Collecting and handling methods of samples

Blood

[Timing of blood sampling] Ideally, blood samples are collected when well-rested and after fasting in the early morning (except for emergency situations or specified conditions).

[Collecting samples]

○ Blood: After taking blood, promptly transfer to a specified tube containing the anticoagulant, and gently invert the tube. Unless otherwise specified, specimens to be stored at room temperature or under refrigeration should be kept in the original tubes, and those to be stored frozen should be transferred to submission containers. Submit the specimens under the specified storage conditions.

○ Serum: Collect about 3 times the volume of blood needed for the test.
Unless otherwise specified, allow to stand at room temperature. After coagulation, centrifuge the blood. After centrifugation, transfer the supernatant to a submission container. Submit the specimens under the specified storage conditions.
The storage condition depends on the tests, so please check it for each test.

○ Plasma: Collect about 3 times the volume of blood needed for the test.
Unless otherwise specified, after drawing blood into a specified tube containing the anticoagulant, promptly invert the tube, and centrifuge the blood.
After centrifugation, transfer the supernatant to a submission container. Submit the specimens under the specified storage conditions.
Sampling methods and storage conditions depend on the tests, so please check comments, storage conditions, and handling methods of containers for each test.
If the volume of the collected blood is less than the volume defined in the container, it may give influence on the data of some items. Make sure to collect the specified volume of blood.

[Points to note]

○ Blood sampling into vacuum tubes
If collected blood volume is below the specified volume of the tube, the pressure inside the tube remains negative, which may cause hemolysis. Make sure to collect the specified volume of blood.

○ Blood sampling into syringes
Take off the needle from the syringe, and slowly inject the needle. Draw blood along the side of the tube.

○ Preventive measures against hemolysis
Avoid putting excess pressure or foaming of blood when drawing blood. Use a completely dried blood sampling tube.
Avoid physical stimulation (e.g., extremely high or low temperature, vibration, etc.).

Urine

[Random urine]

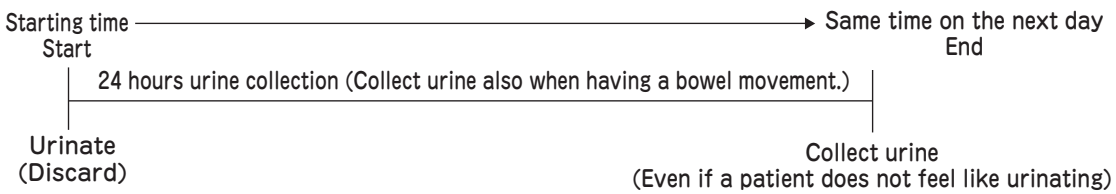
Collect urine into a urine sampling container, and transfer the necessary volume of urine into a submission container. Submit the specimen under the specified storage conditions.
Some tests specify the timing of urine sampling; therefore, please check the comments and handling methods of dedicated containers for each test.

[24 hours urine collection]

At the starting time point of urine collection, instruct a patient to urinate completely (that should be flushed). Then, collect all urine in a storage container in the following 24 hours period. During the time of urine collection, the storage container should be covered by a lid and kept in a cold and dark place.
After the urine collection, measure the urine volume, mix well, and transfer the necessary volume of the specimen into a submission container. Write the collection time period and urine volume, and submit the specimen under the specified storage conditions.

○ Acidified urine collection
Depending on the tests, SRL uses following methods of acidified urine collection to preserve and stabilize specimens. For some tests, acidified urine may have an effect on the data; therefore, please make sure to check comments for each test.

1. Using preservatives
Regardless of the urine volume, put all dedicated preservatives (the tablet and granules) into a storage container for urine collection.
2. Using hydrochloric acid
Put the specified amount of 6N hydrochloric acid into a storage container for urine collection. (Please check comments for the specified amount of hydrochloric acid and points to note for each test.)



Sending in samples for coagulation test (extraction from consensus on handling of coagulation test samples)

[Blood collection tube]

- Use the tube made of plastic or glass treated with silicon.
- Use 0.105-0.109M (3.13-3.2%) sodium citrate solution for anticoagulant.
- The ratio of sodium citrate solution to blood is 1: 9. Acceptable volume of blood collection should be nominal capacity±10%.
- For patients with hematocrit level (Ht)≥55%, adjust the volume of sodium citrate solution.

[Blood collection]

Comply with JCCLS standard blood collection guideline GP4-A2.

- Vacuum or syringe blood collection can be done.
  - ○ Vacuum blood collection using a blood collection needle: collect first blood specimen using a coagulation test tube or blood serum collection tube.
  - ○ Vacuum blood collection tube using a butterfly needle: collect first blood specimen using a dummy blood collection tube or a blood collection tube for other tests before blood collection in a tube for coagulation test.
  - ○ Syringe blood collection: Transfer first blood specimen into a blood collection tube for coagulation test.
- Aseptic needling should be applied with minimum blood flow stagnation (use of tourniquet).
- Use 21- 23G injection needle or butterfly needle depending on individual situations
- Don't use a venous line that contains heparin.
- Confirm that the accurate volume of blood has flown into the blood collection tube. Invert the tube immediately 5 times to mix the blood and anticoagulant without forming bubbles.

[Confirmation of coagulated samples]

Samples may be coagulated at the time at the time of arrival in the laboratory, especially when taken from patients with difficulty of blood collection. If coagulation is confirmed before centrifuge, whether the test will be continued after re-collection of blood or discontinued will be discussed with the clinician.

[Supplementary information]

According to the CLSI Approved guideline 5th ed H21-A5, blood collection via a vascular access device (VAD) should be done with no air leak confirmed, avoiding heparin flush wherever possible to prevent contamination or dilution with heparin.
More specifically, flush with 5mL of saline, and discard blood of 5 mL or 6-folds of VAD dead space volume before sample collection.
It is clearly stated that blood collection from saline lock (cap-off intravenous port) should be done after discarding twice the volume of dead space of catheter and the extension set.

〈Reference〉

Coagulation test standardization working group, Standardization Committee of Japanese Society for Laboratory Hematology
Consensus on handling of coagulation test samples, 17, 149-168, 2016.

About dedicated containers

The dedicated containers presented in each page are prepared by SRL. Please contact the nearest office for the containers. Please regard the self-life as a reference.

container handling method

CONTAINER FORM

A00
Previous container symbol
X

Storage conditions: Room temperature

Polyethylene test tube

CONTAINER FORM

ARR
Previous container symbol
r

Storage conditions: Room temperature

Sterile polyethylene test tube

CONTAINER FORM

ASS
Previous container symbol
i

Storage conditions: Room temperature

Light-shielding polyethylene test tube

CONTAINER FORM

AZZ
Previous container symbol
Z

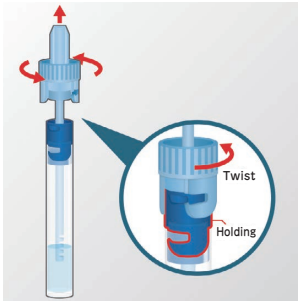
Acid-washed polyethylene test tube
Storage conditions: Room temperature

Metal test

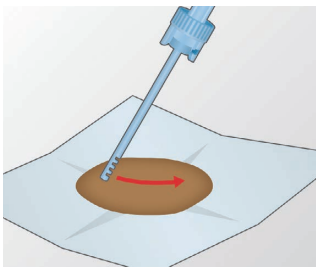
CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
F00 Previous container symbol U 	Stool container Storage conditions: Room temperature	**Adenovirus DNA**	stool 500mg		F	Collect 500mg of stool in the designated container, and be sure to store frozen. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Norovirus antigen	stool Little-finger head size			Place 0.5g (little-finger head size) of stool collected from center of stool into a container shown in the left image, and be sure to freeze.
		Norovirus RNA, qualitative				
		Fecal calprotectin	stool 1g			Place 1g (thumb-head size) of stool into a container shown in the left image, and be sure to freeze.
		Digestion state	stool Thumb-head size		R	Place 1g (thumb-head size) of stool into a container shown in the left image, and refrigerate the specimen.
		Entamoeba histolytica DNA qualification	stool 0.5g		F	Place 0.5g (little-finger head size) of stool collected from center of stool into a container shown in the left image, and be sure to freeze.

CONTAINER FORM	TEST NAME	STORE TEMPERATURE
F30 Previous container symbol d9	**Fecal calprotectin(FEIA)**	F

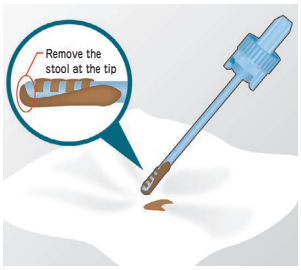
SAMPLE HANDLING METHOD



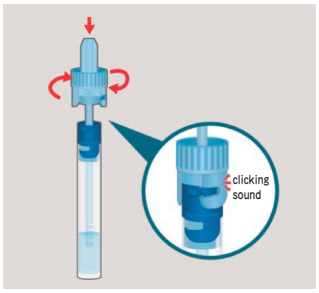
1. While holding the blue part of the cap, twist the top light blue part to the left to pull out the stick.



2. Scrape the stool to completely fill up the 4 grooves at the tip of the stick.



3. Remove the stool at the tip with toilet paper, etc.



4. Put the stick into the container and twist the light blue part to the right until it fits into the blue part with a clicking sound.

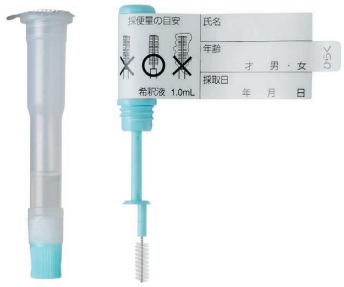
Contents:
tris buffer
BSA
sodium azide (≤ 0.1%)

Storage conditions:
Refrigeration

Self-life: 24 months

● Note
Do not expose eyes, mouth or skin to the preservation solution in the container. If accidentally exposed, rinse well with water.

container handling method

CONTAINER FORM	TEST NAME	STORE TEMPERATURE / SAMPLING METHOD	SAMPLING METHOD
F70 Previous container symbol **d7** Dedicated container for fecal Helicobacter pylori antigen  Additives: Phosphate buffer 1.0 mL Storage conditions: Room temperature Self-life: 1 year	**Fecal Helicobacter pylori antigen**	R	1. Open up the label that is rolled around the handle of the sampling brush, fill out the fields of the label, and roll the label up to the original state. 2. Stick and rotate the brush in the feces so that a portion of feces is caught by the brush. 3. Insert the sampling brush into the container from which the aluminum seal has been taken off, and screw the brush firmly into the container. Then, gently shake the container 5 to 6 times. 4. Put the container in an attached plastic bag, and store in a cold and dark place. Promptly submit the specimen. (Note) Do not remove the blue cap.

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD
F80 Previous container symbol **d8**  Additives: Preservation solution Storage conditions: Room temperature Self-life: 1 year	**Hemoglobin and transferrin in feces** **Hemoglobin in feces, qualitative Gold colloid method** **Hemoglobin in feces, quantitative Gold colloid method**	R	● **Sampling methods** 1. Rotate the screw cap, and pull out the stick. Scrape the wide surface of the stool with the sampling probe. 2. Place the stick back into the container (do not reinsert), and firmly tighten the screw cap. 3. Put the container in an attached bag. Then, refrigerate and submit the specimen. ● **Points to note** 1. Do not throw away preservation solution in the container. 2. Cover the grooved portion of the sampling probe completely with stool sample. Do not scrape up too much or too little stool. No food restrictions are necessary before fecal sampling.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H 	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	Leukemia/lymphoma analysis (LLA), CD45 gating, test for hematopoietic malignant tumor cells	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Collect the specified amount of sample, mix well, and refrigerate. Please submit a sample on the day it is collected.
		Multiple myeloma analysis CD38 multianalysis, test for hematopoietic malignant tumor cells				
		Chromosome G-Banding				Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Chromosome analysis using spectral karyotyping (SKY)(Hematological disorder)				
		TCF3-PBX1 t(1;19) translocation				
		CKS1B 1q21 amplification				
		ALK 2p23 translocation	lymph node 5×5×5 mm	lymph node (with the preservation solution) 5×5×5 mm	R	Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
			bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		GATA2-MECOM inv(3) inversion, t(3;3) translocation				
		BCL6 3q27 translocation	lymph node 5×5×5 mm	lymph node (with the preservation solution) 5×5×5 mm		Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		IGH-FGFR3 t(4;14) translocation	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		FIP1L1-PDGFRA 4q deletion (4q12 deletion)				
		CSF1R 5q deletion				
		EGR1 5q deletion				
		PDGFRB 5q32 translocation				
		D7S486 7q deletion/ Chromosome 7 monosomy				
		Chromosome anomaly associated with hematological disorders, Chromosome 8				

