BD Microgard™ closure fit into 13 x 75 mm racks.


### Further information

Technical information is available on request.

## BD Microtainer® Tubes with Microgard™ closure

| Cat. no. | Description | Fill volume | Closure | Cap colour | Box/Case |
|---|---|---|---|---|---|
| 365975 | $K_2$EDTA tube for haematology | 250-500 µl | BD Microgard™ | | 50/200 |
| 365966 | Plasma tube with lithium heparin | 200-400 µl | BD Microgard™ | | 50/200 |
| 365986 | Plasma tube with separating gel and lithium heparin | 400-600 µl | BD Microgard™ | | 50/200 |
| 365988 | Plasma tube with separating gel, lithium heparin and UV protection (amber tint for light-sensitive tests like bilirubin) | 250-500 µl | BD Microgard™ | | 50/200 |
| 365993 | Glucose tube with sodium fluoride and $Na_2$EDTA | 400-600 µl | BD Microgard™ | | 50/200 |
| 365968 | Serum tube with separating gel and clot activator | 400-600 µl | BD Microgard™ | | 50/200 |
| 365979 | Serum tube with separating gel and clot activator, with UV protection (amber tint for light-sensitive tests like bilirubin) | 400-600 µl | BD Microgard™ | | 50/200 |
| 365964 | Serum tube without clot activator | 250-500 µl | BD Microgard™ | | 50/200 |
| 368933 | BD Microtainer® Tube extender for attachment to all BD Microtainer® Tubes with BD Microgard™ closure (10 mm diameter) | n/a | n/a | | n/a |

# Capillary blood sampling

## Safety lancets

**Capillary blood sampling with BD Microtainer® Contact-Activated Lancet**

The ergonomic design of the single-use BD Microtainer® Contact-Activated safety Lancet enables it to be held securely and to locate the sampling point precisely. The lancet has been clinically demonstrated to minimise patient discomfort and maximise blood flow.[66,68]

Its intuitive handling requires minimum training. The lancet is activated by being pressed onto the sampling location, minimising the influence of the user on puncture depth. The sharp point then retracts automatically into the housing.

This lancet is available in three sizes: for a single drop of blood, medium or large blood flow.

**Further information**

Clinical and technical information is available on request.

## BD Microtainer® Contact-Activated Lancets

| Cat. no. | Piercing width and depth | Lancet Type | Blood volume | Colour code | Box/Case |
|---|---|---|---|---|---|
| 366592 | 30 G x 1.5 mm | Needle | One drop | | 200/2,000 |
| 366593 | 21 G x 1.8 mm | Needle | Medium blood flow | | 200/2,000 |
| 366594 | 1.5 mm x 2.0 mm | Blade | Large blood flow | | 200/2,000 |

# Capillary blood sampling

## Safety lancets

### BD Sentry™ Safety Lancet

A single-use safety lancet, available in two sizes. The lancet has an automatic needle retraction to protect healthcare workers from needlestick injuries and prevents re-use. It is designed with a V-shaped finger placement collar, natural-fit thumb pad and anti-slip ridges for more confident handling.

## BD Sentry™ Safety Lancets

| Cat. no. | Piercing width and depth | Lancet Type | Blood volume | Colour code | Box/Case |
|---|---|---|---|---|---|
| 369528 | 28 G x 1.5 mm | Needle | One drop | | 100/2,000 |
| 369523 | 23 G x 1.8 mm | Needle | Medium blood flow | | 100/2,000 |

# Capillary blood sampling

## Safety lancets

**Capillary blood sampling with BD Microtainer® Quikheel™ Lancet**

The BD Microtainer® Quikheel™ Lancet is a single-use, safety lancet designed for taking capillary blood samples from the heels of premature, new-born babies and infants. When the button is pressed, an extra-thin steel blade provides a fine, clean, surgical cut and ensures a good flow of blood. The penetration depth is pre-determined to protect against bone infections and cannot be altered. The permanently shielded blade excludes the possibility of injury or reuse.

The ergonomic design enables it to be held securely and the piercing point located precisely. The lancets are sterile and individually packed in blister packaging.

**Further information**

Technical information is available on request.

### BD Microtainer® Quikheel™ Lancets

| Cat. no. | Description | Piercing depth | Piercing width | Lancet Type | Colour code | Box/Case |
|---|---|---|---|---|---|---|
| 368102 | Incision lancet for premature babies | 0.85 mm | 1.75 mm | Blade | | 50/200 |
| 368103 | Incision lancet for newborn babies and infants | 1.00 mm | 2.50 mm | Blade | | 50/200 |

# Blood collection devices and accessories

## Safety blood collection sets

### BD Vacutainer® UltraTouch™ Push Button Blood Collection Set

The BD Vacutainer® UltraTouch™ Push Button Blood Collection Set employs patented PentaPoint™ comfort 5-bevel needle technology. Studies have shown that this design helps reduce the chance of a painful injection by creating a flatter, thinner surface to help penetrate the skin with significantly greater ease.[68] This new safety device has been shown to reduce penetration forces by up to 32% when compared to another leading blood collection set.[8]

In addition, its exclusive BD RightGauge™, Ultra-Thin wall technology allows for better blood flow due to the needle's larger inner diameter. Therefore, clinicians can select a smaller gauge needle without sacrificing sample quality.

This technology can also improve tube fill time by up to 50% when using the same gauge (a standard 23-G needle vs the BD Vacutainer® UltraTouch™ Push Button Blood Collection Set).[69]

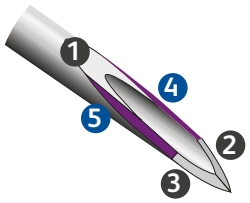
The BD Vacutainer® UltraTouch™ Push Button Blood Collection Set brings healthcare workers greater confidence and the ability to know they can use the needle gauge that is most appropriate for their patients, with improved efficiency.

### Further information

BD recommends for all needles without a pre-attached holder that a BD Vacutainer® One-Use Holder is used.

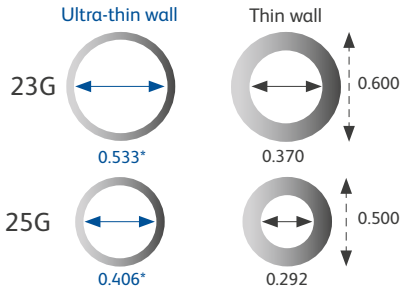
Clinical and technical information is available on request.

## Comfort




PentaPoint™ needle tip

## Speed

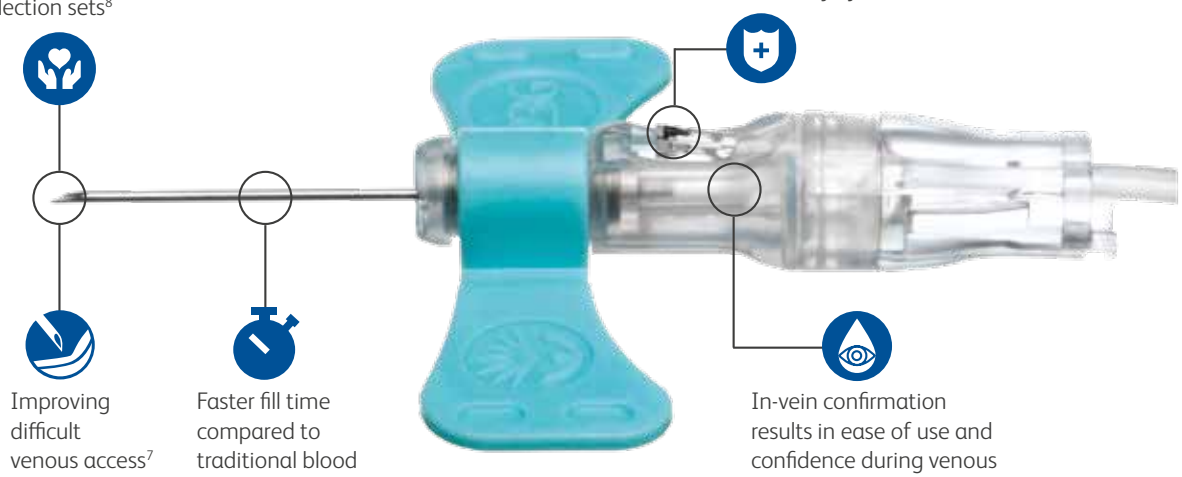



*These are nominal ID values.
All measurements are in mm.

