BD & YOU
PARTNERS IN SAFETY

CLEAR, PURE AND FAST SAMPLES

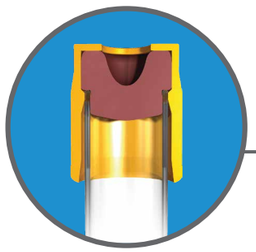
BD
Helping all people live healthy lives

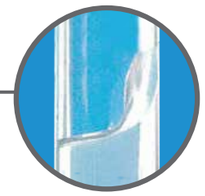
BD Vacutainer®
SST™ II *Advance*

BD Gel Technology Keeps on Moving

BD SST™ II *Advance*

Safety
BD Hemogard™ Safety Closure





Laboratory Workflow & Process Efficiencies
Unique gel design

Sample Integrity
New acrylic based gel

Your Concern

Our Solution

SAFETY

Healthcare Worker

- Accidental exposure to blood can lead to blood- borne pathogen infection such as HIV, HBV, HCV

Patient

- Patient identification errors & incorrect test results can lead to inappropriate and hazardous treatment

Increased Healthcare Worker Safety

- Reduced exposure to blood through the virtually unbreakable medical grade PET tubes and the renowned BD Hemogard™ Safety Closure

Increased Patient Safety

- Proven tube performance through clinical trials ensuring optimal patient results
- No need to aliquot reducing patient identification errors

SAMPLE INTEGRITY

Sample Purity & Analyte Stability

- Impure samples and analyte interference (direct contact with cells, ordinary gel, etc.) can lead to:
  - o Analyzer interference o Re-testing o Extra handling
  - o Delayed reporting of patient results & hence patient treatment

Enhanced Sample Purity & Analyte Stability

- No effect on serum AST, LD, K+ for 6 days at 4°C
- More than 90% recovery with the most commonly used therapeutic drugs up to 7 days at 4°C
- May be recommended for the most commonly tested hormones up to 7 days at 4°C
- May be frozen at -20°C under certain conditions

LABORATORY WORKFLOW & PROCESS EFFICIENCY

Laboratory Workflow

- A slow turnaround time (TAT) can lead to delay in patient treatment

Laboratory Process

- Extra handling & labour can result in:
  - o Slower TAT o Increased labour & material cost
  - o Patient identification errors

Advanced Laboratory Workflow

- Reliable gel movement performance and barrier formation under stressed centrifugation conditions of 800xg at 10 minutes
- May be centrifuged along a g-force continuum between 1800g-3000g using a 4 or 5 minute spin[1]

Advanced Process Efficiency

- Primary tube sampling and storage without the need to aliquot

MINIMISING PREANALYTICAL VARIABLES

Laboratory Errors in the Preanalytical Phase

- 50% of all laboratory errors occur in the preanalytical phase[2]
- 11% of patients are mismanaged[2]
- 15% of patients undergo further unnecessary treatment[2]

Reduction in Preanalytical Variability

- Providing a reliable barrier between the serum and the clot
- Offering a gel separator with minimum adsorption properties

1) 1300-2000xg for 10 minutes at room termparature remain the optimal centrifugation recommendations for general use.
2) M Plebani et al: Laboratory errors: their frequency, type and causes. The Impact of the Preanalytical Phase on the Quality of Laboratory Results. Oxford, July 1996.

BD Gel Technology Keeps on Moving

To meet the needs of the changing clinical environment, BD offers the widest range of clinically documented sample separation solutions.

The BD Vacutainer® SST™ II *Advance* through greater reliable barrier formation provides:

- Optimal Patient Results
- Enhanced Sample Integrity
- Advanced Laboratory Workflow & Process Efficiency
- Reduced Preanalytical Variability

	Catalogue Number	Draw (ml)	Tubing Size (mm)	Label
	366882	2.5	13 x 75	Block
	367957	3.5	13 x 75	Paper
	368498	3.5	13 x 75	See Through
	368879	4	13 x 100	See Through
	367955	5	13 x 100	Paper
	366566	5	13 x 100	See Through
	367953	8.5	16 x 100	Paper
	366644	8.5	16 x 100	See Through

Reorder Information

Packaging: 100/box - 1000/case

All products available with **18-month shelf life.**

Different closure colours available upon request

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TDM Fact Sheet

BD Has selected these drugs as representatives from each class.