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	MYC 8q24 translocation	bone marrow fluid 1.0	bone marrow fluid (with the preservation solution) 1.0		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		IGH-MYC t(8;14) translocation	lymph node 5×5×5 mm each	lymph node (with the preservation solution) 5×5×5 mm each		Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		RUNX1-RUNX1T1 (AML1-MTG8) t(8;21) translocation	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		FGFR1 8p11.2 translocation				
		BCR-ABL1 t(9;22) translocation				
		KMT2A(MLL) 11q23.3 translocation				
		IGH-CCND1 (IGH-BCL1) t(11;14) translocation	lymph node 5×5×5 mm	lymph node (with the preservation solution) 5×5×5 mm	R	Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		NUP98 11p15 translocation	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		BIRC3-MALT1 (API2-MALT1) t(11;18) translocation	lymph node 5×5×5 mm	lymph node (with the preservation solution) 5×5×5 mm		Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		ATM 11q deletion	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Chromosome anomaly associated with hematological disorders, Chromosome 12				
		ETV6-RUNX1 (TEL-AML1) t(12;21) translocation				
		D13S319 13q deletion				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H 	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	**IGH-BCL2 t(14;18) translocation**	lymph node 5×5×5 mm	lymph node (with the preservation solution) 5×5×5 mm		Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		IGH-MAF t(14;16) translocation	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		PML-RARA t(15;17) translocation	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		
		CBFB inv(16) inversion, t(16;16) translocation				
		TP53 17p deletion				
		BCL2 18q21 translocation	lymph node 5×5×5 mm	lymph node (with the preservation solution) 5×5×5 mm		Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		20q deletion	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each	R	Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Chromosome anomaly associated with hematological disorders, Chromosome X				
		Chromosome anomaly associated with hematological disorders, Chromosome Y				
		Sex-mismatched bone marrow transplantation (BMT) (Chromosomes XY)				
		1p Deletion	tissues 5×5×5 mm for each	tissues (with the preservation solution) 5×5×5 mm each		Place tissues5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		MYCN 2p24 amplification	bone marrow fluid 1.0	bone marrow fluid (with the preservation solution) 1.0		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		19q Deletion	tissues 5×5×5 mm for each	tissues (with the preservation solution) 5×5×5 mm each		Place tissues5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.
		EWSR1 22q12 translocation	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H 	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	**FLT3/ITD mutation analysis**	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each	R	Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		KIT sequence analysis (leukemia)				Draw blood to obtain 1.0 mL of bone marrow fluid into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, the result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		NPM1 mutational analysis				
		Screening of chimeric genes related to leukemia, quantitative				Collect the specified amount of sample, mix well, and refrigerate. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		WT1 mRNA quantitative				Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Major BCR-ABL1 mRNA, quantitative				
		Major BCR-ABL1 mRNA, qualitative				
		Mutation analysis in the ABL1 region, Major BCR-ABL1				
		minor BCR-ABL1 mRNA, quantitative				
		minor BCR-ABL1 mRNA, qualitative				
		Mutation analysis in the ABL1 region, minor BCR-ABL1				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H 	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	**TCF3-PBX1 mRNA, quantitative**	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each	R	Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		TCF3-PBX1 mRNA, qualitative				
		PML-RARA mRNA, quantitative				
		PML-RARA mRNA, qualitative				
		CBFB-MYH11 mRNA, quantitative				
		CBFB-MYH11 mRNA, qualitative				
		RUNX1-RUNX1T1 mRNA, quantitative				
		RUNX1-RUNX1T1 mRNA, qualitative				
		RUNX1-MECOM mRNA, qualitative				
		ETV6-RUNX1 mRNA, quantitative				
		ETV6-RUNX1 mRNA, qualitative				

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H 	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	KMT2A-AFF1 mRNA, quantitative	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each	R	Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		KMT2A-AFF1 mRNA, qualitative				
		KMT2A-AFDN mRNA, quantitative				
		KMT2A-AFDN mRNA, qualitative				
		KMT2A-MLLT3 mRNA, quantitative				
		KMT2A-MLLT3 mRNA, qualitative				
		KMT2A-MLLT1 mRNA, quantitative				
		KMT2A-MLLT1 mRNA, qualitative				
		NUP98-HOXA9 mRNA, quantitative				
		STIL-TAL1 mRNA, quantitative				
		DEK-NUP214 mRNA, quantitative				
		DEK-NUP214 mRNA, qualitative				
		T-cell receptor β-chain Cβ1 rearrangement				
		T-cell receptor β-chain Jβ1 rearrangement				
		T-cell receptor β-chain Jβ2 rearrangement				
		T-cell receptor γ-chain Jγ rearrangement				
		T-cell receptor δ-chain Jδ1 rearrangement				
		Immunoglobulin H-chain J_H rearrangement				
		Immunoglobulin H-chain Cμ rearrangement				
		Immunoglobulin L-chain Jκ rearrangement				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H00 Previous container symbol H 	Containing the preservation solution (Container capability of 5 mL) Additives: RPMI-1640 FBS Kanamycin sulfate Novo-heparin sodium Sodium bicarbonate HEPES Storage conditions: Freeze Self-life: Use this after confirming that the solution color has turned to pale pink. The color turns to pale yellow after freezing and to pale pink after thawing.	**Immunoglobulin L-chain Cκ rearrangement**	bone marrow fluid 1.0 each	bone marrow fluid (with the preservation solution) 1.0 each		Obtain 1.0 mL of bone marrow fluid into a container shown in the left image aseptically, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Immunoglobulin L-chain Cλ rearrangement				
		Chimerism analysis, pre-transplant, recipient, PCR				Collect the specified amount of sample, mix well, and refrigerate. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Chimerism analysis, pre-transplant, donor, PCR	umbilical cord blood 1.0	umbilical cord blood (with the preservation solution) 1.0	R	
		Chimerism analysis, post-transplant, PCR	bone marrow fluid 1.0	bone marrow fluid (with the preservation solution) 1.0		
		DNA histogram	bone marrow fluid 1 × 10^7 cells	bone marrow fluid (with the preservation solution) 1 × 10^7 cells		Collect the specified amount of sample, mix well, and refrigerate. Please submit a sample on the day it is collected.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
H20 Previous container symbol H2 	Containing the preservation solution (Container capability of 10 mL) Additives: FBS PBS Kanamycin sulfate Storage conditions: Freeze Self-life: 1 year	**Malignant lymphoma analysis (MLA), CD45 gating, test for hematopoietic malignant tumor cell** **Malignant lymphoma analysis, 7AAD analysis, test for hematopoietic malignant tumor cells**	lymph node 5×5×5 mm each	lymph node (with the preservation solution) 5×5×5 mm each	R	Place lymph nodes 5×5×5 mm in size in a container shown in the left image, suspend, and refrigerate. Please submit a sample on the day it is collected.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
M30 Previous container symbol r3 	Containing deproteinization solution (Content volume of 1 mL) Additives: 0.8 N perchloric acid Storage conditions: Refrigeration Self-life: 1 year	**Lactic acid** **Pyruvic acid**	whole blood 1.0 each	Immediately Deproteinized supernatant 0.4 each	R	Immediately after blood sampling, pipette accurately 1.0 mL of blood into the dedicated container. After stirring thoroughly, centrifuge the tube at 3000 rpm for 5 minutes, and submit the supernatant.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
M40 Previous container symbol r4 	Containing deproteinization solution (Content volume of 4 mL) Additives: Sodium tungstate, sulfuric acid Storage conditions: Refrigeration Self-life: 1 year	**Ammonia**	whole blood 1.0	Immediately Deproteinized supernatant 3	F	Immediately after blood sampling, pipette accurately 1.0 mL of blood into the dedicated container. After stirring thoroughly, centrifuge the tube at 3000 rpm for 5 minutes, and submit the supernatant.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
M50 Previous container symbol r5 	Containing deproteinization solution (Content volume of 0.5 mL) Additives: 0.8 N perchloric acid Storage conditions: Refrigeration Self-life: 1 year	Light Shielding **Vitamin C (ascorbic acid)**	serum 0.5	deproteinized supernatant 0.5	F	Immediately after blood sampling, separate serum, and pipette accurately 0.5 mL of serum into the dedicated container. After stirring thoroughly, centrifuge the tube at 3000 rpm for 5 minutes. Transfer the supernatant into a light-shielding polyethylene test tube (ASS), freeze, and submit the specimen under frozen conditions.

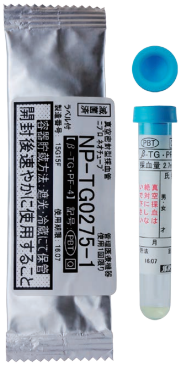
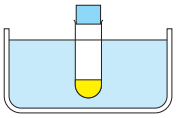
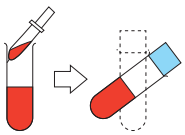
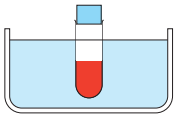
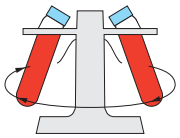
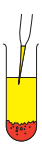
CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PAC Previous container symbol B 	Containing ACD-A solution Additives: ACD-A solution Storage conditions: Room temperature Self-life: 1 year (1 month after opening the aluminum package)	**Platelet associated Immunoglobulin G (PAIgG)**	whole blood 7.5	whole blood (with ACD-A solution) 7.5	R	After drawing the specified amount of blood, inject the blood into a container shown in the left image. After mixing well, refrigerate the specimen. (Note) If peripheral platelet count is ≤ $3 \times 10^4/\mu L$, use two dedicated tubes to surely collect at least 10 mL of blood.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PAP Previous container symbol D 	Containing EDTA-2Na and aprotinin (3mL vacuum blood sampling tube) Additives: EDTA-2Na 3.75 mg Aprotinin (1500 units) Storage conditions: Room temperature Self-life: 1 year	**Parathyroid hormone related peptide (PTHrP)**	whole blood 1.5–2.0 each	Refrigerated plasma 0.5 each	F	After drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
		Pancreatic glucagon		Immediately Refrigerated plasma 0.5 each		Draw blood into a container shown in the left image, mix well, separate plasma at low temperature (4℃), and freeze the specimen immediately.
		Glucagon (IRG)		Refrigerated plasma 0.5 each		After drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
		Human atrial natriuretic peptide (HANP)		Immediately Refrigerated plasma 0.5 each		Draw the specified amount of blood into a container shown in the left image in resting conditions, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PAP Previous container symbol D 	Containing EDTA-2Na and aprotinin (3mL vacuum blood sampling tube) Additives: EDTA-2Na 3.75 mg Aprotinin (1500 units) Storage conditions: Room temperature Self-life: 1 year	**GLP-1 (active)** **Active glucagon-like peptide-1, extraction** **Active glucose-dependent insulinotropic polypeptide, extraction** **GIP (active)**	whole blood 1.5–2.0 each	Immediately Refrigerated plasma 0.5 each	F	After blood sampling to a container shown in the left image, add DPP-IV inhibitor (10 μL per 1.0 mL of blood). After mixing, centrifuge the mixture under refrigerated conditions. After plasma separation, freeze the specimen immediately.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PAR Previous container symbol **B1** 	Containing ACD-A solution Additives : ACD-A solution Storage conditions : Room temperature Self-life: 1 year (1 month after opening the aluminum package)	**Flow cytometry crossmatch, lymphocyte crossmatch test**	whole blood 7.5	whole blood (with ACD-A solution) 7.5	R	After drawing the specified amount of blood, inject the blood into a container shown in the left image. After mixing well, and store at room temperature.

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD		
PBT Previous container symbol **Q** 	**β-thromboglobulin (β-TG)**	F		Cool the dedicated container (PBT) in advance.	Make sure that the surface of specimen in the dedicated container is below the surface of the ice water. Do not use ice cubes.
				Collect 3.0 mL of blood sample in a plastic syringe with a 20 gauge needle, if possible (19-21 gauge needle is also acceptable). (Do not collect blood samples directly using a dedicated container [PBT].)	Do not use any vacuum blood sampling tube, catheter, or other sampling methods. Also, do not use any tourniquets. Avoid drawing ≥10 mL of blood. Collect blood smoothly while avoiding any damage to the vascular walls.
				Remove the needle and gently open the cap of the dedicated container (PBT) to gently transfer 2.7 mL of the blood sample into the tube. Invert the tube slowly 2 to 3 times.	Use only the dedicated container. Do not shake the dedicated container.
				Promptly place the dedicated container in a rack with crushed ice and water.	Make sure that the surface of blood in the dedicated container is below the surface of the ice water.
(Do not use a vacuum tube.) Containing antiplatelet agent Additives: Theophylline Adenosine Dipyridamole Sodium citrate Citric acid Storage conditions: Refrigeration and protection from light Self-life: 1 year	**Platelet factor-4 (PF-4)**		Proceed to the following procedures within 2 minutes.		
				After allowing the tube to stand in a crushed ice-water mixture for 15 to 30 minutes, centrifuge the tube at 2000 g for 30 minutes at 2 to 4℃. (The table below shows the rotor radius and the speed [rpm] at 2000 G.)*Equation of the rotating speed of the centrifuge $G = 1.118 \times 10^{-5} \times r \times n^2$ r:radius of the centrifuge rotor (cm) n:number of revolutions per minute (rpm)	Make sure to centrifuge within 1 hour under cool conditions. Conversion table
				Collect 0.3 mL of supernatant per testing sample from a little lower than the surface into a specimen container using a micropipette. Do not collect the supernatant close to the pellet. (Avoid collecting all plasma.) Make sure to freeze the specimen (stability for 1 month).	