## The experience

Less pain compared to traditional blood collection sets[8]

Reduce needlestick injury[19]



Improving difficult venous access[7]

Faster fill time compared to traditional blood collection sets[69]

In-vein confirmation results in ease of use and confidence during venous blood collection

# Blood collection devices and accessories

## Safety blood collection sets

### BD Vacutainer® UltraTouch™ Push Button Blood Collection Sets

| Cat. no. | Size | Needle length | Length of tubing | With Luer adapter | Colour code | Box/Case |
|---|---|---|---|---|---|---|
| 367393 | 21 G (0.8 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367365 | 21 G (0.8 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367392 | 23 G (0.6 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367364 | 23 G (0.6 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367391 | 25 G (0.5 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367363 | 25 G (0.5 mm) | 19 mm | 305 mm | Yes | | 50/200 |

**BD Vacutainer® UltraTouch™ Push Button Blood Collection Set with Pre-Attached Holder**

With this safety blood collection set, the holder is already pre-attached, so it is not necessary to manually assemble the needle and holder. This ready-for-use blood collection set is individually packaged in a sterile blister.

This sterile closed system is ideally suited for taking of samples using the BD BACTEC™ Blood Culture Bottle, with bench-testing indicating improved fill rate.[10]

NEW

### BD Vacutainer® UltraTouch™ Push Button Blood Collection Sets with Pre-Attached Holder

| Cat. no. | Size | Needle length | Length of tubing | Colour code | Box/Case |
|---|---|---|---|---|---|
| 368686 | 21 G (0.8 mm) | 19 mm | 178 mm | | 20/100 |
| 368689 | 21 G (0.8 mm) | 19 mm | 305 mm | | 20/100 |
| 368685 | 23 G (0.6 mm) | 19 mm | 178 mm | | 20/100 |
| 368688 | 23 G (0.6 mm) | 19 mm | 305 mm | | 20/100 |
| 368684 | 25 G (0.5 mm) | 19 mm | 178 mm | | 20/100 |
| 368687 | 25 G (0.5 mm) | 19 mm | 305 mm | | 20/100 |

# Blood collection devices and accessories

## Safety blood collection sets

### BD Vacutainer® Push Button Blood Collection Set

The BD Vacutainer® Push Button Blood Collection Set with in-vein activation offers split-second protection against needlestick injuries.

- Indication of successful venepuncture:
  When the vein has been successfully penetrated, blood flows immediately into the inspection chamber.[70]
- Versatile:
  For taking blood samples and for short-term infusions of up to 2 hours.
- Single-handed activation possible:
  Activating the safety mechanism with one hand allows you to focus more attention on the patient and the venepuncture site.
- Protection against needlestick injuries:
  When pressing the button, the needle is withdrawn straight from the vein and disappears permanently inside the housing of the blood collection set. This provides an extremely high level of protection[70].

### Further information

BD recommends for all needles without a pre-attached holder that a BD Vacutainer® One-Use Holder is used.

Clinical and technical information is available on request.

## BD Vacutainer® Push Button Blood Collection Sets

| Cat. no. | Size | Needle length | Length of tubing | With Luer adapter | Colour code | Box/Case |
|---|---|---|---|---|---|---|
| 367338 | 21 G (0.8 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367344 | 21 G (0.8 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367326 | 21 G (0.8 mm) | 19 mm | 305 mm | No | | 50/200 |
| 367336 | 23 G (0.6 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367342 | 23 G (0.6 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367324 | 23 G (0.6 mm) | 19 mm | 305 mm | No | | 50/200 |
| 367335 | 25 G (0.5 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367341 | 25 G (0.5 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367323 | 25 G (0.5 mm) | 19 mm | 305 mm | No | | 50/200 |

# Blood collection devices and accessories

## Safety blood collection sets

**BD Vacutainer® Push Button Blood Collection Set with Pre-Attached Holder**

With this Safety Blood Collection Set, the holder is already pre-attached, so it is not necessary to manually assemble the needle and holder. This ready-for-use blood collection set is individually packaged in a sterile blister.

This sterile closed system is ideally suited for taking of samples using the BD BACTEC™ Blood Culture Bottles.

**Further Information**

Technical information is available on request.

### BD Vacutainer® Push Button Blood Collection Sets with Pre-Attached Holder

| Cat. no. | Size | Needle length | Length of tubing | Colour code | Box/Case |
|---|---|---|---|---|---|
| 367355 | 21 G (0.8 mm) | 19 mm | 178 mm | | 20/100 |
| 368657 | 21 G (0.8 mm) | 19 mm | 305 mm | | 20/100 |
| 367354 | 23 G (0.6 mm) | 19 mm | 178 mm | | 20/100 |
| 368658 | 23 G (0.6 mm) | 19 mm | 305 mm | | 20/100 |

**Ready-for-use**
blood collection set

# Blood collection devices and accessories

## Safety blood collection sets

### BD Vacutainer® Safety-Lok™ Blood Collection Set

The BD Vacutainer® Safety-Lok™ Blood Collection Set for venous blood collection has a fully integrated safety shield, which once activated, protects against needlestick injuries.

- Indication of successful venepuncture:
  When the vein has been successfully penetrated, blood can be seen in the device.
- Versatile:
  For taking blood samples and for short-term infusions of up to 2 hours.
- Single-handed activation possible:
  Activating the safety mechanism with one hand allows you to focus more attention on the patient and the venepuncture site.
- Protection against needlestick injuries:
  Following successful venepuncture, the integrated safety shield is pushed over the needle, covering it completely, indicated by an audible click.

### Further information

BD recommends for all needles without a pre-attached holder that a BD Vacutainer® One-Use Holder is used.

Clinical and technical information is available on request.

## BD Vacutainer® Safety-Lok™ Blood Collection Sets

| Cat. no. | Size | Needle length | Length of tubing | With Luer adapter | Colour code | Box/Case |
|---|---|---|---|---|---|---|
| 1.13 367282 | 21 G (0.8 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367286 | 21 G (0.8 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367246 | 21 G (0.8 mm) | 19 mm | 305 mm | No | | 50/200 |
| 367284 | 23 G (0.6 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 367288 | 23 G (0.6 mm) | 19 mm | 305 mm | Yes | | 50/200 |
| 367247 | 23 G (0.6 mm) | 19 mm | 305 mm | No | | 50/200 |
| 367295 | 25 G (0.5 mm) | 19 mm | 178 mm | Yes | | 50/200 |
| 368383 | 25 G (0.5 mm) | 19 mm | 305 mm | No | | 50/200 |

# Blood collection devices and accessories

## Safety blood collection sets

**BD Vacutainer® Safety-Lok™ Blood Collection Set with Pre-Attached Holder**

With this Safety Blood Collection Set, the holder is already pre-attached, so it is not necessary to manually assemble the needle and holder. This ready-for-use blood collection set is individually packaged in a sterile blister.

The sterile closed system is ideally suited for the taking of samples using BD BACTEC™ Blood Culture Bottles.

**Further information**

Technical information is available on request.

### BD Vacutainer® Safety-Lok™ Blood Collection Sets with Pre-Attached Holder

| Cat. no. | Size | Needle length | Length of tubing | Colour code | Box/Case |
|---|---|---|---|---|---|
| 1.13 368654 | 21 G (0.8 mm) | 19 mm | 178 mm | | 25/200 |
| 368652 | 21 G (0.8 mm) | 19 mm | 305 mm | | 25/200 |
| 368655 | 23 G (0.6 mm) | 19 mm | 178 mm | | 25/200 |
| 368653 | 23 G (0.6 mm) | 19 mm | 305 mm | | 25/200 |

**Sterile closed system**

# Blood collection devices and accessories

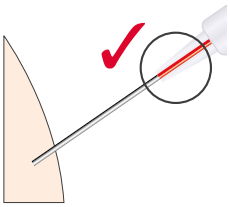
## Safety blood collection needles

**BD Vacutainer® Eclipse™ Signal™ Blood Collection Needle with integrated holder**

The BD Vacutainer® Eclipse™ Signal™ Needle offers a combination of proven, robust safety technology with the additional benefit of in-vein confirmation built into an integrated ergonomic holder. This results in ease of use and confidence during venous blood collection, aiming to increase both healthcare worker and patient safety.