Drug Class	Time / Temperature	4 hrs 25°C	8 hrs 25°C	24 hrs 25°C	48 hrs 25°C	7 days 4°C
Cardioactive	Digoxin	•	•	•	•	•
	NAPA	•	-	•	•	•
	Procainamide	•	-	•	•	•
Antibiotic	Gentamicin	•	-	•	•	•
	Tobramycin	•	•	•	•	•
	Vancomycin	•	•	•	•	•
Antiepileptic	Carbamazepine	•	•	•	•	•
	Phenobarbital	•	•	•	•	•
	Phenytoin	•	•	•	•	•
	Valproic Acid	•	•	•	•	•
Bronchodilator	Theophylline	•	•	•	•	•
Analgesic	Acetaminophen	•	-	•[1]	•	•
	Salicylate	•	-	•	•	•

1. Acetaminophen was stable at 24 hrs, 25°C in one of two studies. Refer to BD White Papers for full details.

- Stable - Not Tested

The table above indicates within-tube stability vs initial time(t_0) in BD Vacutainer® SST™ II Plus Tubes. Refer to BD White Papers for full details.

Ref: BD White Paper VS5776, VS7050.

The absorption of drugs by gel is dependent upon several factors[2] including:

- The chemical nature of the gel
- The chemical nature of the drug
- Specimen volume on gel
- Time specimen sits on the gel
- Storage temperature

2. Dasgupta, et al. "Absorption of Therapeutic Drugs by Barrier Gels in Serum Separator Blood Collection Tubes". Am J Clin Pathol. 1994; 101: 456-461.

Special Chemistry Fact Sheet

BD has selected these analytes as representatives from each type of compound.

	Time / Temperature	8 hrs 25°C	24 hrs 25°C	48 hrs 4°C	7 days 4°C
Proteins/Peptides	CEA	•	-	•	•
	CRP	•	-	•	•
	Ferritin	•	-	•	•
	FSH	•[1]	-	•	•[1]
	LH	•	-	•	•
	Maternal AFP	•[1]	-	•	•
	PSA	-	•[2]	-	-
	Free T4	•[1]	•[1]	-	•[1]
	Total T3	•	-	•	•
	Total T4	•	-	•	•[1]
	TSH	•	•	•	•
Vitamins	Folate	•[1,3]	•[1,3]	•[1,3]	•[1,3]
	Vitamin B12	•	•	•[1]	•[1]
Steroids	Cortisol	•	•	-	•
	Estradiol	-	•	•	•
	Progesterone	-	•	•	•
	Testosterone	•	•[1]	-	•[1]

1. The mean bias vs initial time (t_0) was within the clinical acceptance limit but the 95% limit for the mean bias was not. Refer to BD White Papers for full details.

2. PSA was stable at 24 hrs, 4°C

3. Stability of folate may vary depending on storage conditions.

- Stable - Not Tested

The table above indicates within-tube stability vs initial time (t_0) in BD Vacutainer® SST™ II Plus Tubes, except for progesterone and estradiol. Data for progesterone and estradiol indicates within-tube stability vs t_0 in BD Vacutainer® SST™ II Advance Tubes. Refer to BD White Papers for full details.

Ref: BD White Paper VS5778, VS7051, VS7192

Whenever changing any manufacturer's blood collection tube type, size or storage condition for a particular laboratory assay, the laboratory personnel should review the tube manufacturer's data and their own data to establish/ verify the reference range for a specific instrument/reagent system. Based on such information, the laboratory can then decide if a change is appropriate.

BD