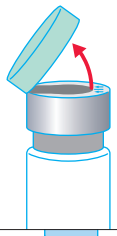
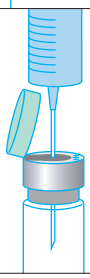
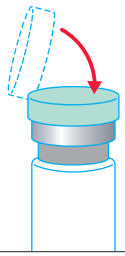
Radius (cm)	Speed (rpm)	Radius (cm)	Speed (rpm)
10	4200	22	2800
12	3800	24	2700
14	3500	26	2600
16	3300	28	2500
18	3100	30	2400
20	3000		

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PC2 Previous container symbol K 	Containing 3.2% sodium citrate (1.8mL vacuum blood sampling tube) Additives: 3.2% sodium citrate 0.2 mL Storage conditions: Room temperature Self-life: 1 year (1 month after opening the plastic case that contains 25 tubes)	Heparin	whole blood 1.8 each	Immediately plasma 0.3		Draw 1.8 mL of blood into a tube containing 0.2 mL of 3.2% sodium citrate, invert the tube 5 to 6 times, and promptly separate plasma. Be sure to freeze the plasma sample for storage. (When submitting ≥1.8 mL of blood with multiple test requests, use the PC5 container.) [Points to note] * Please be advised of the following procedures for total PAI-1. 1. Use the PC2 container for sampling, and be sure to centrifuge blood under refrigerated conditions. Avoid centrifugation at room temperature or using the PC5 container, because such procedures may cause increasing the values. 2. If the sample cannot be separated immediately, put it in ice water and separate plasma within 1 hour.
		Activated partial thromboplastin time (APTT)		Immediately plasma 0.5 each		
		Prothrombin time (PT)				
		Thrombotest (TT)				
		Fibrinogen (FIB)				
		Soluble fibrin monomer complex (SFMC)		Immediately plasma 0.3		
		Fibrin monomer complex, quantitative		Immediately plasma 0.5		
		FDP, quantitative		Immediately plasma 0.3		
		D-dimer		Immediately plasma 0.5		
		Prothrombin fragment F1+2		Immediately plasma 0.3		
		Antithrombin III (AT-III)			F	
		Thrombin/ Antithrombin complex III (TAT)		Immediately plasma 0.5 each		
		Plasminogen				
		Antiplasmin (α_2 plasmin inhibitor)				
		Plasmin-α_2-plasmin inhibitor complex (PIC test)		Immediately plasma 0.2		
		Total PAI-1 (tPA/PAI-1 complex)		Immediately Refrigerated plasma 0.5		
		Coagulation factor activity test: Factor Ⅷ (F8), Chromogenic Substrate method		Immediately plasma 0.3 each		
		Coagulation factor activity test: Factor Ⅸ (F9), Chromogenic Substrate method				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PC2 Previous container symbol K 	Containing 3.2% sodium citrate (1.8mL vacuum blood sampling tube) Additives: 3.2% sodium citrate 0.2 mL Storage conditions: Room temperature Self-life: 1 year (1 month after opening the plastic case that contains 25 tubes)	Coagulation factor activity test: Factor II (F2), Factor V (F5), Factor VII (F7), Factor VIII (F8), Factor IX (F9), Factor X (F10), Factor XI (F11), Factor XII (F12), Factor XIII (F13)	whole blood 1.8 each	Immediately plasma 0.4 each	F	Draw 1.8 mL of blood into a tube containing 0.2 mL of 3.2% sodium citrate, invert the tube 5 to 6 times, and promptly separate plasma. Be sure to freeze the plasma sample for storage. (When submitting ≥1.8 mL of blood with multiple test requests, use the PC5 container.)
		von Willebrand factor antigen assay		Immediately plasma 0.2		
		von Willebrand factor activity (ristocetin cofactor)		Immediately plasma 0.5 each		
		von Willebrand factor multimer analysis				
		ADAMTS13 activity		Immediately plasma 0.3		
		ADAMTS13 inhibitor		Immediately plasma 0.6		
		Protein C (antigen level)		Immediately plasma 0.3		
		Protein C activity		Immediately plasma 0.4		
		Protein S (antigen level)		Immediately plasma 0.2		
		Protein S activity		Immediately plasma 0.4		
		Protein S (free antigen level)		Immediately plasma 0.2		
		HIT antibody (Platelet factor 4-heparin complex antibody)		Immediately plasma 0.5		Draw 1.8 mL of blood into a tube containing 0.2 mL of 3.2% sodium citrate, invert the tube 5 to 6 times, and promptly separate plasma. Be sure to freeze the plasma sample for storage.
		C1 inactivator activity (C1 esterase inhibitor activity)		Immediately plasma 0.2		Draw 1.8 mL of blood into a tube containing 0.2 mL of 3.2% sodium citrate, invert the tube 5 to 6 times, and promptly separate plasma. Be sure to freeze the plasma sample for storage. (When submitting ≥1.8 mL of blood with multiple test requests, use the PC5 container.)

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PC5 Previous container symbol L 	Containing 3.2% sodium citrate (4.5mL vacuum blood sampling tube) Additives: 3.2% sodium citrate 0.5 mL Storage conditions: Room temperature Self-life: 1 year (1 month after opening the plastic case that contains 25 tubes)	Light Shielding **Vitamin K fractionation**	whole blood 4.5 each	Immediately plasma 2.0	F	Draw 4.5 mL of blood into a tube containing 0.5 mL of 3.2% sodium citrate, invert the tube 5 to 6 times, and promptly separate plasma. Be sure to use the “light-shielding polyethylene test tube (ASS)” when submitting plasma samples. Be sure to freeze the plasma sample for storage.
		Coagulation inhibitor identification **Factor VIII**		Immediately plasma 1.0 each		Draw 4.5 mL of blood into a tube containing 0.5 mL of 3.2% sodium citrate, invert the tube 5 to 6 times, and promptly separate plasma. Be sure to freeze the plasma sample for storage.
		Coagulation inhibitor identification **Factor IX**				
		Lupus-anticoagulant		Immediately Refrigerated plasma 1.0		Centrifuge at ≥ 1500 G for 15 minutes at room temperature immediately after blood is drawn, take plasma at the position of ≥ 5 mm above the buffy coat, and submit it under frozen conditions. Handle the samples with care to avoid platelet contamination which may affect the results. *Equation of the rotating speed of the centrifuge $G=1.118\times10^{-5}\times r\times n^2$ r: radius of the centrifuge rotor (cm) n: number of revolutions per minute (rpm)

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PE2 Previous container symbol T3 	(2mL vacuum blood sampling tube) Additives: Novo-heparin 15 IU Storage conditions: Room temperature Self-life: 1 year	**Endotoxin, quantitative**	whole blood (with Novo-heparin) 2.0 each		R	After drawing blood into a container shown in the left image, mix well. Promptly refrigerate the specimen. The data will be affected if it is kept at room temperature. Avoid putting in another request at the same time, except for β-D-glucan.
		β-D-glucan				After drawing blood into a container shown in the left image, mix well. Promptly refrigerate the specimen. Avoid putting in another request at the same time, except for Endotoxin quantitative.

CONTAINER FORM	TEST NAME		AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLING METHOD	
PE4 Previous container symbol T4   (4.0mL vacuum blood sampling tube) Additives: Stabilizer 0.1 mL Storage conditions: Refrigeration Self-life: 1 year	Endotoxin in dialysis fluid	Solution A Solution B RO water Preparation solution others	Dialysis fluid (containing stabilizer) 4.0 each		R	1 	Pull up the color cap of the PE4 container towards the arrow direction to open while keeping one edge of the cap on the aluminum part (so that the cap stays on the top edge). Clean the rubber stopper with an alcohol disinfection cotton.
						2 	Aseptically collect dialysis fluid using a needle-attached syringe, and inject into the PE4 container by pushing the needle through the rubber stopper.
						3 	After injection, cover the color cap to the original state. Promptly shake the container about 4 times to mix the stabilizer uniformly. Promptly refrigerate, and submit the specimen.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PF2 Previous container symbol E  	Containing sodium fluoride (2mL vacuum blood sampling tube) Additives: Sodium fluoride 2.5 mg Heparin sodium 25 uspu EDTA-2Na 7.4 mg Storage conditions: Room temperature Self-life: 2 years	Glucose	whole blood 1.5–2.0	plasma 0.5		After drawing blood into a container shown in the left image, mix well, and separate plasma. Refrigerate the plasma samples.
		Hemoglobin A_{1c} (HbA1c) (NGSP)	whole blood (with sodium fluoride) 2.0		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen.
		Glycoalbumin	whole blood 2.0	plasma 0.5		After drawing blood into a container shown in the left image, mix well, and separate plasma. Refrigerate the plasma samples.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G		γ-aminobutyric acid (GABA)	whole blood 3.0	Immediately plasma 1.0		After drawing blood into a container shown in the left image, mix well, and separate plasma immediately. Be sure to freeze the plasma sample for storage.
		Fatty acid fractionation (24)	whole blood 1.5–2.0 each	plasma 0.5 each	F	Draw blood into a container shown in the left image under fasted conditions in the early morning, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
		Fatty acid fractionation (4)				
		Very long chain fatty acid	whole blood 4.5–5.0	plasma 2.0		After drawing blood into a container shown in the left image, mix well, and separate plasma. Freeze the plasma samples for storage.
		Lipoprotein lipase (LPL)	whole blood 1.5–2.0	Immediately Refrigerated plasma 0.3		Provide a patient with 30 units of heparin per kilogram of body weight intravenously under fasted conditions in the early morning. 15 minutes later, draw blood into a container shown in the left image, and centrifuge the blood at low temperature (4℃). Be sure to freeze the plasma sample for storage.
	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	Nicotinic acid (niacin)	whole blood (with heparin) 1.5			After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen.
		Lead (Pb)	whole blood (with heparin) 3.0			
		Chromium	whole blood (with heparin) 0.7		R	
		Cadmium	whole blood (with heparin) 0.5			
		Manganese	whole blood (with heparin) 0.7			
		Ethanol	whole blood (with heparin) 1.0		F	After drawing blood into a container shown in the left image, mix well. Transfer the blood into a polyethylene test tube, and freeze the specimen.
		Voriconazole	whole blood 1.5–2.0 each	plasma 0.3		After drawing blood into a container shown in the left image, mix well, and separate plasma. Refrigerate the plasma samples.
		Carbamazepine		plasma 0.5 each	R	
		Ethosuximide				
		Phenobarbital				
		Phenytoin				
		Primidone		plasma 0.3		
		Valproate		plasma 0.5		

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G 	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	Gabapentin	whole blood 1.5–2.0 each	plasma 0.3 each	R	After drawing blood into a container shown in the left image, mix well, and separate plasma. Refrigerate the plasma samples.
		Lamotrigine				
		Topiramate				
		Levetiracetam				
		Stiripentol				
		Perampanel				
		Lacosamide				
		Amiodarone				
		Bepridil				
		Aprindine				
		Disopyramide				
		Procainamide		plasma 0.4		
		Propranolol		plasma 0.3 each		
		Pilsicainide				
		Cibenzoline				
		Pirmenol	whole blood 3.0–4.0	plasma 1.3		
		Quinidine	whole blood 1.5–2.0 each	plasma 0.4		
		Flecainide		plasma 0.3		
		Theophylline		plasma 0.5 each		
		Methotrexate				

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	CCR4 protein, FCM	whole blood (with heparin) 5.0 each		R	After drawing blood into a container shown in the left image, mix well, and store at room temperature. Please submit a sample on the day it is collected.
		Tuberculosis specific IFN-γ				After drawing blood into a container shown in the left image, mix well, and store at room temperature (18-25℃). Please submit a sample on the day it is collected.
		Presepsin	whole blood 1.5-2.0	plasma 0.4 Immediately	F	After drawing blood into a container shown in the left image, gently invert the tube 2 to 3 times, and separate plasma immediately. Be sure to freeze the plasma sample for storage. Avoid excessive mix by a vortex mixer or others, mild stirring for a long time, or freeze-thawing method that may cause the elevated values. Avoid putting in another request at the same time.
		CD34, quantitative	whole blood (with heparin) 5.0		R	After drawing blood into a container shown in the left image, mix well, and store at room temperature. Freeze the sample containing DMSO. Avoid putting in another request at the same time. Please submit a sample on the day it is collected.
		Erythrocyte surface marker analysis CD55	whole blood (with heparin) 1.0 each			After drawing blood into a container shown in the left image, mix well, and store at room temperature. Please submit a sample on the day it is collected.
		Erythrocyte surface marker analysis CD59				
		Leukemia/lymphoma analysis (LLA), CD45 gating, test for hematopoietic malignant tumor cells	whole blood (with heparin) 5.0 each			
		Malignant lymphoma analysis (MLA), CD45 gating, test for hematopoietic malignant tumor cells				
		T cell percentage B cell percentage	whole blood (with heparin) 3.0			After drawing blood into a container shown in the left image, mix well, and store at room temperature (17-25℃). Draw a larger amount of blood from patients with low levels of lymphocytes. Please submit a sample on the day it is collected.
		B-cell surface immunoglobulin (Sm-Ig) IgG	whole blood (with heparin) 1.0 each			After drawing blood into a container shown in the left image, mix well, and store at room temperature (17-25℃). Draw a larger amount of blood from patients with low levels of lymphocytes. (3.0 mL when requesting ≥3 test items) Please submit a sample on the day it is collected.
		B-cell surface immunoglobulin (Sm-Ig) IgA				
		B-cell surface immunoglobulin (Sm-Ig) IgM				
		B-cell surface immunoglobulin (Sm-Ig) IgD				
		B-cell surface immunoglobulin (Sm-Ig) K				
		B-cell surface immunoglobulin (Sm-Ig) L				
		Lymphocyte surface marker automated analysis by monoclonal antibodies	whole blood (with heparin) 3.0 each			After drawing blood into a container shown in the left image, mix well, and store at room temperature. (Collect 5.0 mL of blood when requesting at least 10 items.) Please submit a sample on the day it is collected.
		Lymphocyte surface marker analysis by two-color analysis				
		IgG-FcR^{+}/T-cell percentage	whole blood (with heparin) 1.0			After drawing blood into a container shown in the left image, mix well, and store at room temperature (17-25℃). Draw a larger amount of blood from patients with low levels of lymphocytes. Please submit a sample on the day it is collected.
		Platelet surface marker analysis CD41	whole blood (with heparin) 5.0 each			After drawing blood into a container shown in the left image, mix well, and store at room temperature. Please submit a sample on the day it is collected.
		Platelet surface marker analysis CD42b				
		Th1/Th2 (IFN-γ×IL-4/CD4)	whole blood (with heparin) 3.0			