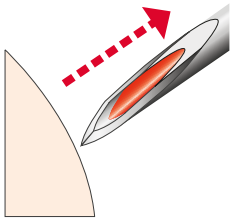
1.20 1. įpakuotas atskirai, vienkartinis, pakuotė sterili

### Confirmation



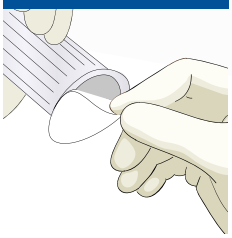
BD InstaFlash™ Needle Technology instantly signals vein entry, to support improved first stick proficiency

### Reduced risk



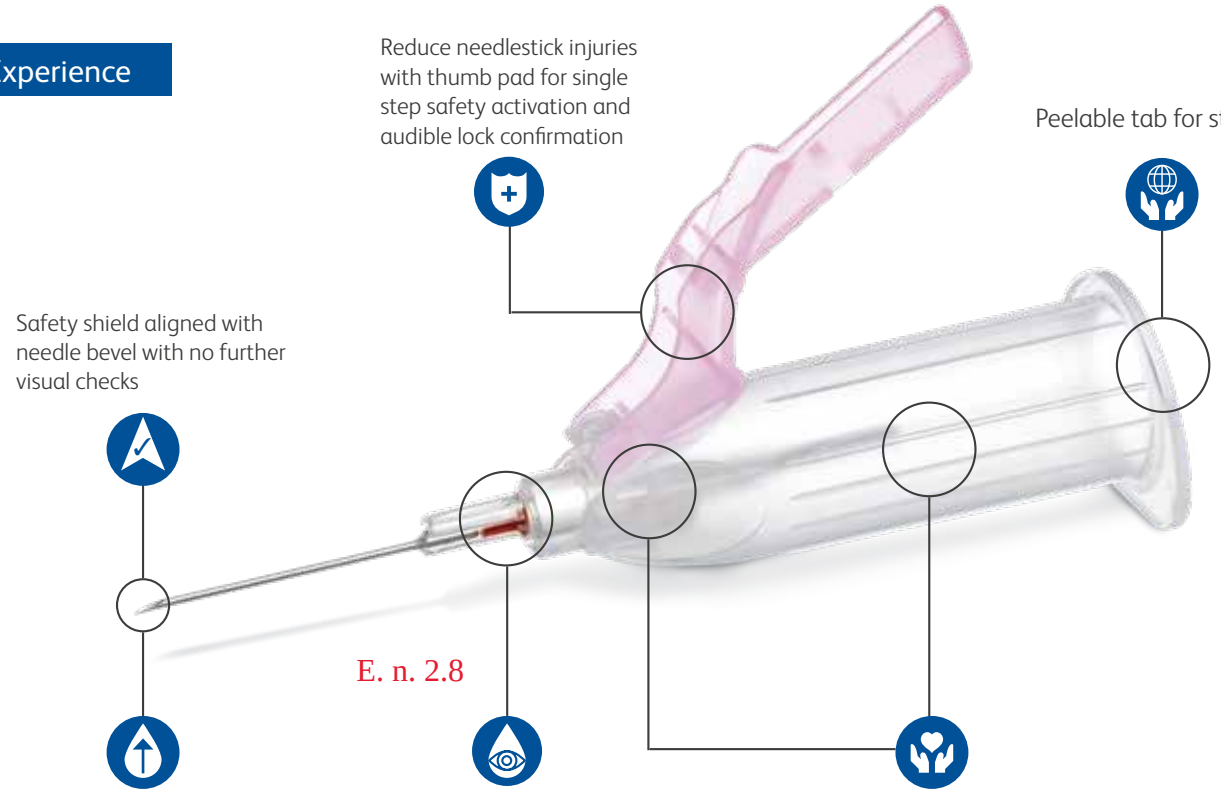
Blood droplet reduction technology draws blood away from the end of the needle

### Minimal waste



A peelable tab maintains sterility while reducing packaging waste

### Experience




E. n. 2.8

# Blood collection devices and accessories

## Safety blood collection needles

### BD Vacutainer® Eclipse™ Signal™ Blood Collection Needles with Integrated Holder

| Cat. no. | Size | Needle length | Colour code | Box/Case |
|---|---|---|---|---|
| 368835 | 21 G (0.8 mm) | 25 mm | | 50/400 |
| 368836 | 22 G (0.7 mm) | 25 mm | | 50/400 |

### BD Vacutainer® Eclipse™ Signal™ Blood Collection Needles

**Further information**

BD recommends for all needles without a pre-attached holder that a BD Vacutainer® One-Use Holder is used.

Clinical and technical information is available on request.

| Cat. no. | Size | Needle length | Colour code | Box/Case |
|---|---|---|---|---|
| 368837 | 21 G (0.8 mm) | 25 mm | | 50/500 |
| 368838 | 22 G (0.7 mm) | 25 mm | | 50/500 |

# Blood collection devices and accessories

## Safety blood collection needles

### BD Vacutainer® Eclipse™ Blood Collection Needle

The BD Vacutainer® Eclipse™ safety needle for venous blood sampling has a fully integrated safety shield, which once activated, protects against needlestick injuries. This safety shield is an integral part of the needle and its orientation aligns with the needle bevel. The safety mechanism is designed for single-handed activation. The fully integrated safety shield engages over the needle with an audible click, irreversibly locking with a triple closure mechanism.

### Further information

BD recommends for all needles without a pre-attached holder that a BD Vacutainer® One-Use Holder is used.

Clinical and technical information is available on request.

## BD Vacutainer® Eclipse™ Blood Collection Needles

| Cat. no. | Size | Needle length | Colour code | Box/Case |
|---|---|---|---|---|
| 368609 | 21 G (0.8 mm) | 32 mm | | 48/480 |
| 368610 | 22 G (0.7 mm) | 32 mm | | 48/480 |

### BD Vacutainer® Eclipse™ Blood Collection Needle with Pre-Attached Holder

With this safety needle, the holder is already pre-attached, so it is not necessary to manually assemble the needle and holder. This ready-for-use blood sample needle and holder is individually packaged in a sterile blister.

## BD Vacutainer® Eclipse™ Blood Collection Needles with Pre-Attached Holder

| Cat. no. | Size | Needle length | Colour code | Box |
|---|---|---|---|---|
| 1.20 368650 | 21 G (0.8 mm) | 32 mm | | 100 |
| 368651 | 22 G (0.7 mm) | 32 mm | | 100 |

# Blood collection devices and accessories

## Blood collection needles

### BD Vacutainer® Multi-Sample Needles

BD Vacutainer® needles can be used for multiple tube samples. BD Vacutainer® needles are coated with silicone, a low friction lubricant, ensuring smooth vein entry.

BD Vacutainer® needles are available in 20, 21 or 22 gauge needle sizes.

### Further information

BD recommends for all needles without a pre-attached holder that a BD Vacutainer® One-Use Holder is used.

Clinical and technical information is available on request.

## BD Vacutainer® Multi-Sample Needles

| Cat. no. | Size | Needle length | Colour code | Box/Case |
|---|---|---|---|---|
| 360215 | 20 G (0.9 mm) | 38 mm | | 100/1,000 |
| 360214 | 20 G (0.9 mm) | 25 mm | | 100/1,000 |
| 360213 | 21 G (0.8 mm) | 38 mm | | 100/1,000 |
| 360212 | 21 G (0.8 mm) | 25 mm | | 100/1,000 |
| 360211 | 22 G (0.7 mm) | 38 mm | | 100/1,000 |
| 360210 | 22 G (0.7 mm) | 25 mm | | 100/1,000 |

1.14

## BD Vacutainer® Flashback Blood Collection Needles

The BD Vacutainer® Flashback Needle is built with the same quality as the multi-sample needle and includes in-vein confirmation.

| Cat. no. | Size | Needle length | Colour code | Box/Case |
|---|---|---|---|---|
| 301746 | 21 G (0.8 mm) | 25 mm | | 50/1,000 |
| 301747 | 22 G (0.7 mm) | 25 mm | | 50/1,000 |

# Blood collection devices and accessories

## Adapters and holders

**BD Vacutainer® One-Use Holder, BD Luer Adapters and Adapters with Pre-Attached Holders**

1 The BD Vacutainer® Blood Transfer Device is a pre-assembled and easy-to-use device, designed with safety in mind. It is used for needle-less specimen transfer from a syringe to an evacuated tube or blood culture bottle and has a red colour-coded connection to provide easy differentiation from other holder-based products.

2 The BD Vacutainer® Luer-Lok™ Access Device is a pre-assembled multi-sample BD Luer-Lok™, compatible with female luer connections. It has a blue colour-coded connection to provide easy differentiation from other holder-based products.

3 The BD Vacutainer® One-Use Holder is compatible with all BD Vacutainer® Tubes and Needles. The BD Vacutainer® One-Use Holder is also compatible with the BD BACTEC™ Blood Culture Bottle.


4 The BD Vacutainer® Luer Adapter is a sterile device to be used with the BD Vacutainer® One-Use Holder. It is compatible with female luer connections, with a blue colour-coded cap to provide differentiation from other needles.

### BD Vacutainer® Luer Adapters with Pre-Attached Holders

These single-use products are ready-to-use, sterile, packed individually with a unique GS1 DataMatrix 2D bar code device identifier, in a strip of six units.

| Cat. no. | Description | Colour code | Case |
|---|---|---|---|
| 36481000 | Blood Transfer Device (female luer) | | 198 |
| 36490200 | Luer-Lok™ Access Device (male luer) | | 198 |

### BD Vacutainer® One-Use Holder

| Cat. no. | Description | Colour code | Box/Case |
|---|---|---|---|
| 364815 | BD Vacutainer® One-Use Holder is made of plastic and is designed to be part of the BD Vacutainer® System, compatible with tubes of 13 mm and 16 mm diameter and BD BACTEC™ Blood Culture Bottle, transparent white | | 250/1,000 |

1.16

### BD Vacutainer® Luer Adapter

| Cat. no. | Description | Colour code | Case |
|---|---|---|---|
| 367300 | BD Vacutainer® Luer Adapter | | 100/1,000 |

1.15

# Veninio kraujo mėginio paėmimas
## Serumo analizė

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 366882 | 2.5 | 13x75 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 367957 | 3.5 | 13x75 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 368498 | 3.5 | 13x75 | Silicis (krešulio aktyvatorius)/gelis | PET | Permatoma |  |
| 368965 | 3.5 | 13x75 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 368966 | 3.5 | 13x75 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 368967 | 3.5 | 13x75 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 368879 | 4 | 13x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Permatoma |  |
| 367955 | 5 | 13x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 366566 | 5 | 13x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Permatoma |  |
| 368968 | 5 | 13x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 368969 | 5 | 13x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 368970 | 5 | 13x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 366444 | 6 | 16x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 367953 | 8.5 | 16x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |
| 366644 | 8.5 | 16x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Permatoma |  |
| 366468 | 8.5 | 16x100 | Silicis (krešulio aktyvatorius)/gelis | PET | Popierius |  |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

# Veninio kraujo mėginio paėmimas
## Serumo analizė

**Serumo mėgintuvėliai**
Norint gauti serumo mėginius iš plastikinių mėgintuvėlių, mėgintuvėlyje turi būti pridėtas koaguliacijos aktyvatorius. Kai paties plastikinio paviršiaus nepakanka sužadinti koaguliaciją per priimtiną laiką, BD Vacutainer™ Plus plastikiniai serumo mėgintuvėliai turi silicio dalelių, pridėtų šiam tikslui. Šie mėgintuvėliai pažymėti akronimu CAT (krešulio aktyvatoriaus mėgintuvėlis).

**Krešėjimo laikai**
Rekomenduojamas minimalus pacientų, kurie nebuvo gydomi antikoaguliantais, mėginių koaguliacijos laikas yra 60 minučių serumui (raudonas) ir 5 minutės trombino (oranžinis) mėgintuvėliams.

**Centrifugavimo sąlygos:**
≤1200 g 10 minučių prie 18-25$^0$C stikliniams serumo mėgintuvėliams.
≤3200 g 10 minučių prie 18-25$^0$C plastikiniams serumo mėgintuvėliams.

**Maišymo rekomendacijos:**
Plastikiniai ir stikliniai serumo mėgintuvėliai turi būti švelniai 5-6 kartus apverčiami 180$^0$.

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 368492 | 2 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 368271 | 2 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Permatoma | |
| 369032 | 4 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 365904 | 4 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Permatoma | |
| 368815 | 6 | 13x100 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 368814 | 6 | 13x100 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 367819 | 6 | 13x100 | Silicis (krešulio aktyvatorius) | PET | Permatoma | |
| 367896 | 10 | 16x100 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 367614 | 5 | 13x75 | Be priedo/silikonas | Stiklas | Popierius | |
| 367624 | 5 | 13x75 | Be priedo | Stiklas | Popierius | |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

# Veninio kraujo mėginio paėmimas
## Hematologija

**EDTA**
EDTA druskos (etileno diamino tetra-acto rūgštis) yra naudojamos viso kraujo antikoaguliacijai hematologiniams tyrimams, kadangi ląsteliniai kraujo komponentai yra dalinai gerai konservuojami EDTA. Pastarasis veikia kaip antikoaguliantas, nes jis suformuoja kompleksus su metalo jonais, tokiais kaip kalcis, todėl slopina koaguliacijos kaskadą. Koaguliacija su EDTA yra negrįžtama.

EDTA koncentracija BD Vacutainer® mėgintuvėliuose yra 1.8 mg per mL pilno kraujo, kai užpildymo lygis yra tinkamas, kaip tai rekomenduoja ICSH (Tarptautinė hematologijos draugijos taryba)[1] ir CLSI (Klinikinių ir laboratorijos standartų institutas). Hematologiniams tyrimams institutai rekomenduoja dikalio EDTA druską ($K_2$EDTA). $K_2$EDTA yra naudojama BD Vacutainer® Plus plastikiniuose mėgintuvėliuose sausa forma.

**Mėgintuvėlio maišymas**
Tinkamai nedelsiant po kraujo mėginio paėmimo maišykite EDTA mėgintuvėlį (8-10 apvertimų), kad išvengtumėte mikrokrešėjimo.

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 368841 | 2 | 13x75 | $K_2$EDTA | PET | Popierius | |
| 368274 | 2 | 13x75 | $K_2$EDTA | PET | Permatoma | |
| 368856 | 3 | 13x75 | $K_2$EDTA | PET | Popierius | |
| 368499 | 3 | 13x75 | $K_2$EDTA | PET | Permatoma | |
| 368861 | 4 | 13x75 | $K_2$EDTA | PET | Popierius | |
| 367862 | 4 | 13x75 | $K_2$EDTA | PET | Permatoma | |
| 367864 | 6 | 13x100 | $K_2$EDTA | PET | Popierius | |
| 365900 | 6 | 13x100 | $K_2$EDTA | PET | Permatoma | |
| 367525 | 10 | 16x100 | $K_2$EDTA | PET | Popierius | |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

[1]International Council for Standardisation in Haematology and: Expert Panel on Cytometry, Recommendations of the International Council for the Standardisation in Haematology for Ethlyenediaminetetraacetic Acid Anticoagulation of Blood for Blood Cell Counting and Sizing, Am J Clin Patholo 1993;100: 371-372.