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G		Cytomegalovirus-specific CTL assay (HLA-A*0201)	whole blood (with heparin) 5.0 each		R	After drawing blood into a container shown in the left image, mix well, and store at room temperature. Please submit a sample on the day it is collected.
		Cytomegalovirus-specific CTL assay (HLA-A*2402)				
	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	Congenital chromosomal anomalies: G-Banding	whole blood (with heparin) 3.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Congenital chromosomal anomalies: C-Banding				
		Congenital chromosomal anomalies: Q-Banding				
		Congenital chromosomal anomalies: High-resolution banding				
		Chromosome analysis using spectral karyotyping (SKY) (Congenital anomaly)				
		Fragile X chromosome (Fragile X syndrome)				
		Chromosome 1 (1p36 deletion syndrome)				
		Chromosome 4 (Wolf-Hirschhorn syndrome)				
		Chromosome 5 (Sotos syndrome)				
		Chromosome 7 (Williams syndrome)				
		Congenital chromosomal anomaly, Chromosome 13				
		Chromosome 13 (Congenital retinoblastoma, RB1)				
		Chromosome 15 (Prader-Willi syndrome)				
		Chromosome 15 (Angelman syndrome)				
		Chromosome 17 (Miller-Dieker syndrome)				
		Congenital chromosomal anomaly, Chromosome 18				
		Congenital chromosomal anomaly, Chromosome 21				
		Chromosome 22 (22q11 deletion) (CATCH22) Conotruncal anomaly face syndrome Velo-cardio-facial syndrome DiGeorge syndrome				
		Congenital chromosomal anomalies Chromosome X				
		Chromosome X (Steroid sulfatase [STS] gene)				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G 	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	Congenital chromosomal anomalies Chromosome Y	whole blood (with heparin) 3.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Chromosome Y (Sex-determining region Y [SRY])				
		Chromosomes XY (Short stature homeobox [SHOX])				
		Chromosome anomaly associated with hematological disorders, G-Banding	whole blood (with heparin) 5.0 each			
		Chromosome analysis using spectral karyotyping (SKY) (Hematological disorder)				
		TCF3-PBX1 t(1;19) translocation				
		CKS1B 1q21 amplification				
		ALK 2p23 translocation				
		GATA2-MECOM inv(3) inversion, t(3;3) translocation				
		BCL6 3q27 translocation				
		IGH-FGFR3 t(4;14) translocation				
		FIP1L1-PDGFRA 4q deletion (4q12 deletion)				
		CSF1R 5q deletion				
		EGR1 5q deletion				
		PDGFRB 5q32 translocation				
		D7S486 7q deletion/ Chromosome 7 monosomy				
		Chromosome anomaly associated with hematological disorders, Chromosome 8				

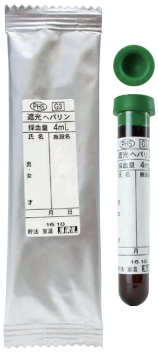
CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G		MYC 8q24 translocation	whole blood (with heparin) 5.0 each			After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		IGH-MYC t(8;14) translocation				
		RUNX1-RUNX1T1 (AML1-MTG8) t(8;21) translocation				
		FGFR1 8p11.2 translocation				
		BCR-ABL1 t(9;22) translocation				
		Peripheral blood neutrophils BCR-ABL1 t(9;22) translocation				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Submit the specimens promptly after blood sampling. If more than 30 hours has passed from sample collection, the sample cannot be used for the test due to cellular morphological changes which may affect the test result.
	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	KMT2A (MLL) 11q23.3 translocation				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		IGH-CCND1 (IGH-BCL1) t(11;14) translocation				
		NUP98 11p15 translocation				
		BIRC3-MALT1 (API2-MALT1) t(11;18) translocation			R	
		ATM 11q deletion				
		Chromosome anomaly associated with hematological disorders, Chromosome 12				
		ETV6-RUNX1 (TEL-AML1) t(12;21) translocation				
		D13S319 13q deletion				
		IGH-BCL2 t(14;18) translocation				
		IGH-MAF t(14;16) translocation				
		PML-RARA t(15;17) translocation				
		CBFB inv(16) inversion, t(16;16) translocation				
		TP53 17p deletion				
		BCL2 18q21 translocation				

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH5 Previous container symbol G 	Containing heparin (5mL vacuum blood sampling tube) Additives: Heparin sodium 65IU Storage conditions: Room temperature Self-life: 2 years	20q deletion	whole blood (with heparin) 5.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected.
		Chromosome anomaly associated with hematological disorders, Chromosome X				
		Chromosome anomaly associated with hematological disorders, Chromosome Y				
		Sex-mismatched bone marrow transplantation (BMT) (Chromosomes XY)				
		FLT3 mutational analysis ITD/ TKD	whole blood (with heparin) 3.0			After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		DNA index	peripheral blood (with heparin) 10.0 each		R	Use 2 tubes shown in the left image. Please submit a sample on the day it is collected.
		DNA histogram				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PH9 Previous container symbol I		**Lymphocyte blastoid transformation by PHA** **Lymphocyte blastoid transformation by Con-A**	whole blood (with heparin) 5.0 each			After drawing blood into a container shown in the left image, mix well, and store at room temperature (17–25℃). Draw a larger amount of blood from patients with low levels of lymphocytes. (8.0 mL when requesting the 2 test items at the same time) Please submit a sample on the day it is collected.
	Containing heparin (10mL vacuum blood sampling tube) Additives: Heparin sodium 130IU Storage conditions: Room temperature Self-life: 2 years	**Drug-induced lymphocyte stimulation test (DLST)**	1 drug whole blood (with heparin) 12.0		R	Collect 2 tubes of blood per drug in the designated container, mix well, and be sure to store at room temperature. 1. Each additional drug requires 5.0 mL of blood. 2. One drug requires 5 million lymphocytes. In some cases, tests may not be conducted due to insufficient lymphocytes. 3. As a guide, double the amount of blood collected when the leukocyte count is ≤ 3000 mm^3. Please contact our sales in charge if you have the leukocyte count and the percentage of lymphocytes in detail. 4. When you place an order for 2 or more items, please specify priority. 5. Please submit a blood sample together with a drug you would like to test. Tablets (one tablet), capsules (one capsule), powders (one packet of approx. one dose), liquid-type internal medicines (approx. 0.5 mL), injection medicines (one vial [ampule]). We will not be able to conduct the test with an ampule for an intradermal reaction test as it contains a trace quantity. If you wish to use other drugs, please contact our sales in charge. 6. If heparin is suspected to be a responsible agent, please collect blood in the dedicated container (PNK) and submit it. Please submit a sample on the day it is collected.
		Mixed lymphocyte culture (MLC)	whole blood (with heparin) (Recipient) 20.0 (donor) 10.0 (unrelated donor) 10.0			Draw 20.0 mL (×2) of blood from a recipient, 10.0 mL (×1) of blood from a donor, and blood 10.0 mL (×1) of blood from an unrelated donor into a container shown in the left image, mix well, and store at room temperature. Do not open the container or transfer samples. MLC is necessary to keep lymphocytes cultured in sterile conditions. Fill name of institution and subject name on the container label. Draw a larger amount of blood from patients with low levels of lymphocytes.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PHS Previous container symbol **G3** 	Containing heparin (4mL vacuum blood sampling tube) Additives: Heparin sodium 83.6 units Storage conditions: Room temperature Self-life: 18 months (1 month after opening the aluminum package)	Light Shielding **Coproporphyrin**	whole blood (with heparin) 1.5 each		R	After drawing blood into a light-shielding container shown in the left image, mix well, and refrigerate the specimen. Be sure to use the light-shielding container.
		Light Shielding **Uroporphyrin**				
		Light Shielding **Protoporphyrin**				
		Light Shielding **Free erythrocyte protoporphyrin**	whole blood (with heparin) 1.0			

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PK2 Previous container symbol **g** 	Containing EDTA-2K (2mL vacuum blood sampling tube) Additives: EDTA-2K 3.8 mg Storage conditions: Room temperature Self-life: 2 years	**Peripheral blood general test**	whole blood (with EDTA-2K) 2.0 each		R	After drawing blood into a container shown in the left image. Immediately after collecting, gently mix the blood by inverting the tube ≥ 5 times, and refrigerate the specimen. We cannot test hemolytic, coagulated, or frozen samples. Please submit a sample on the day it is collected.
		Reticulocyte count				
		Eosinophil granulocyte count				
		NCC Oncopanel System				Collect blood sample in the dedicated container, mix well, and refrigerate the specimen. After the specimen collection, please submit it within 14 days.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PK5 PK7  For 5mL (PK5)  For 7mL (PK7)	Containing EDTA-2K (5mL or 7mL vacuum blood sampling tube) Contents: EDTA-2K 9.5 mg or 13.3 mg Storage conditions: Room temperature Self-life: 2 years	**EGFR mutation analysis v2.0 (plasma)**	whole blood 10.0-14.0	plasma 5.0	R	Draw a sufficient volume of blood to obtain the required specimen (5mL of plasma) into a tube shown in the left image. After blood sampling, make sure to separate plasma within 4 hours. Immediately after the separation, pipette 2.5 mL each of plasma into 2 sterile polyethylene test tubes (ARR) and store them frozen. Decanting is not permitted when obtaining the plasma aliquots to avoid contamination with leukocyte-derived genomic DNA. Avoid putting in another request at the same time. In this method, the result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PKF Previous container symbol g1 	Containing EDTA-2K (2mL vacuum blood sampling tube) Additives: EDTA-2K 3.6 mg Storage conditions: Room temperature Self-life: 1 year	**Vitamin B_1**	whole blood (with EDTA-2K) 0.5 each		F	After drawing blood into a container shown in the left image, mix well, and freeze the specimen.
		Light Shielding **Vitamin B_2**				Draw blood into the designated container, and mix well. Transfer the blood into a light-shielding polyethylene test tube (ASS), submit the specimen under frozen conditions.
		Cyclosporine	whole blood (with EDTA-2K) 0.7 each			After drawing blood into a container shown in the left image, mix well, and freeze the blood. Please note that this cannot be requested simultaneously with other test items.
		Tacrolimus				
		Everolimus	whole blood (with EDTA-2K) 1.0			

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN2 PN5 Previous container symbol C  For 2 mL (PN2)  For 5 mL (PN5)	Containing EDTA-2Na (2 or 5mL vacuum blood sampling tube) Additives: EDTA-2Na 3.0 or 7.5 mg Storage conditions: Room temperature Self-life: 2 years	Pancreatic phospholipase A_2 (pancreatic PLA_2)	whole blood 1.5–2.0 each	plasma 0.3		After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
		Amino acid analysis, 39 types, LC/MS		Immediately Refrigerated plasma 0.5 each	F	Promptly after drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
		Amino acid analysis, 9 types, LC/MS				
		Amino acid analysis, 2 types (tyrosine/ phenylalanine), LC/MS				
		Homocystein, total		plasma 0.3 each	R	After drawing blood into a container shown in the left image, mix well, and separate plasma. Refrigerate the plasma samples.
		Rufinamide				
		Mycophenolic acid		plasma 0.5		
		Imatinib		plasma 0.3		
		Adrenocorticotropic hormone (ACTH)		Refrigerated plasma 0.5		Draw blood into a container shown in the left image in resting conditions in the early morning, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
		Parathyroid hormone (whole PTH)		plasma 0.5 each		After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
		Cortisol				Draw blood into a container shown in the left image in resting conditions in the early morning, mix well, and separate plasma. Freeze the plasma samples for storage.
		Aldosterone				
		Aldosterone/ Renin activity	whole blood 2.0–3.0 each	Refrigerated plasma 0.8		Draw blood into a container shown in the left image in resting conditions in the early morning, mix well, and separate plasma. Freeze the plasma samples for storage.
		Aldosterone/ Renin quantitative		Refrigerated plasma 1.0	F	
		Serotonin	whole blood (with EDTA-2Na) 1.0			After drawing blood into a container shown in the left image, mix well. Transfer the blood into a polyethylene test tube, and freeze the specimen.
		Plasma renin activity (PRA)	whole blood 1.5–2.0 each	Refrigerated plasma 0.3		After drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
		Renin quantitative, activity		Refrigerated plasma 0.5		
		Angiotensin I		Refrigerated plasma 0.2		
		Angiotensin II		Refrigerated plasma 0.3 each		
		Cyclic AMP				