# Veninio kraujo mėginio paėmimas
## Koaguliacijos analizė

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 363047 | 1.8 | 13x75 | Na citratas (0.109M = 3.2%) | PET | Popierius |  |
| 363097 | 1.8 | 13x75 | Na citratas (0.129M = 3.8%) | PET | Popierius |  |
| 368273 | 1.8 | 13x75 | Na citratas (0.109M = 3.2%) | PET | Permatoma |  |
| 363048 | 2.7 | 13x75 | Na citratas (0.109M = 3.2%) | PET | Popierius |  |
| 363079 | 2.7 | 13x75 | Na citratas (0.129M = 3.8%) | PET | Popierius |  |
| 364305 | 2.7 | 13x75 | Na citratas (0.109M = 3.2%) | PET | Permatoma |  |
| 367714 | 4.5 | 13x75 | Na citratas (0.105M = 3.2%) | Stiklas | Popierius |  |
| 367704 | 4.5 | 13x75 | Na citratas (0.129M = 3.8%) | Stiklas | Popierius |  |
| 366575 | 6 | 13x100 | Na citratas (0.105M = 3.2%) | Stiklas | Popierius |  |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

# Veninio kraujo mėginio paėmimas
## Gliukozės analizė

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 368920 | 2 | 13x75 | Fluoridas (2.5 mg/mL) / Oksalatas (2 mg/mL) | PET | Popierius |  |
| 368921 | 4 | 13x75 | Fluoridas (2.5 mg/mL) / Oksalatas (2 mg/mL) | PET | Popierius |  |
| 368201 | 5 | 13x100 | Fluoridas (2.5 mg/mL) / Oksalatas (2 mg/mL) | PET | Popierius |  |
| 368520 | 2 | 13x75 | Fluoridas (1.5 mg/mL) / EDTA (3 mg/mL) | PET | Blokas |  |
| 368521 | 4 | 13x75 | Fluoridas (1.5 mg/mL) / EDTA (3 mg/mL) | PET | Blokas |  |
| 367764 | 5 | 13x75 | Natrio fluoridas (4 mg/mL) / Natrio heparinas (28 IU/mL) | Stiklas | Popierius |  |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

# Veninio kraujo mėginio surinkimas
## Plazmos analizė

**NAUJIENA BD Vacutainer® Barricor™ plazmos kraujo surinkimo mėgintuvėlis**
BD Vacutainer® Barricor™ yra revoliucinis naujas kraujo surinkimo mėgintuvėlis, kuris suteikia pastoviai greitą, švarų, aukštos kokybės plazmos mėginį, leidžiant gauti tiksliausius rezultatus.

Dizainas papildo BD Vacutainer® vakuuminius kraujo surinkimo mėgintuvėlius ir tęsia BD tikslą užtikrinti geriausią kraujo mėginių surinkimo, gabenimo ir apdorojimo praktiką.

BD Barricor™ produkto savybės buvo sukurtos siekiant užtikrinti optimalų našumą. Naujausių technologijų mechaninis atskyriklis pagreitina našumą ir optimizuoja darbo eigą panaudojant plazmos galią.

Pagrindiniai mechaninio atskyriklio privalumai lyginant su gelio mėgintuvėliais:

- Ypač aukšta mėginio kokybė lyginant su plazmos gelio mėgintuvėliu – 47 % mažiau trombocitų nei BD PST™ II[1].
- Atskyrimas per 3 minutes esant 4000 g[2].
- Mėginio paėmimo zondo užteršimo geliu, kuris užkiša zondą, gadina analizatorių ir sukuria papildomus priežiūros kaštus, rizikos pašalinimas.
- Didesnis analičių intervalas gali būti tiriamas vienu mėgintuvėliu, pvz. terapiniai medikamentai[3].
- Ilgesnis analičių stabilumas lyginant su esamais plazmos gelio atskyrimo mėgintuvėliais[4].
- Sumažintas jautrumas temperatūrai sandėliavimo metu.

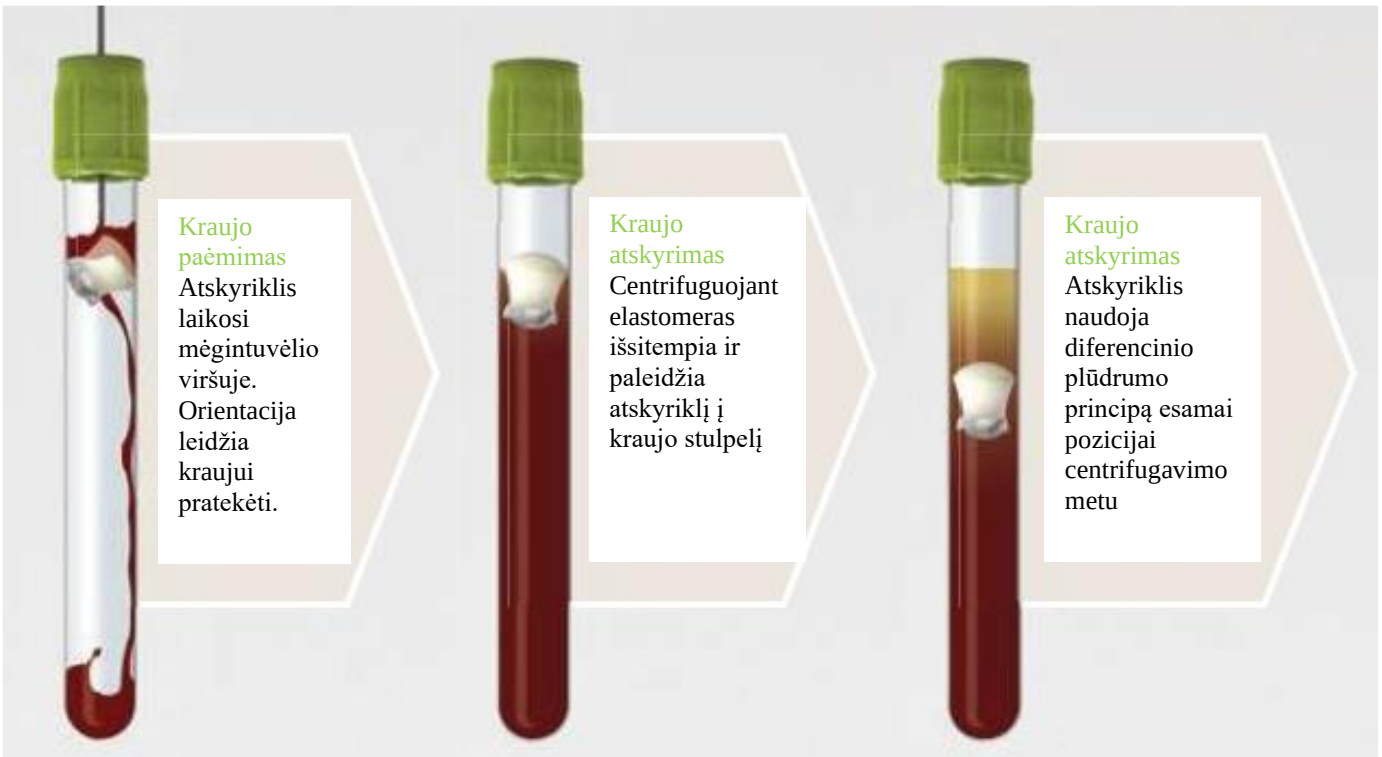
**Mėgintuvėlio maišymas**
Siekiant išvengti mikrokrešulių, maišykite BD Barricor™ mėgintuvėlį 8-10 apvertimų nedelsiant po kraujo mėginio surinkimo.

**Centrifugavimo sąlygos**
4000 g 3 minutes
3000 g 5 minutes
2500 g 7 minutes
1850 g 10 minučių

Infekcinių ligų tyrimui centrifuguokite 3000 g 10 minučų[5].

Žr. www.bd.com/ifu

**Kita informacija**
Klinikinė ir techninė informacija pateikiama atskiru prašymu.




1. BD White Paper VS9195: Evaluation of Specimen Quality in BD Vacutainer® Barricor™ Tubes with Respect to Visual Observations and Cell Counts in Plasma as Compared with BD Vacutainer® PST™ II Tubes, 2016.
2. BD White Paper VS9192: Evaluation of Analyte Performance (including cell count, plasma yeld, visuals) at Various Centrifugation Conditions (optimum vs recommended), 2016.
3. BD White Paper VS9168: Comparisons of the BD Vacutainer® Barricor™ Plasma Blood Collection Tube with the BD Vacutainer® PST™ II Tube and BD Vacutainer® Serum Tube for Selected Therapeutic Drugs, 2016.

# BD Vacutainer® Barricor™ mėgintuvėliai

NAUJIENA

| Kodas | Ištraukimo tūris (mL) | Dydis (mm) | Priedaai | Atskyrimas | Medžiaga | Etiketė | Dangtelio uždarymas | Dangtelio spalva |
|---|---|---|---|---|---|---|---|---|
| 365050 | 3.0 | 13 x 75 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Popierinė | BD Hemogard™ | |
| 365054 | 3.0 | 13 x 75 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Permatoma | BD Hemogard™ | |
| 365053 | 3.5 | 13 x 100 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Popierinė | BD Hemogard™ | |
| 365049 | 4.5 | 13 x 100 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Popierinė | BD Hemogard™ | |
| 365052 | 4.5 | 13 x 100 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Permatoma | BD Hemogard™ | |
| 365081 | 5.0 | 13 x 100 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Permatoma | BD Hemogard™ | |
| 365056 | 5.5 | 13 x 100 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Popierinė | BD Hemogard™ | |
| 365057 | 5.5 | 13 x 100 | Ličio heparinas | Mechaninis atskyrimo įtaisas** | PET | Permatoma | BD Hemogard™ | |

Visi mėgintuvėliai tiekiami dėžėmis po 100 / dėkluose po 1000.

Kraujo atskyrimas
Kai ištemptas, kanalai sukuriami apie atskyrikli leidžiant kraujo ląstelėms ištekėti iš plazmos savybė, kuri išskiria BD Barricor™ iš gelinių mėgintuvėlių

Kraujo atskyrimas
Kai centrifuga lėtėja, elastomeras grįžta į originalią formą suformuodamas sandariklį tarp plazmos viršuje ir kraujo ląstelių apačioje. Tokiu būdu gaunamas stabilus tvirtas barjeras

4. BD White Paper VS9295: Within-Tube Stability of Selected Routine Chemistry Analytes and Immunoassays BD Vacutainer® Barricor™ Tubes at Multiple Time Post Centrifugation, 2016.
5. BD White Paper VS9236: Comparison of BD Vacutainer® Barricor™ Tubes with BD Vacutainer® PST™ II, SST™ II and Serum Tubes for Selected Diagnostic Infectious Disease Marker Assays, 2016.

** Mechaninis atskyrimo įtaisas: termoplastiškas elastomeras (TPE) ir didelio tankio polipropilenas.

# Veninio kraujo mėginio paėmimas
## Plazmos analizė

**Ličio heparinas/Natrio heparinas**
BD Vacutainer® plazmos mėgintuvėliai klinikinei chemijai gali būti įsigyjami išpurkšti sausais natrio heparino ar ličio heparino priedais. Heparinas veikia kaip antikoaguliantas, nes jis sukuria antitrombino kompleksą.

Optimali antikoaguliacija pasiekiama visuose BD Vacutainer® mėgintuvėliuose naudojant 17IU farmacinės klasės hepariną per mL kraujo, kai užpildymo lygis yra tinkamas. Ličio heparinas BD Vacutainer® yra išpurškiamas sausas ant vidinių mėgintuvėlių sienelių naudojant specialią procedūrą, kad priedas būtų tolygiai paskirstomas siekiant geriausio galimo tirpumo. Klinikinei chemijai ličio heparinas bendru atveju rekomenduojamas pirmiau natrio heparino.

**Centrifugacijos sąlygos:**
≤1300 g 10 minučių prie 18-25$^0$C.

**Maišymo rekomendacijos:**
Plazmos mėgintuvėliai turi būti švelniai 8-10 kartų apverčiami 180$^0$. Tinkamas BD Vacutainer® heparino mėgintuvėlio maišymas nedelsiant po kraujo mėginio paėmimo yra ypač svarbus siekiant išvengti mikrokrešėjimo.

**BD Vacutainer® Heparin mėgintuvėliai**

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 368494 | 2 | 13x75 | Ličio heparinas | PET | Popierius | |
| 368272 | 2 | 13x75 | Ličio heparinas | PET | Permatoma | |
| 368884 | 4 | 13x75 | Ličio heparinas | PET | Popierius | |
| 368496 | 4 | 13x75 | Ličio heparinas | PET | Permatoma | |
| 368886 | 6 | 13x100 | Ličio heparinas | PET | Popierius | |
| 368889 | 6 | 13x100 | Ličio heparinas | PET | Permatoma | |
| 367526 | 10 | 13x100 | Ličio heparinas | PET | Popierius | |
| 367869 | 4 | 13x75 | Natrio heparinas | PET | Popierius | |
| 367876 | 6 | 13x100 | Natrio heparinas | PET | Popierius | |
| 368480 | 10 | 16x100 | Natrio heparinas | Stiklas | Popierius | |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

# Ląstelių ir biožymenų konservavimas
## BD PPT™ kraujo paėmimo mėgintuvėliai

**BD PPT™ sistema (plazmos paruošimo mėgintuvėlis)**
BD PPT™ mėgintuvėlis naudojamas neskiestos plazmos iš viso kraujo atskyrimui molekulinės diagnostikos testų metodams. Šiuos metodus sudaro, tačiau neapsiribojama, polimerazės grandinės reakcija (PGR) ar šakinio DNR (bDNA) amplifikacijos technikos. BD PPT™ mėgintuvėlis taip pat taikomas kitoms MDx analizėms, kur reikalingas neskiestos plazmos mėginys. BD PPT™ mėgintuvėliai užtikrina:

- Saugų infekcinių mėginių tvarkymą
  Naudotojas nėra veikiamas biologiškai pavojingų medžiagų, esančių BD Vacutainer™ mėgintuvėlyje. Plazma paruošiama uždarame BD Vacutainer™ mėgintuvėlyje, kuris gali būti tiesiogiai transportuojamas, tokiu būdu pašalinant alikvotinių dalių sudarymo poreikį iš pirminio BD Vacutainer™ mėgintuvėlio į antrinę talpyklą bei pakartotinio taros ženklinimo. Nėra jokio biologiškai pavojingo mėginio poveikio.
- Plazmos kokybės išlaikymą
  Gelio barjeras apsaugo nuo plazmos patekimo į eritrocitus, kad būtų išlaikytas plazmos stabilumas. Virusinė įkrova bus stabili:
  6 valandas – visas kraujas kambario temperatūroje[1]
  24 valandas – atskirta plazma kambario temperatūroje
  5 dienos – atskirta plazma, laikoma šaldytuve $4^0$C

Plazma gali būti laikoma užšaldyta vietoje BD PPT™ mėgintuvėlyje. Tačiau, plazmos užšaldymas vietoje BD PPT™ mėgintuvėliuose gali būti draudžiamas kai kuriems tyrimams, todėl privalu laikytis tyrimo gamintojo gairių.
BD PPT™ mėgintuvėlis yra CE paženklintas ir FDA 510K išaiškintas *in vitro* diagnostiniam naudojimui.

**Tyrimai**
Mes džiaugsimės galėdami tiekti papildomą dokumentaciją arba literatūrą Jums pareikalaus.

**Centrifugacijos sąlygos:**
1100 g 10 minučių prie 18-$25^0$C.

**Maišymo rekomendacijos:**
Plazmos paruošimo mėgintuvėliai turi būti švelniai 8-10 kartų apverčiami $180^0$.

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 362795 | 5 | 13x100 | $K_2$EDTA/Gelis | PET | Permatoma |  |
| 362799 | 8.5 | 16x100 | $K_2$EDTA/Gelis | PET | Permatoma |  |

Visi mėgintuvėliai tiekiami dėžėse po 100.

# Veninio kraujo mėginio paėmimas
## Serumo analizė

**Serumo mėgintuvėliai**
Norint gauti serumo mėginius iš plastikinių mėgintuvėlių, mėgintuvėlyje turi būti pridėtas koaguliacijos aktyvatorius. Kai paties plastikinio paviršiaus nepakanka sužadinti koaguliaciją per priimtiną laiką, BD Vacutainer™ Plus plastikiniai serumo mėgintuvėliai turi silicio dalelių, pridėtų šiam tikslui. Šie mėgintuvėliai pažymėti akronimu CAT (krešulio aktyvatoriaus mėgintuvėlis).

**Krešėjimo laikai**
Rekomenduojamas minimalus pacientų, kurie nebuvo gydomi antikoaguliantais, mėginių koaguliacijos laikas yra 60 minučių serumui (raudonas) ir 5 minutės trombino (oranžinis) mėgintuvėliams.

**Centrifugavimo sąlygos:**
≤1200 g 10 minučių prie 18-25$^0$C stikliniams serumo mėgintuvėliams.
≤3200 g 10 minučių prie 18-25$^0$C plastikiniams serumo mėgintuvėliams.

**Maišymo rekomendacijos:**
Plastikiniai ir stikliniai serumo mėgintuvėliai turi būti švelniai 5-6 kartus apverčiami 180$^0$.