CONTAINER FORM	TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN2 PN5 Previous container symbol C  For 2 mL (PN2)  For 5 mL (PN5) Containing EDTA-2Na (2 or 5mL vacuum blood sampling tube) Additives: EDTA-2Na 3.0 or 7.5 mg Storage conditions: Room temperature Self-life: 2 years	Human brain natriuretic peptide (BNP)	whole blood 1.5–2.0 each	Immediately plasma 0.5	F	Drawing blood into a container shown in the left image in resting conditions, and mix well. Separate plasma within 6 hours in refrigerated conditions. Promptly freeze the plasma for storage.
	PIVKA-II		plasma 0.5	R	After drawing blood into a container shown in the left image, mix well, and separate plasma. Refrigerate the plasma samples.
	Pro-gastrin-releasing peptide (ProGRP)		plasma 0.4	F	After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
	Epstein-Barr virus nucleic acid quantitative	whole blood 3.0–5.0	plasma 0.8		
	ABO/Rh blood group (D factor)	whole blood (with EDTA-2Na) 2.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen.
	Blood group Rh-Hr type				
	Blood type incompatibility	whole blood 10.0–12.0 (in a separate container) and whole blood 2.0	Immediately serum 4.0 and		Draw 2.0 mL of blood into a container shown in the left image, mix well, and promptly submit the specimen under room temperature conditions. Also, draw 10.0 to 12.0 mL of blood in a separate container, promptly separate serum, and refrigerate the specimen. Avoid putting in another request at the same time.
			whole blood (with EDTA-2Na) 2.0	R	
	Direct coombs test	whole blood (with EDTA-2Na) 1.0			After drawing blood into a container shown in the left image, mix well, and promptly submit the specimen in room temperature conditions. Avoid putting in another request at the same time.
	Irregular antibody (Antibody identification/ antibody titer measurement)	whole blood 10.0–15.0 (in a separate container) and whole blood 2.0	Immediately serum 5.0 and	R	Draw 2.0 mL of blood into a container shown in the left image, mix well, and promptly submit the specimen under room temperature conditions. Also, draw 10.0 to 15.0 mL of blood in a separate container, promptly separate serum, and refrigerate the specimen. Avoid putting in another request at the same time.
			whole blood (with EDTA-2Na) 2.0	R	
	Pentraxin 3 (PTX3)	whole blood 1.5–2.0 each	Immediately Refrigerated plasma 0.3		Promptly after drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
	Interleukin-8 (IL-8)		plasma 0.5	F	After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
	Transforming growth factor β1 (TGF-β1)	whole blood 3.0–5.0	Immediately Refrigerated plasma 0.5		Put the blood sample in an ice-chilled container immediately, After ice cooling for 10 to 60 minutes, separate plasma by refrigerated centrifuge (at 1000 G for 30 minutes at 4℃). Avoid putting in another request at the same time.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN2 PN5 Previous container symbol C  For 2 mL (PN2)  For 5 mL (PN5)	Containing EDTA-2Na (2 or 5mL vacuum blood sampling tube) Additives: EDTA-2Na 3.0 or 7.5 mg Storage conditions: Room temperature Self-life: 2 years	FLT3/ITD mutation analysis	whole blood (with EDTA-2Na) 2.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		NPM1 mutational analysis				
		RET gene mutation analysis, Medullary carcinoma of the thyroid				
		Single site analysis for RET				
		Y chromosome microdeletion (AZF region)				
		Drug metabolizing enzyme cytochrome P450 CYP2C19 gene polymorphism analysis				
		UGT1A1 gene polymorphism analysis				
		NUDT15 gene codon 139 polymorphism analysis				
		HLA-A, B, serological typing				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. When requesting at least 2 HLA test items, the sufficient amount for blood test is 2.0 mL. Still, recipients may have a decreased number of cells after chemotherapy or other treatments, which may make it difficult to recover DNA; therefore, make sure to submit at least 2×10^6 cells. Recipients with WBC count below 1000/μL need to provide at least two 2.0mL sampling tubes (Container PN2) or one 5.0mL sampling tube (Container PN5). In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		HLA-A, DNA typing				
		HLA-B, DNA typing				
		HLA-C, DNA typing				
		HLA-DR, serological typing				
		HLA-DRB1, DNA typing				
		HLA-DPB1, DNA typing				
		HLA-DQA1, DNA typing				
		HLA-DQB1, DNA typing				
		Complement factor (C2)	whole blood 2.0–3.0	plasma 1.0	F	After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma in a polyethylene test tube for storage.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN5 Previous container symbol C	Containing EDTA-2Na (5mL vacuum blood sampling tube) Additives: EDTA-2Na 7.5 mg Storage conditions: Room temperature Self-life: 2 years	Herpes Simplex virus DNA, qualitative	whole blood (with EDTA-2Na) 2.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, the result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Varicella-zoster virus DNA, qualitative				
		Cytomegalovirus pp65 antigen (C7-HRP)	whole blood (with EDTA-2Na) 3.0		R	After drawing blood into a container shown in the left image, mix well, and store at room temperature. Submit the specimens promptly after blood sampling. If blood within 24 hours after collection is not used, the detection rate will decrease.
		Cytomegalovirus DNA, qualitative	whole blood (with EDTA-2Na) 2.0 each			After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, the result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Epstein-Barr virus nucleic acid quantitative				
		Human herpesvirus, type 6 DNA, qualitative				
		Human herpesvirus, type 7 DNA, qualitative				
		Measles virus RNA, qualitative				
		Mumps virus RNA, qualitative				
		High sensitivity PNH testing	whole blood (with EDTA-2Na) 5.0 each		R	Be sure to collect the specimen into a container shown in the left image, and submit it in refrigerated conditions. Avoid putting in another request at the same time.
		JAK2V617F mutational analysis				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		MPN gene mutational analysis				
		Congenital long QT syndrome gene analysis				
		HTT gene CAG repeat sequence				
		Androgen receptor gene CAG repeat sequence				
		IL28B SNPs analysis				

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN5 Previous container symbol C 	Containing EDTA-2Na (5mL vacuum blood sampling tube) Additives: EDTA-2Na 7.5 mg Storage conditions: Room temperature Self-life: 2 years	Male AIRS (8 types)	whole blood 3.0–5.0 each	Immediately Refrigerated plasma 0.5 each	F	1. Collect approximately 5mL of blood in an EDTA-2Na-containing tube (left image). 2. Immediately after collecting, gently mix the blood by inverting the tube 2 to 3 times (do not use a roller for mixing). 3. Immediately after mixing (within 1 minute after mixing), cool the tube by immersing in ice water (so that the tube is immersed in an ice bath up to the level of the surface of blood) (≥15 minutes, until ready for centrifuge). 4. Within 8 hours of blood sampling, centrifuge the sample under refrigerated conditions (4℃ , 3000 rpm, 15 minutes) or under normal conditions (3000 rpm, 15 minutes, no temperature rise of the rotor). 5. Immediately after the centrifugation, collect the supernatant plasma from the center of it without touching the interface with the blood, and dispense it. 6. Within 4 hours of dispensing, freeze the plasma samples for storage.
		Female AIRS (9 types)				
		AICS for males (5 types)				
		AICS for females (6 types)				
		LHON mt DNA Evaluation	whole blood (with EDTA-2Na) 8.0×2		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, the result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		MELAS mt DNA Evaluation				
		MERRF mt DNA Evaluation				
		NARP mt DNA Evaluation				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN7 Previous container symbol A 	Containing EDTA-2Na (7mL vacuum blood sampling tube) Additives: EDTA-2Na 10.5 mg Storage conditions: Room temperature Self-life: 2 years	Antidiuretic hormone (AVP)	whole blood 4.0–5.0 each	Immediately Refrigerated plasma 1.5 each	F	Promptly after drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃). Be sure to freeze the plasma sample for storage.
		Catecholamine 3 fractionation A: adrenaline NA: noradrenaline DA: dopamine				
		L-dopa				
		Dopamine, total				
		HVA		plasma 1.5 each		After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
		VMA				
		Serotonin		Immediately Refrigerated plasma 1.5		Promptly after drawing blood into a container shown in the left image, mix well, and separate plasma at low temperature (4℃) at 900 rpm for 20 minutes (PRP) or at 1500 rpm for 10 minutes (P). Be sure to freeze the plasma for storage.
		5-Hydroxyindoleacetic Acid (5-HIAA)		plasma 1.5 each		After drawing blood into a container shown in the left image, mix well, and separate plasma. Be sure to freeze the plasma sample for storage.
		3-Methoxy-4-Hydroxyphenylglycol (MHPG)				
		Herpes simplex virus DNA, quantitative	whole blood (with EDTA-2Na) 5.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Cytomegalovirus pp65 antigen (C10, C11)				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Submit the specimens promptly after blood sampling. If blood within 24 hours after collection is not used, the detection rate will decrease.
		Cytomegalovirus DNA quantitative				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Epstein-Barr virus nucleic acid quantitative (WBC)				
		Epstein-Barr virus DNA (Clonality)	whole blood (with EDTA-2Na) 7.0			After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN7 Previous container symbol A 	Containing EDTA-2Na (7mL vacuum blood sampling tube) Additives: EDTA-2Na 10.5 mg Storage conditions: Room temperature Self-life: 2 years	HTLV-1 nucleic acid detection (pregnant woman), qualitative	whole blood (with EDTA-2Na) 7.0 each		R	After drawing blood into a container shown in the left image, mix well, and submit the specimen in refrigerated conditions. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		HTLV-1 Provirus DNA qualitative				
		HTLV-I (ATLV) Provirus DNA (Clonality)				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen.
		KIT sequence analysis (leukemia)				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Screening of chimeric genes related to leukemia, quantitative				
		WT1 mRNA quantitative				
		Major BCR-ABL1 mRNA (IS)				
		Major BCR-ABL1 mRNA, qualitative				
		Mutation analysis in the ABL1 region, Major BCR-ABL1				
		minor BCR-ABL1 mRNA,quantitative				
		minor BCR-ABL1 mRNA, qualitative				
		Mutation analysis in the ABL1 region, minor BCR-ABL1				
		TCF3-PBX1 mRNA, quantitative				
		TCF3-PBX1 mRNA, qualitative				
		PML-RARA mRNA, quantitative				
		PML-RARA mRNA, qualitative				
		CBFB-MYH11 mRNA, quantitative				
		CBFB-MYH11 mRNA, qualitative				
		RUNX1-RUNX1T1 mRNA, quantitative				
		RUNX1-RUNX1T1 mRNA, qualitative				
		RUNX1-MECOM mRNA, qualitative				
		ETV6-RUNX1 mRNA, quantitative				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN7 Previous container symbol A 	Containing EDTA-2Na (7mL vacuum blood sampling tube) Additives: EDTA-2Na 10.5 mg Storage conditions: Room temperature Self-life: 2 years	ETV6-RUNX1 mRNA, qualitative KMT2A-AFF1 mRNA, quantitative KMT2A-AFF1 mRNA, qualitative KMT2A-AFDN mRNA, quantitative KMT2A-AFDN mRNA, qualitative KMT2A-MLLT3 mRNA, qualitative KMT2A-MLLT3 mRNA, quantitative KMT2A-MLLT1 mRNA, quantitative KMT2A-MLLT1 mRNA, qualitative NUP98-HOXA9 mRNA, quantitative STIL-TAL1 mRNA, quantitative DEK-NUP214 mRNA, quantitative DEK-NUP214 mRNA, qualitative T-cell receptor β-chain Cβ1 rearrangement T-cell receptor β-chain Jβ1 rearrangement T-cell receptor β-chain Jβ2 rearrangement T-cell receptor γ-chain Jγ rearrangement T-cell receptor δ-chain Jδ1 rearrangement Immunoglobulin H-chain J_H rearrangement Immunoglobulin H-chain C_μ rearrangement Immunoglobulin L-chain J_κ rearrangement Immunoglobulin L-chain C_κ rearrangement Immunoglobulin L-chain C_λ rearrangement	whole blood (with EDTA-2Na) 7.0 each		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Please submit a sample on the day it is collected. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
						After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PN7 Previous container symbol A 	Containing EDTA-2Na (7mL vacuum blood sampling tube) Additives: EDTA-2Na 10.5 mg Storage conditions: Room temperature Self-life: 2 years	PRRT2 gene mutational analysis	whole blood (with EDTA-2Na) 7.0 each			After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		MECP2 (exons 3 and 4) mutation analysis				
		Dystrophin DNA				
		Fukuyama-type congenital muscular dystrophy DNA insertion				
		Chimerism analysis, pre-transplant, recipient, PCR			R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Also, make sure to submit a pair of specimens taken from a recipient and from a donor. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Chimerism analysis, pre-transplant, donor, PCR				
		Chimerism analysis, post-transplant, PCR				After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Varicella-zoster virus DNA, quantitative	whole blood (with EDTA-2Na) 5.0 each			
		Human herpesvirus, type 6 DNA quantitative				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PNK Previous container symbol R 	Containing the preservation solution(5mL vacuum blood sampling tube) Additives: Preservation solution 0.7 mL Storage conditions: Refrigeration Self-life: 1 year (1 month after opening the aluminum sheet)	Natural killer cell activity	whole blood (with the preservation solution) 5.0		R	After drawing blood into a container shown in the left image, mix well, and refrigerate the specimen. Draw a larger amount of blood from patients with low levels of lymphocytes. Please submit a sample on the day it is collected.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PNM Previous container symbol g2 	Containing EDTA-2K (10mL vacuum blood sampling tube) Additives: EDTA-2K 18mg Storage conditions: Room temperature Self-life: 1 year	**BRCA1/2 gene test (Breast cancer)**	whole blood 7.0 each (with EDTA-2K)		R	After drawing blood into a container shown in the left image, mix well, and store at room temperature. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples. Please submit a sample on the day it is collected.
		BRCA1/2 gene test (Ovarian cancer)				
		BRCA1/2 gene test (HBOC)				
		Single site testing for BRCA 1/2 gene				

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PSD Previous container symbol h 	SDS Containing EDTA-2Na (Container capability of 10 mL) Storage conditions: Room temperature	**Adenovirus DNA, qualitative**	conjunctiva swab	conjunctival swab (with SDS)	R	Swab affected area with a sterile cotton swab, place the swab in the designated container, and store at room temperature. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Herpes simplex virus DNA, qualitative	swab of affected area	swab of affected area (with SDS)		
		Varicella-zoster virus DNA, qualitative				
		Cytomegalovirus DNA, qualitative				
		Human herpesvirus, type 6 DNA, qualitative				
		Human herpesvirus, type 7 DNA, qualitative				
		Enterovirus RNA, qualitative	throat swab	throat swab (with SDS)		

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
PSF Previous container symbol P3 	Containing EDTA-2K + plasma separating agent (8mL vacuum blood sampling tube) Storage conditions: Room temperature Self-life: 1 year	**HIV-1 RNA quantitative**	whole blood 8.0	plasma 1.8	F	Draw the specified amount of blood (8 mL) into a container shown in the left image, gently invert the tube 4 to 5 times, and centrifuge the tube at room temperature. Freeze the specimen in the tube and submit it under frozen conditions. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	SAMPLE HANDLING METHOD
S09 S06  For 9 mL (S09)  For 6 mL (S06)	Containing separating agent (9 or 6mL vacuum blood sampling tube) Storage conditions: Room temperature Self-life: 1 year	**General biochemical tests** **General serological tests** **others**	As appropriate	As appropriate	After drawing the necessary amount of blood into a container shown in the left image depending on the test, gently invert the tube 4 to 5 times, and allow to stand at room temperature for 30 to 60 minutes. After coagulation, centrifuge the sample. Transfer the serum into the container A00 (polyethylene test tube), and submit it. Please make sure that a sufficient amount of specimen is provided. The centrifugation conditions should be 2000G for 10 minutes. (The table below shows the rotor radius and the speed [rpm] at 2000G.)