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 368492 | 2 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 368271 | 2 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Permatoma | |
| 369032 | 4 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 365904 | 4 | 13x75 | Silicis (krešulio aktyvatorius) | PET | Permatoma | |
| 368815 | 6 | 13x100 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 368814 | 6 | 13x100 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 367819 | 6 | 13x100 | Silicis (krešulio aktyvatorius) | PET | Permatoma | |
| 367896 | 10 | 16x100 | Silicis (krešulio aktyvatorius) | PET | Popierius | |
| 367614 | 5 | 13x75 | Be priedo/silikonas | Stiklas | Popierius | |
| 367624 | 5 | 13x75 | Be priedo | Stiklas | Popierius | |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

# Veninio kraujo mėginio paėmimas
## Hematologija

**EDTA**
EDTA druskos (etileno diamino tetra-acto rūgštis) yra naudojamos viso kraujo antikoaguliacijai hematologiniams tyrimams, kadangi ląsteliniai kraujo komponentai yra dalinai gerai konservuojami EDTA. Pastarasis veikia kaip antikoaguliantas, nes jis suformuoja kompleksus su metalo jonais, tokiais kaip kalcis, todėl slopina koaguliacijos kaskadą. Koaguliacija su EDTA yra negrįžtama.

EDTA koncentracija BD Vacutainer® mėgintuvėliuose yra 1.8 mg per mL pilno kraujo, kai užpildymo lygis yra tinkamas, kaip tai rekomenduoja ICSH (Tarptautinė hematologijos draugijos taryba)[1] ir CLSI (Klinikinių ir laboratorijos standartų institutas). Hematologiniams tyrimams institutai rekomenduoja dikalio EDTA druską ($K_2$EDTA). $K_2$EDTA yra naudojama BD Vacutainer® Plus plastikiniuose mėgintuvėliuose sausa forma.

**Mėgintuvėlio maišymas**
Tinkamai nedelsiant po kraujo mėginio paėmimo maišykite EDTA mėgintuvėlį (8-10 apvertimų), kad išvengtumėte mikrokrešėjimo.

| Katalogo nr. | Tūris (mL) | Dydis (mm) | Specifikacija | Medžiaga | Etiketė | Dangtelis |
|---|---|---|---|---|---|---|
| 368841 | 2 | 13x75 | $K_2$EDTA | PET | Popierius | |
| 368274 | 2 | 13x75 | $K_2$EDTA | PET | Permatoma | |
| 368856 | 3 | 13x75 | $K_2$EDTA | PET | Popierius | |
| 368499 | 3 | 13x75 | $K_2$EDTA | PET | Permatoma | |
| 368861 | 4 | 13x75 | $K_2$EDTA | PET | Popierius | |
| 367862 | 4 | 13x75 | $K_2$EDTA | PET | Permatoma | |
| 367864 | 6 | 13x100 | $K_2$EDTA | PET | Popierius | |
| 365900 | 6 | 13x100 | $K_2$EDTA | PET | Permatoma | |
| 367525 | 10 | 16x100 | $K_2$EDTA | PET | Popierius | |

Visi mėgintuvėliai tiekiami dėžėse po 100/dėkluose po 1000.

[1]International Council for Standardisation in Haematology and: Expert Panel on Cytometry, Recommendations of the International Council for the Standardisation in Haematology for Ethlyenediaminetetraacetic Acid Anticoagulation of Blood for Blood Cell Counting and Sizing, Am J Clin Patholo 1993;100: 371-372.

# Saugios kraujo surinkimo adatos

| Katalogo numeris | Dydis | Adatos ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368609 | 21 G (0.8 mm) | 1.25 “ (32 mm) | žalia | 480 (10 x 48) |
| 368610 | 22 G (0.7 mm) | 1.25 “ (32 mm) | juoda | 480 (10 x 48) |

**BD Vacutainer® Eclipse™ kraujo surinkimo adata su iš anksto prijungtu laikikliu**
Su šia iš anksto sujungta saugia adata, laikiklis jau sumontuotas ant adatos, todėl nereikia rankiniu būdu surinkinėti adatos ir laikiklio. Tai yra paruošta naudoti kraujo mėginio adata ir laikiklis, tiekiami individualiai supakuoti sterilioje pakuotėje.

## BD Vacutainer® Eclipse™ saugios adatos su iš anksto prijungti laikikliu

| Katalogo numeris | Dydis | Adatos ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368650 | 21 G (0.8 mm) | 1.25 “ (32 mm) | | 100 |
| 368651 | 22 G (0.7 mm) | 1.25 “ (32 mm) | | 100 |

# Saugios kraujo paėmimo adatos

**BD Vacutainer® Eclipse™ Signal™ kraujo paėmimo adata**
BD Vacutainer® Eclipse™ Signal™ suteikia įrodytą tvirtą ir saugią technologiją bei papildomą pagerinto pataikymo į veną naudą. Dėl šių priežasčių adatą lengva naudoti veninio kraujo paėmimo metu. Ji taip pat sumažina adatos dūrio sužeidimo kraujo paėmimo metu riziką taip pagerinant sveikatos priežiūros profesionalo ir paciento saugumą.

## BD Vacutainer® Eclipse™ Signal™ kraujo paėmimo adatos

| Katalogo nr. | Dydis | Ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368837 | 21 G (0.8 mm) | 1.25“ (32 mm) | | 500 (10x50) |
| 368838 | 22 G (0.7 mm) | 1.25“ (32 mm) | | 500 (10x50) |

## BD Vacutainer® Eclipse™ Signal™ kraujo paėmimo adatos su integruotu laikikliu

| Katalogo nr. | Dydis | Ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368835 | 21 G (0.8 mm) | 1.25“ (32 mm) | | 400 (8x50) |
| 368836 | 22 G (0.7 mm) | 1.25“ (32 mm) | | 400 (8x50) |

**BD Vacutainer® Passive Shielding kraujo paėmimo adata**
BD Vacutainer® Passive Shielding kraujo paėmimo adata sukurta suteikti didžiausią apsaugą nuo adatos dūrio kraujo paėmimo metu. Adatos apsauginis dangtelis nusileidžia automatiškai po pirmojo mėgintuvėlio įterpimo, taip suteikiant apsaugą nuo pat pirmosios mėgintuvėlio įterpimo akimirkos iki produkto utilizavimo. Apsauginis dangtelis uždengia datą nedelsiant po jos pašalinimo iš paciento, net jeigu adata ištraukiama netikėtai dėl paciento staigaus ar netikėto judesio. Produktas idealiai tinka ten, kur paciento bendradarbiavimo su gydytoju nėra galimybės užtikrinti.

## BD Vacutainer® Passive Shielding kraujo paėmimo adatos

| Katalogo nr. | Dydis | Ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368636 | 21 G (0.8 mm) | 1“ (25 mm) | | 200 (8x25) |
| 368637 | 22 G (0.7 mm) | 1“ (25 mm) | | 200 (8x25) |

# Apsauginiai kraujo paėmimo rinkiniai

**BD Vacutainer® Safety-Lok™ kraujo paėmimo rinkinys su prijungtu laikikliu**

Su prijungtais produktais, laikiklis jau yra sumontuotas, todėl nereikia rankinio adatos ir laikiklio surinkimo. Sterili uždara sistema pristatoma individualiai supakuoti, kad sumažinti kraujo kultūrų užteršimo riziką. Ji idealiai tinka mėginių apėmimui naudojant BD Bactec™ kraujo kultūros butelius.

**BD Vacutainer® Safety-Lok™ kraujo paėmimo rinkiniai su prijungtu laikikliu**

| Katalogo nr. | Dydis | Adatos ilgis | Vamzdelio ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|---|
| 368654 | 21 G (0.8 mm) | 0.75“ (19 mm) | 7“ (178 mm) | | 200 (4x25) |
| 368652 | 21 G (0.8 mm) | 0.75“ (19 mm) | 12“ (305 mm) | | 200 (4x25) |
| 368655 | 23 G (0.6 mm) | 0.75“ (19 mm) | 7“ (178 mm) | | 200 (4x25) |
| 368653 | 23 G (0.6 mm) | 0.75“ (19 mm) | 12“ (305 mm) | | 200 (4x25) |

# Apsauginiai kraujo paėmimo rinkiniai

- Apsauga nuo adatos keliamų sužalojimų:
  Po sėkmingo dūrio į veną, integruota apsauga užstumiama ant adatos, pilnai ją apsupant. Ji fiksuojasi negrįžtamai su garsiniu spragtelėjimu ant datos.
- Galima aktyvacija viena ranka:
  Saugos mechanizmo aktyvacija viena ranka leidžia sutelkti didesnį dėmesį pacientui ir dūrio į veną vietai.
- Universalus:
  Kraujo mėginių paėmimui ir trumpalaikei infuzijai iki dviejų valandų.