Conversion table

Radius (cm)	Speed (rpm)	Radius (cm)	Speed (rpm)
10	4200	22	2800
12	3800	24	2700
14	3500	26	2600
16	3300	28	2500
18	3100	30	2400
20	3000		

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
S3F S5F Previous container symbol P1  For collecting 3 mL of blood (S3F)  For collecting 5mL of blood (S5F)	Containing coagulation accelerator + serum-separating agent (3 or 5mL vacuum blood sampling tube) Storage conditions: Room temperature Self-life: 1 year	**HBV DNA quantitative, IU**	whole blood 5.0	serum 1.8	F	Draw the specified amount of blood into a container shown in the left image, gently invert the tube 4 to 5 times, and allow to stand at room temperature for 30 to 60 minutes. After coagulation, centrifuge the tube. Freeze the specimen in the tube and submit it under frozen conditions. Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		HCV RNA core genotype	whole blood 3.0 each	serum 0.5 each		
		HCV RNA 1b (NS5A)				
		HCV RNA quantitative	whole blood 5.0	serum 1.8		
		HCV DCV-resistant mutation (L31/Y93)	whole blood 3.0 each	serum 0.5 each		
		HCV NS3 drug resistant mutation (D168)				
		HCV NS5B-S282 mutation				
		HCV-1b-IFN/ ribavirin mutation				

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	SAMPLE HANDLING METHOD
S9P S7P  For 10mL (S9P)  For 7mL (S7P)	Not containing separating agent (10 or 7mL vacuum blood sampling tube) Storage conditions: Room temperature Self-life: 1 year	**drug test**	As appropriate	As appropriate	After drawing the necessary amount of blood into a container shown in the left image depending on the test, gently invert the tube 4 to 5 times, and allow to stand at room temperature for 30 to 60 minutes. After coagulation, centrifuge the sample. Transfer the serum into the container A00 (polyethylene test tube), and submit it. The centrifugation conditions should be 2000G for 10minutes. (The table below shows the rotor radius and the speed [rpm] at 2000G.)

Conversion table

Radius (cm)	Speed (rpm)	Radius (cm)	Speed (rpm)
10	4200	22	2800
12	3800	24	2700
14	3500	26	2600
16	3300	28	2500
18	3100	30	2400
20	3000		

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
SEC Previous container symbol e1 	Serum-separating agent + coagulation accelerator film (3mL vacuum blood sampling tube) Storage conditions: Room temperature Self-life: 1 year	**Eosinophil cationic protein (ECP)**	whole blood 2.5-3.0	serum 0.2	R	Draw 2.5 to 3.0 mL of blood into a tube, invert the tube 5 times. After allowing to stand for 60 to 120 minutes at room temperature (24-28℃),centrifuge the tube for 10 minutes. Transfer the serum to the polyethylene test tube (A00), and submit it. Take care with the temperature change. The value significantly varies with the temperature while standing it.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
SZZ Previous container symbol e 	Containing serum-separating agent and coagulation accelerator (3mL vacuum blood sampling tube) Additives: Thrombin Heparin neutralizer Storage conditions: Room temperature Self-life: 1 year	**Aluminum (Al)**	whole blood 2.5-3.0	serum 0.6	R	To prevent contamination, collect blood from a shunt by instillation or using a vacuum tube. Immediately after blood sampling, thoroughly mix the blood by inverting the tube. After centrifugation, submit the specimen under refrigerated conditions.

CONTAINER FORM	
U00 Previous container symbol Y	Storage conditions: Room temperature  Urine container

CONTAINER FORM	TEST NAME	STORE TEMPERATURE
U10 Previous container symbol Y1 Sterile dropping pipette Sterile cup	**Chlamydia trachomatis DNA** **Neisseria gonorrhoeae DNA** **Simultaneous identification of DNA of N. gonorrhoeae and C. trachomatis**	R

Additives:
Guanidine hydrochloride

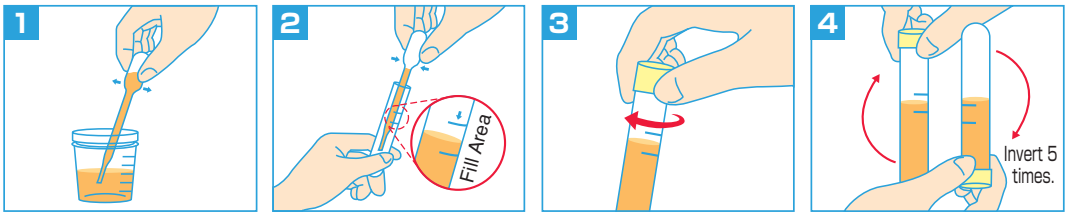
Storage conditions:
Room temperature

Self-life: 1 year

●Obtaining specimens from urine

Collect the first-voided urine at least 1 hour after the last urination.

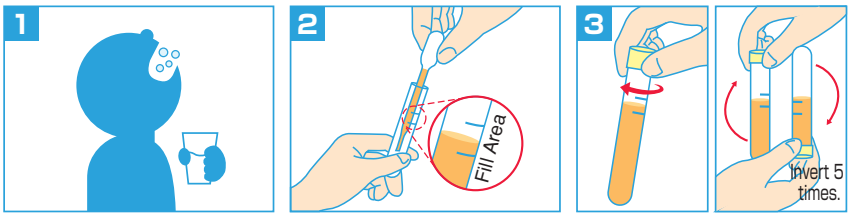
(1) Collect the first-voided urine in a sterile cup, and transfer the urine into the dedicated container using a sterile dropping pipette.
(2) Fill the urine is to the level between the lines on the dedicated container.
(3) Firmly tighten the cap of the dedicated container.
(4) Invert the dedicated container 5 times, and submit the specimen under refrigerated conditions.



●Obtaining from mouth wash specimens

Patient must refrain from eating, gargling, brushing teeth, or chewing gum before collecting specimens.

(1) Take 15 to 20 mL of sterile physiological saline in the mouth, tilt the head backward, and gargle vigorously for 10 to 20 seconds.
(2) Collect all of the mouth wash specimen in a cup, and transfer it to the dedicated container using a dropping pipette to the level between the lines on the container.
(3) Firmly tighten the cap of the dedicated container, invert the container for 5 times, and submit the specimen under refrigerated conditions.



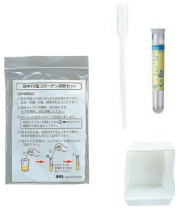
CONTAINER FORM

U20
Previous container symbol
Y0

Urine container
Storage conditions: Room temperature

17-ketosteroids (17-KS) 7 fractionation/Pregnanediol/Pregnanetriol

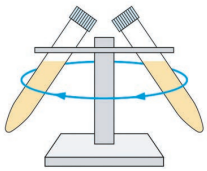
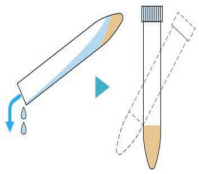
CONTAINER FORM	TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
U50 Previous container symbol **Y5**  Containing preservative (Container capability of 10mL) Storage conditions: Room temperature Self-life: 2 years	**Myoglobin, Urine**	random urine 6		R	Promptly after sampling, pour collected urine into the dedicated container (U50) up to the printed line on the label, mix well, and submit the specimen under refrigerated conditions. Avoid freezing.

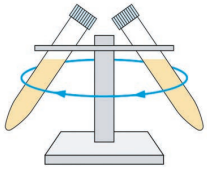
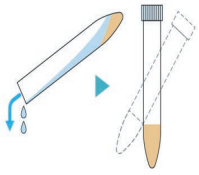
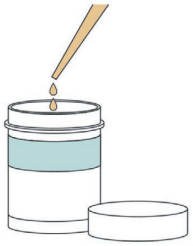
CONTAINER FORM	TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
U70 Previous container symbol **Y7**  Containing Tris + Hcl (Container capability of 10mL) Additives: 1.5 M Tris-Hcl 0.5 mL Storage conditions: Room temperature Self-life: 2 years	**Collagen type IV, Urine**	random urine 5		R	Collect the first-void urine in the early morning, and transfer into a container shown in the left image. After mixing well, refrigerate the specimen. Avoid freezing and putting in another request at the same time.

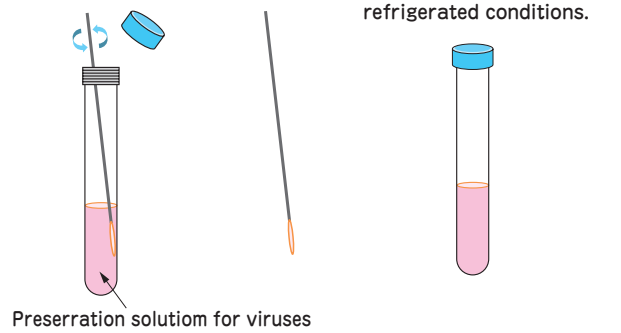
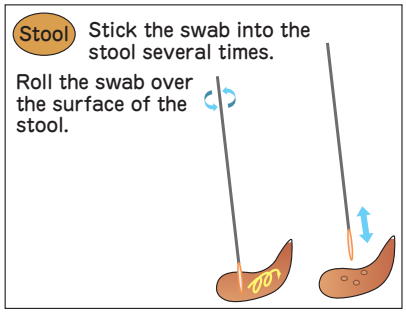
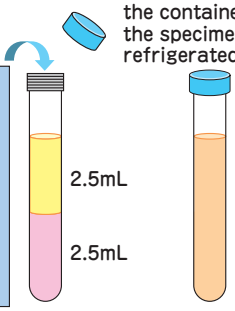
CONTAINER FORM	TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
U80 Previous container symbol **Y8**  Containing the preservation solution (Container capability of 10 mL) Additives: Urine stabilizer Storage conditions: Protection from light at room temperature Self-life: 2 years and 6 months	**Nuclear matrix protein 22, Urine (NMP22)**	random urine As appropriate (Separate container)	Immediately random urine (supernatant) 5	R	Promptly after urine sampling, centrifuge the urine. Transfer the supernatant into the dedicated container to the specimen sampling level, and mix well. Avoid freezing and putting in another request at the same time. Submit the specimen under refrigerated conditions.

CONTAINER FORM	TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
U90 Previous container symbol **b2**  Containing the antiplasmin agent Additives: Aprotinin Purified gelatin Dehydroacetic acid Sodium Storage conditions: Room temperature Self-life: 2 years (1 week after opening the aluminum package)	**FDP, quantitative**	random urine (fresh urine) 2	random urine (supernatant) 0.5	F	Collect fresh urine, and transfer into a container shown in the left image. After mixing well, centrifuge at 3000 rpm for 5 to 10 minutes. Be sure to freeze the supernatant (random urine).

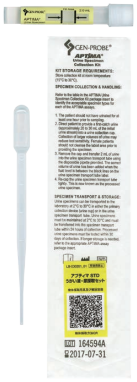
container handling method

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD	
UV6 Previous container symbol **f3**  Additives: Methanol 55% Storage conditions: Room temperature Self-life: 1 year and 6 months	**Urine cytodiagnosis (LBC)**	R		Centrifuge the appropriate amount of urine collected at 1500 rpm for 5 minutes.
				Remove the supernatant and mix the sediment well.
				Pipette the sediment and transfer it into a dedicated container. Firmly tighten the cap before submission. (If the amount of the sediment is too small, put the solution in the dedicated container into a test tube and transfer it again into the container.)

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD	
UV7 Previous container symbol **f7**  Additives: Methanol 55% Storage conditions: Room temperature Self-life: 1 year and 6 months	**Bladder cancer FISH (UroVysion)**	R		Centrifuge the proper amount of collected urine (≥33mL) at 1500rpm for 5 minutes.
				Remove the supernatant and mix the sediment well.
				Pipette the sediment and transfer it into a dedicated container before freezing. Confirm that the lid of the container is tightly closed before submission without wrapping with a parafilm.
			●Points to note Pay attention to discarding the supernatant after centrifuge because if the cell count in the submitted container is insufficient, the test may be impossible.	