**BD Vacutainer® Safety-Lok™ kraujo paėmimo rinkiniai be luer adapterio**

| Katalogo nr. | Dydis | Adatos ilgis | Vamzdelio ilgis | Luer adapteris | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|---|---|
| 367246 | 21G (0.8 mm) | 0.75“ (19 mm) | 12“ (305 mm) | Nėra | | 200 (4x50) |
| 367247 | 23G (0.6 mm) | 0.75“ (19 mm) | 12“ (305 mm) | Nėra | | 200 (4x50) |
| 368383 | 25G (0.5 mm) | 0.75“ (19 mm) | 12“ (305 mm) | Nėra | | 200 (4x50) |

**BD Vacutainer® Safety-Lok™ kraujo surinkimo rinkiniai su luer adapteriu**

| Katalogo nr. | Dydis | Adatos ilgis | Vamzdelio ilgis | Luer adapteris | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|---|---|
| 367282 | 21G (0.8 mm) | 0.75“ (19 mm) | 7“ (178 mm) | Su | | 200 (4x50) |
| 367286 | 21G (0.8 mm) | 0.75“ (19 mm) | 12“ (305 mm) | Su | | 200 (4x50) |
| 367284 | 23G (0.6 mm) | 0.75“ (19 mm) | 7“ (178 mm) | Su | | 200 (4x50) |
| 367288 | 23G (0.6 mm) | 0.75“ (19 mm) | 12“ (305 mm) | Su | | 200 (4x50) |
| 367295 | 25G (0.5 mm) | 0.75“ (19 mm) | 7“ (178 mm) | Su | | 200 (4x50) |

# Kraujo paėmimo adatos

**BD Vacutainer® PrecisionGlide™ kelių mėginių adata**
BD Vacutainer® PrecisionGlide™ adatos gali būti naudojamos keliems mėgintuvėlių mėginiams. BD Vacutainer® PrecisionGlide™ adatos turi pažangų žemo kampo dizainą ir padengtos silikonu, žemos trinties lubrikantu, užtikrinančiu švelnų ir tolygų įvedimą į veną.

Individuali lazerio kokybės kontrolė išlaiko aukščiausius kokybės lygius. BD Vacutainer® PrecisionGlide™ adatos gali būti su 20, 21 ar 22 dydžio adata.

**BD Vacutainer® PrecisionGlide™ kelių mėginių adatos**

| Katalogo nr. | Dydis | Ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 360210 | 22 G (0.7 mm) | 1“ (25 mm) | | 1000 (10x100) |
| 360211 | 22 G (0.7 mm) | 1.5“ (38 mm) | | 1000 (10x100) |
| 360212 | 21 G (0.8 mm) | 1“ (25 mm) | | 1000 (10x100) |
| 360213 | 21 G (0.8 mm) | 1.5“ (38 mm) | | 1000 (10x100) |
| 360214 | 20 G (0.9 mm) | 1“ (25 mm) | | 1000 (10x100) |
| 360215 | 20 G (0.9 mm) | 1.5“ (38 mm) | | 1000 (10x100) |

# Saugios kraujo surinkimo adatos

| Katalogo numeris | Dydis | Adatos ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368609 | 21 G (0.8 mm) | 1.25 “ (32 mm) | žalia | 480 (10 x 48) |
| 368610 | 22 G (0.7 mm) | 1.25 “ (32 mm) | juoda | 480 (10 x 48) |

**BD Vacutainer® Eclipse™ kraujo surinkimo adata su iš anksto prijungtu laikikliu**
Su šia iš anksto sujungta saugia adata, laikiklis jau sumontuotas ant adatos, todėl nereikia rankiniu būdu surinkinėti adatos ir laikiklio. Tai yra paruošta naudoti kraujo mėginio adata ir laikiklis, tiekiami individualiai supakuoti sterilioje pakuotėje.

## BD Vacutainer® Eclipse™ saugios adatos su iš anksto prijungti laikikliu

| Katalogo numeris | Dydis | Adatos ilgis | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|---|
| 368650 | 21 G (0.8 mm) | 1.25 “ (32 mm) | | 100 |
| 368651 | 22 G (0.7 mm) | 1.25 “ (32 mm) | | 100 |

# Adapteriai ir laikikliai

**BD Vacutainer® vienkartinio naudojimo laikiklis, BD luer adapteris ir adapteriai su iš anksto prijungtais laikikliais**

1. BD Vacutainer® Luer adapteris (katalogo nr. 367300) yra sterilus prietaisas su kelių mėginių paėmimo vožtuvu ir sukurta naudoti su kateteriu kraujo paėmimui su BD Vacutainer® kraujo paėmimo mėgintuvėliais.
2. BD Vacutainer® vienkartinio naudojimo laikikliai (katalogo nr. 364815) yra suderinami su visais BD Vacutainer® mėgintuvėliais ir adatomis, įskaitant BD Eclipse™ apsaugines adatas, BD Safety-Lok™ kraujo paėmimo rinkinius ir BD Push Button kraujo surinkimo rinkinius. BD Vacutainer® vienkartinio naudojimo laikikliai taip pat suderinami su BD BACTEC™ kraujo kultūros buteliukais.
3. BD Vacutainer® Luer-Lok™ prieigos prietaisai (katalogo nr. 364902) yra iš anksto surinktas kelių mėginių BD Luer-Lok™ ir laikikliu, kuris yra suderinamas su „female“ tipo luer jungtimis arba IV jungtimis, sukurtomis luer prieigai, ir turi mėlynos spalvos jungtį, skirtą suteikti lengvą diferenciaciją nuo kitų laikikliais paremtų produktų.

4. BD Vacutainer® kraujo perkėlimo prietaisas (katalogo nr. 364810) yra iš anksto surinktas ir lengvai naudojamas prietaisas, sukurtas galvojant apie saugumą. Pastarasis naudojamas mėginio perkėlimui nenaudojant adatos iš švirkšto į vakuuminį mėgintuvėlį ar kraujo kultūros buteliuką bei turi raudonos spalvos jungtį, skirtą suteikti lengvą diferenciaciją nuo kitų laikikliais paremtų produktų.

**BD Vacutainer® Luer adapteris**

| Katalogo nr. | Apibūdinimas | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|
| 367300 | Luer plėtinys kraujo mėginių paėmimui iš kateterių ir perfuzijos rinkinių | | 1000 (10x100) |

**BD Vacutainer® Luer adapteriai su iš anksto prijungtais laikikliais**

Šie vienkartiniai produktai yra paruošti naudoti, sterilūs, individualiai supakuoti laikikliai su sumontuotu Luer adapteriu.

| Katalogo nr. | Apibūdinimas | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|
| 364902 | BD Vacutainer® Luer-Lok™ Access Device („male“ tipo Luer) | | 200 (2x100) |
| 364810 | BD Vacutainer® Blood Transfer Device („female“ tipo Luer) | | 200 (2x100) |

| Katalogo nr. | Apibūdinimas | Spalvos kodas | Parduodamų vienetų kiekis |
|---|---|---|---|
| 364815 | BD Vacutainer® vienkartinis plastikinis laikiklis mėgintuvėliams su 13 mm ir 16 mm diametru, ir BD Bactec™ kraujo kultūros buteliukams | | 1000 (4x250) |
| 368872 | BD Pronto™ Quick Release laikiklis mėgintuvėliams su 13 mm ir 16 mm diametru, ir BD Bactec™ kraujo kultūros buteliukams  | Įvairūs | 100 (5x20) |
| 364879 | BD Vacutainer® kelių naudojimų plastikinis laikiklis mėgintuvėliams su 13 mm ir 16 mm diametru, ir BD Bactec™ kraujo kultūros buteliukams | | 1000 (4x250) |