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLE HANDLING METHOD
V10 Previous container symbol **V**  Dedicated container for viruses Containing the preservation solution Storage conditions: Refrigeration Self-life: 6 months	**Adenovirus antigen, shell vial method** **Herpes simplex virus antigen** **Varicella-zoster virus antigen** **Cytomegalovirus antigen** **Influenza virus antigen** **Influenza virus RNA** **Parainfluenza virus antigen** **Viruses isolation** **Viruses identification**	R	● **Swab of affected area, vesicle fluid, stool, etc.** Wipe affected area with a sterile cotton swab. Transfer the specimen into a container with virus preservation solution according to the methods shown in the figures below. Then, refrigerate the specimen. Rub the swab head against the interior wall of the container. / Withdraw the cotton swab. / Firmly tighten the cap of the container, and submit the specimen under refrigerated conditions.  Preserration solutiom for viruses Stool — Stick the swab into the stool several times. Roll the swab over the surface of the stool.  ● **Urine, cerebrospinal fluid, pleural fluid, nasal discharge, etc.** Collect a specimen of an equivalent volume to the virus preservation solution according to the method shown in figures below, and refrigerate the specimen. Firmly tighten the cap of the container, and submit the specimen under refrigerated conditions. A liquid specimen (e.g., urine) should be mixed with an equivalent volume of virus preservation solution. Even if a specimen volume is lower than that of the preservation solution, do not discard the preservation solution, and transfer as much specimen as possible to the container.  2.5mL 2.5mL ● **Tissues** Collect a small piece of tissue specimen (about 5 mm cube), and place it into the virus preservation solution. Then, refrigerate the specimen.

CONTAINER FORM	TEST NAME	STORE TEMPERATURE
V20 Previous container symbol F2	**Simultaneous identification of rRNA of N. gonorrhoeae and C. trachomatis Mycoplasma genitalium rRNA, qualitative**	R



(for urine/mouth washing liquid)

(for secretion)

Additives:
Lithium lauryl-sulfate, additives

Storage conditions:
Room temperature

Self-life: 1 year

● Obtaining specimens from urine
1. Urinate at least 1 hour before collecting sample.
2. Collect 20 to 30 mL of the first-voided urine in a cup. (Please note that too much urine will cause dilution of the specimen, reducing the detection sensitivity.)
3. Within 24 hours, pipette 2 mL of urine in the dedicated container using an attached dropping pipette, and mix. If the urine is filled to the level between the black lines on the dedicated container, an appropriate amount of urine is collected.
4. After the sampling, submit the specimen under refrigerated conditions.

● Obtaining specimens from the cervical canal
1. Remove excess mucus from the cervical canal and the surroundings using the cleaning swab (white one). Discard the cleaning swab.
2. Insert the collecting swab (blue one) into the cervical canal.
3. Gently rotate the swab clockwise for 10 to 30 seconds to ensure adequate sampling (Figure 1).
4. Withdraw the swab carefully while avoiding any contact with the vaginal mucus.
5. Immediately place the swab into the dedicated container, and mix the specimen with the preservation solution in the container (Figure 4).
6. Carefully break the swab shaft at the score line (Figure 5). Do not spill the contents of the tube.
7. Close the cap firmly while the swab is included in the dedicated container. Submit the specimen under refrigerated conditions (Figure 5).

● Obtaining specimens from the urethra of men
1. Urinate at least 1 hour before collecting sample.
2. Insert the collecting swab (blue one) 2 to 4 cm into the urethra (Figure 2).
3. Gently rotate the swab clockwise for 2 to 3 seconds to ensure adequate sampling (Figure 2).
4. Immediately place the swab into the dedicated container, and mix the specimen with the preservation solution in the container (Figure 4).
5. Carefully break the swab shaft at the score line (Figure 5). Do not spill the contents of the tube.
6. Close the cap firmly while the swab is included in the dedicated container. Submit the specimen under refrigerated conditions (Figure 5).

● Obtaining specimens from the phyarinx (throat swab specimen)
1. Rub the collecting swab (blue one) firmly over the tonsillar arches to ensure adequate sampling (Figure 3). Before obtaining a throat swab specimen, patient must refrain from washing month, eating, or drinking.
2. Immediately place the blue swab into the transport tube, and mix the specimen with the swab transport medium.
3. Carefully break the blue swab shaft at the score line (Figure 4). Do not spill the contents of the tube
4. Firmly tighten the cap of the swab transport tube, and submit the specimen under refrigerated conditions (Figure 5).

● Obtaining mouth wash specimens
1. Patient must refrain from eating, gargling, brushing teeth, or chewing gum before collecting specimens.
2. Have the patient to sit face to face to the examiner.
3. Take 15 to 20 mL of physiological saline (0.9% saline solution) in the month, tilt the head backward, and gargle vigorously for 15 to 20 seconds.
4. Collect all of the gargling liquid into the container for mouth wash specimen.
5. Within 24 hours, pipette 2 mL of the mouth wash specimen in the dedicated container using an attached dropping pipette. If the specimen is filled to the level between the black lines on the dedicated container, an appropriate amount is collected.
6. After the sampling, submit the specimen under refrigerated conditions.

[Note]
Please note that the swab shaft may be broken if an excessive force is applied to the shaft while collecting sample.

figure 1

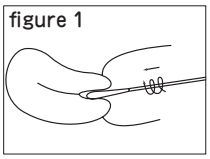


figure 2

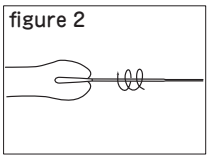


figure 3

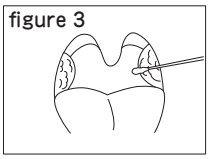


figure 4

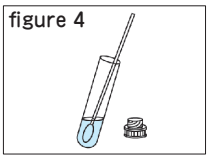
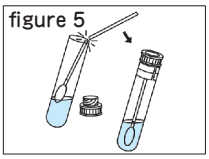


figure 5



CONTAINER FORM	TEST NAME	STORE TEMPERATURE
V30 Previous container symbol W1	Herpes simplex virus specific antigen Varicella-zoster virus antigen	F

Storage conditions:
Room temperature

Self-life:
1 year

●SAMPLING METHOD
Conduct sampling which enables to collect abundant focal basal cells.
Early-stage vesicle is optimal as specimen. Vesicle fluid and pus are inappropriate as specimen.
(1) Peel upper surface or crust with a sterile needle. (Figure 1)
(2) Remove upper surface which covers the focal site with forceps etc. (Figure 2)
(3) Moisten the cotton swab with physiological saline.
(4) Wipe vigorously the entire basal area since cells infected with viruses exist in this area. (Figure 3)
● Note
Wipe out pus with a cotton swab if any, and collect specimen with other cotton swab. While applying this procedure, make sure not to make a mess of basal cells.

●Procedures
● Sample smearing
(1) Smear sample on the two circles of the glass slide, rotating a cotton swab. While this procedure, place the cotton swab paralleled to the glass slide to smear the entire area of the swab. Pay attention not to smear disproportionately. (Figure 4)
(2) Make sure to check the uniform distribution of the specimen before discarding a cotton swab. Uniform distribution provides opaque view. If there is any transparent area, smear on this area again with a cotton swab placed parallel.
(3) Then apply air dry.
(4) Add sufficient amount of acetone (enable to be distributed to the entire specimen) on the dried glass slide, then make it evaporated.
・Submit two glass slides containing specimen.
● Sample storing
The completely dried glass slides should be kept in an object case with the smeared surface down and cryopreserved after writing down the test name, hospital name, and subject name.

Figure 1

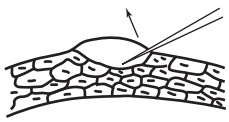


Figure 2

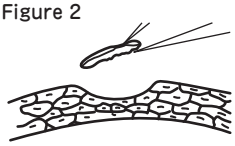


Figure 3

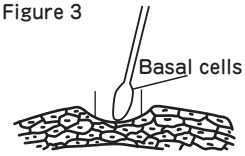
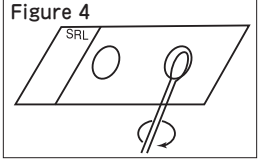


Figure 4

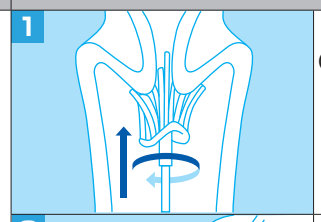


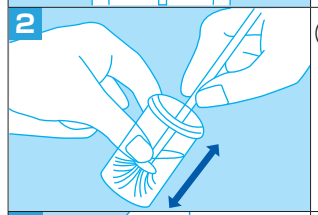
CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD
V41 Previous container symbol f6	Human papillomavirus DNA (genotypes 16, 18, and other high-risk groups) Human papillomavirus DNA (high-risk group) (LBC) Human papillomavirus (HPV) genotyping Human papillomavirus DNA (low-risk group) (LBC) Cytodiagnosis (Gynecologic LBC, Bethesda system) Cytodiagnosis (Gynecologic LBC)	R	1 (1) Collect cervical cells Collect cells using an instrument other than cotton swab (e.g., brush, spatula). 2 (2) Release cells Place the sampling device into the container, and rinse the sampling device by pushing the broom into the bottom of the container 10 times, forcing the bristles apart. Then, swirl the broom vigorously to further release the collected cells. 3 (3) Tighten the cap Remove the sampling device, and tighten the cap so that pass the black line the container to the left side. Store the specimen at room temperature. (Note) Do not leave any part of the sampling device in the container.

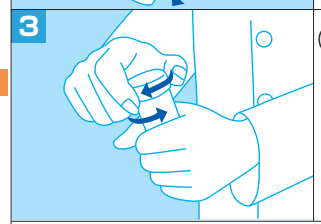
Additives:
Methanol 55%

Storage conditions:
Room temperature

Self-life:
1 year and 6 months

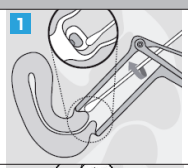
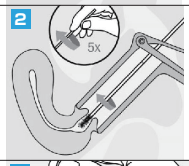
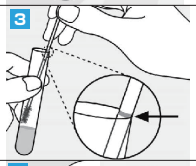
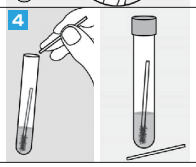






[Note]
When collecting cells from pregnant women, use cotton swab instead of brush or spatula in consideration of the safety. To collect the necessary amount of cells for the test with cotton swabs, remove mucus with a cotton swab in advance, and use another cotton swab for collecting cells. After collection, thoroughly rinse the cotton swab used for the collection in the preservation solution to release the cells. Do not leave any part of the cotton swab in the container. Please note that the swab shaft may be broken if an excessive force is applied to the shaft.

container handling method

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD	
V50 Previous container symbol **F3**  Additives: Guanidine hydrochloride Storage conditions: Room temperature Self-life: 1 year	**Chlamydia trachomatis DNA**	R		Remove excess mucus from the cervical canal and the surroundings using the dry swab attached in the swab sampling kit. Discard this swab.
	Neisseria gonorrhoeae DNA			Insert the attached FLOQSwabs into the cervical canal. Gently rotate the swab towards the same direction for 5 rounds, and withdraw the swab carefully while avoiding any contact with the vaginal mucus.
	Simultaneous identification of DNA of N. gonorrhoeae and C. trachomatis			Open the cap of the dedicated container, and carefully place the FLOQSwabs into the container while avoiding immersing the tip of the swab in the container solution. Align the score line of the swab shaft with the top edge of the container.
				Break the FLOQSwabs shaft using the edge of the dedicated container, and discard the top portion of the swab shaft. Firmly tighten the cap of the dedicated container, and submit the specimen under refrigerated conditions.

CONTAINER FORM

V60
Previous container symbol
W3

Additives: Preservation solution
Storage conditions: Room temperature
Self-life: 3 years

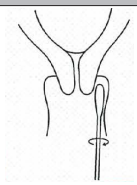
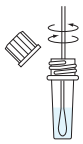
For general use

For pregnant women

Human papillomavirus DNA (high-risk group, low-risk group)
[Note]Please note that the swab shaft may be broken if an excessive force is applied to the shaft while collecting sample.

container handling method

CONTAINER FORM	CONTAINER FORM
VP0 Previous container symbol **u5** Pathology container	**VP1** Previous container symbol **u1** Preparation kit for frozen tissue specimens
	
Fill the container with 20% formalin solution. Storage conditions: Room temperature	Storage conditions: Room temperature Self-life: 1 year

CONTAINER FORM	TEST NAME	STORE TEMPERATURE	SAMPLING METHOD	
VP5 Previous container symbol **W5**  Additives: Extraction buffer Storage conditions: Room temperature Self-life: 1 year	**Human oncofetal fibronectin**	F		Insert a dedicated cotton swab into the posterior vaginal vault, and rotate the swab about 10 seconds to allow it to absorb secretions. * Do not rub the vaginal surface vigorously. * Avoid any mucus from being contained into the specimen.
				Remove the white cap of the specimen extraction container. Immerse the secretion-containing swab in the extraction buffer, and swirl the swab 5 times. (Do not spill the contents of the container.)
				Take out the cotton swab from the specimen extraction container.
				Attach a specimen filter to the specimen extraction container.
				Drop all of the specimen extract into the specimen storage tube. Close the cap of the tube, and be sure to freeze it.
			● Points to note • Collect specimen before washing the vagina. • If sperm are contained in a specimen, do not use it. • If ≥0.1% of blood is contained in a specimen, accurate results may not be obtained. • Collect specimen from the posterior vaginal vault. • Avoid rubbing the vaginal surface vigorously.	

CONTAINER FORM	TEST NAME	STORE TEMPERATURE
VP6 Previous container symbol W6	Granulocyte elastase in cervical mucus	F

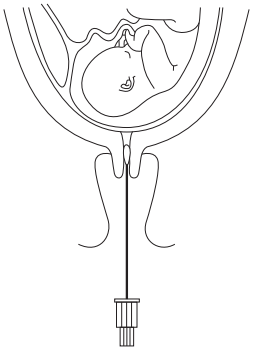
Additives:
Extraction buffer (Phosphate buffer)

Storage conditions:
Room temperature (Refrigeration for the extraction buffer)

Self-life: 1 year

SAMPLING METHOD

Correct site for collecting specimen



Gently remove excess mucus from the vaginal area using a swab.

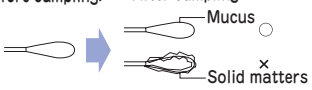
Insert the specimen collection swab into the endocervical canal. Note 3)

Gently rotate the swab twice toobtain cervical mucus. Note 4)

●Points to note

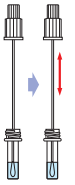
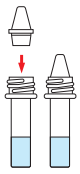
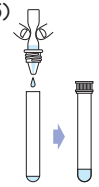
1) Collect specimen from the endocervical canal.
2) Collect specimen before washing the vagina.
3) Insert the swab while avoiding contact with anything, such as secretion or mucus around the external os, till it reaches the endocervical canal.
4) Each rotation should take about 5 seconds to allow the swab to absorb mucus. If a small amount of solid matters are attached to the swab, remove them with tweezers.

<Before sampling> <After sampling>



5) Start extraction procedures of the collected specimen within 15 minutes.
[Note]
Please note that the swab shaft may be broken if an excessive force is applied to the shaft while collecting specimen.

Extraction methods

(1) 	Unscrew the blue cap of the extraction container with the extraction buffer.	(2) 	Place the cotton swab with the collected cervical mucus in the container, and allow to stand for 2 to 3 minutes. Then, shake the swab in an up-and-down direction for 20 to 30 times to extract the specimen.	(3) 	Squeeze the cotton swab by each container with fingers to release the specimen extract and remove the swab.
(4) 	Set the filter.	(5) 	Filter the specimen extract into the specimen storage container. Apply only one pressure to the extraction container to obtain 5 to 7 drops (about 300 μL) of the extract. If the required amount of extract is not obtained,start the procedure all over again from specimen collection. Seal the specimen storage container with the white cap, and store it. Specimens should be tested within 3 days when refrigerated (8°C) and within 3 months when frozen (≤-15°C).		

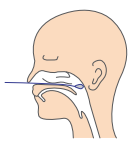
CONTAINER FORM	TEST NAME	STORE TEMPERATURE
VS4 Previous container symbol k9	Bordetella pertussis DNA	F

Storage conditions:
Room temperature

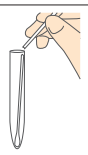
Self-life: 5 years

SAMPLING METHOD

1. Take out a swab by holding the shaft. Do not touch the cotton part.



2. Hold the patient's head so as to stay still, and gently insert the swab into the postnasal space to collect mucus.



3. Withdraw the swab, and promptly insert the swab into the sterile polyethylene test tube (ARR). Align the slit score line of the swab shaft with the top edge of the container, and break the shaft.

4. Close the cap firmly while the swab is included in the container. Submit the specimen under frozen conditions.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
X00 Previous container symbol ℓ 	Sterile sputum collection container Storage conditions: Room temperature	**Nucleic acid identification of M. tuberculosis complex, TRC**	sputum 2.0 each		R	In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Nucleic acid identification of MAC, Real-time TRC				
		Pneumocystis carinii (P. jirovecii) DNA			F	Avoid putting in another request at the same time. In this method, a result is affected proportionally to the degree of contamination. Therefore, pay careful attention when collecting and handling samples.
		Mycoplasma pneumoniae DNA				
		Legionella DNA, qualitative	sputum 1.0			

CONTAINER FORM

X10
Previous container symbol
f

Cytodiagnosis, sputum cell concentrations
Additives:
Saccomanno's solution, mucolytic agent

Storage conditions:
Room temperature (cold and dark place)

Self-life: 1 year

CONTAINER FORM

XC0
Previous container symbol
L2

Storage conditions: Room temperature

Dedicated container for calculi

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
XR4 Previous container symbol L4 	Storage conditions: Room temperature Self-life: 4 years	**Phosphorylated tau protein**	CSF 0.5		F	Collect sample in a container shown in the left image, and be sure to store frozen.
		Tau protein	CSF 1.0			Collect sample in a container shown in the left image, and freeze immediately. Place the specimen into the container set (Z50), and be sure to store frozen.

container handling method

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
Z10 Previous container symbol t	[Object cases] Preparation (slide glass) Storage conditions: Room temperature	Complete blood count (CBC)	blood smear 2–3 slides			Submit blood smears. Store at room temperature.
		Nasal eosinophils	nasal discharge smear 2–3 slides			Prepare smears with fresh nasal discharge, and submit. Store at room temperature.
		BRAF V600 mutation analysis, PCR	unstained 5–10 slides			Prepare unstained slides. Place the slides in an object case, and submit under room temperature. 10 μm thick unstained slides (serial sections): 5–10 slides
		BRAF exon15 V600E (SEQ)	unstained slides • For tumor site confirmation Section thickness 3.4 μm: 2 slides each • For DNA extraction Section thickness 10 μm: 5–10 slides each			Prepare unstained slide, and write section thickness on the front side of the slide. Place the slides into an object case shown in the left image, and submit under room temperature. When ordering any of the three tests in the left (regardless of the number of tests ordered at the same time), make sure to also place an order of “Tumor site confirmation test ” as well.
		PIK3CA mutation analysis, SEQ				
		c-kit mutation analysis (GIST)				
		General cytodiagnosis (sputum)	wet-fixed 2 smears		R	Prepare stained smear slides. Place the slides in an object case shown in the left image, and submit under room temperature.
		General cytodiagnosis (other specimens than sputum)	smears (wet-fixed 1 slide, dry-fixed 1 slide)			
		Cytodiagnosis (Gynecology, Bethesda system)	wet-fixed smear 1 slide each			
		Cytodiagnosis (Gynecology)				
		Stained specimen preparation	unstained 2 slides each			
		CD30(IHC)				Use a silanized slide and thinly slice the specimen into 3 to 4 μm and apply it within 50 mm from the edge of the glass slide.
		Breast cancer PD-L1 protein, IHC, SP142	unstained 4 slides			Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Slice the tissue to the thickness of 4-5 μm, and apply it onto the slide at around the center.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
Z10 Previous container symbol t	[Object cases] Preparation (slide glass) Storage conditions: Room temperature	Gastric cancer HER2 gene, FISH	unstained 4 slides each		R	Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before promptly submitting them. In the case of baking for the purpose of preventing tissues from coming off, treat them in as short a time as possible (less than 1 hour), and avoid leaving the glass slides at high temperatures for any duration longer than that. For reference, the testing guidelines developed by the Pathological committee for gastric cancer HER2 testing recommended that use of materials that have been fixed in 10% neutral buffered formalin for 6 to 72 hours is preferable (depending on the size of specimens for biopsy samples with at least 6 hour fixation). Prepare thin slices of tissue sections 4 to 6 μm in thickness.
		Gastric cancer HER2 protein, IHC				Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before promptly submitting them. In the case of baking for the purpose of preventing tissues from coming off, treat them in as short a time as possible (less than 1 hour), and avoid leaving the glass slides at high temperatures for any duration longer than that. For reference, the testing guidelines developed by the Pathological committee for gastric cancer HER2 testing recommended that use of materials that have been fixed in 10% neutral buffered formalin for 6 to 72 hours is preferable (depending on the size of specimens for biopsy samples with at least 6 hour fixation). Prepare thin slices of tissue sections 3 to 4 μm in thickness.
		Lung cancer, PD-L1 protein, IHC, 22C3				Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Thinly slice the tissue into 4 to 5 μm and apply it onto the slide at around the center, ≥ 15 mm from the frosted edge and ≥ 15 mm from the slide glass edge.
		Lung cancer, PD-L1 protein, IHC, 28-8				
		Lung cancer, PD-L1 protein, IHC, SP142				Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Slice the tissue to the thickness of 4-5 μm, and apply it onto the slide at around the center.
		Lung cancer PD-L1 protein, IHC, SP263				
		Lung cancer ALK protein, Highly sensitive IHC				Use poly-l-lysine coated or silane treated slides. Prepare thin slices of tissue sections 4 μm in thickness. Place the section onto the slide at around the center. After drying at 37℃ for 24 hours, submit the slides.
		Lung cancer ALK protein,(IHC) D5F3				
		Lung cancer ALK gene, FISH	unstained 3 slides			Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Prepare thin slices of tissue sections 4 to 6 μm in thickness. In the case of baking for the purpose of preventing tissues from coming off, treat them for about 2 to 24 hours.

CONTAINER FORM		TEST NAME	AMOUNT COLLECTED (mL)	AMOUNT SUBMITTED (mL)	STORE TEMPERATURE	SAMPLE HANDLING METHOD
Z10 Previous container symbol t	[Object cases] Preparation (slide glass) Storage conditions: Room temperature	Melanoma PD-L1 protein, (IHC)28-8	unstained 4 slides each			Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Thinly slice the tissue into 4 to 5 μm and apply it onto the slide at the center, ≥ 15 mm from the frosted edge and ≥ 15 mm from the slide glass edge.
		Head and neck cancer PD-L1 protein, IHC, 22C3				Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Slice the tissue to the thickness of 4-5 μm, and apply it onto the slide at around the center.
		Head and neck cancer PD-L1 protein, (IHC) 28-8				Use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them. Thinly slice the tissue into 4 to 5 μm and apply it onto the slide at the center, ≥ 15 mm from the frosted edge and ≥ 15 mm from the slide glass edge.
		CCR4 protein, IHC	6 unstained slides			For a testing material, provide unstained slides prepared using paraffin blocks that have been fixed in 10-20% neutral buffered formalin fixative for about 24 to 48 hours before embedding. Thinly slice the samples into 3 to 4 μm, use coated slides such as silanized slides, and leave thinly-sliced samples to dry overnight at about 40℃ before submitting them.
		OncotypeDX Breast	9 slides in total (Refer to Preparing HE stained and unstained sample slides)		R	(1) First, thinly slice a tissue section of 3 to 4 μm thickness for HE staining. • Write “A HE” on the slide. (2) Next, thinly slice 6 tissue sections of 10 μm thickness for RNA extraction. • When picking up the tissue sections, arrange them so that they are all in the same directions. • Leave the sections that have been picked up to dry naturally; avoid paraffin melting. • Write down the numbers 1 to 6 in the order the sections were sliced off. (3) Lastly, thinly slice 2 tissue sections of 3 to 4 μm thickness for HE staining. • Write “B HE” and “C HE” on the slides. * When preparing samples, please take the following precautions to avoid contamination: • Replace the microtome blades for every sample. • Use clean water when picking up the sections. • When slicing off thin sections, do not handle samples with bare hands but use disposable gloves.
		OncotypeDX DCIS				
		OncotypeDX Colon				

Points to note concerning the submission of samples for genetic tests for malignant tumor (solid tumor).

CONTAINER FORM		TEST NAME	UNSTAINED SLIDE (NUMBER)	THICKNESS (μm)	RATE OF TUMOR CELL	STORE TEMPERATURE
Z10 Previous container symbol t 	[Object cases] Preparation (slide glass) Storage conditions: Room temperature	BRAF V600 mutation analysis, PCR	5-10	10	≥ 50%	
		EGFR mutation analysis v2.0	5-10	10	≥ 10%	
		EGFR gene mutational analysis (Scorpion-ARMS technique)	5-10	5-10	≥ 10%	
		Qualitative detection of ROS1 gene fusions (FFPE)	5	5	≥ 30%	
		IDH1/2 gene analysis (Glioma) (FFPE)	5-10	4-10	≥ 20%	R
		RAS/BRAF gene mutational analysis	5	5-10	≥ 10%	
		Microsatellite instability (MSI) test (FFPE)	5-10	5	≥ 50%	
		Oncomine Dx Target Test CDx system (FFPE)	5-10	5	≥ 30%	
		Oncomine Dx Target Test Multi-CDx System 4genes analysis (FFPE)	5-10	5	≥ 30%	
		Oncomine Dx Target Test Multi-for research 46genes analysis (FFPE)	5-10	5	≥ 30%	
		NCC Oncopanel System	5	10	≥ 20%	R
		FoundationOne CDx Cancer genome profile	10	4-5	≥ 30%	R
		Microsatellite instability (MSI) test (Lynch syndrome)	5-10	5	≥ 50%	

COLLECTING METHOD

●Condition for submission
Perform histopathological assessment on unstained sample slides, and confirm that a sufficient proportion of tumor cells are available for the testing.
If the proportion of tumor cells is not sufficient, mark the tumor cell region on the back side of the unstained sample slide.
Please note that submission of unmarked slides leads to impact on the test result (e.g., fasle negativity) due to inability to perform micro-dissection.
For microsatellite instability (MSI) test (FFPE) and microsatellite instability (MSI) test (Lynch syndrome), tumor part and normal part must be distinguished because of the characteristics of the test. Be sure to mark the tumor cell region.

●Unstained sample slide
Immediately immerse the collected tissue in 10% formalin neutral buffer solution for fixation (recommended duration of fixation: 6-48 hours).
Wherever possible, continuously slice the formalin fixed and paraffin embedded (FFPE) block produced in the past 3 years at a designated thickness to prepare serial sections.
For submission, pay thorough precaution against contamination by changing microtome blades for each specimen.
The DNA has undergone fragmentation due to formalin-fixed tissues. Therefore, please note that an analysis may not be possible depending on the conditions and period of storage, as well as the type and composition of a fixing solution and fixation time.

●Biopsy sample
Make sure to handle biopsy specimen with special care as only a trace amount of specimen is extracted, and in some cases most tissues may not be present, or they may not include tumor cells.

CONTAINER FORM

Z50

Previous container symbol

L5

Storage conditions: Room temperature

Container set