

SAMPLING AND DISPATCH OF SAMPLES

BACTERIOLOGY – CLINICAL SAMPLES

Please notify us of samples by telephone: 058 468 15 99 (direct number) or 058 468 14 01 (reception).
 Samples are received on working days only.

1 Persons in charge of pre-diagnostics

The sender is responsible for correct sampling, unambiguous labelling of sample containers, complete filling in of the application form, correct storage of sample up to its transportation, its dispatch and prior notification by telephone of the SPIEZ LABORATORY.

If the assignment is unclear or if samples are delivered that do not meet the quality requirements, the SPIEZ LABORATORY will be obliged to consult the sender.

2 Materials

Pathogen	Analysis	Suitable sampling material	Transport medium / container	Amount	Storage and dispatch ¹
<i>Bacillus anthracis</i>	Culture or molecular biology	swab vesicle, eschar, nose, throat	swab in transport medium for bacteria (e.g. ESwab Liquid Amies [Copan 490CE.A])	1 swab	store at room temperature send at room temperature
		blood	<i>Culture:</i> blood culture bottles (aerobic and anaerobic)	sample twice	store at room temperature send at room temperature
		skin biopsy	<i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black); sterile container	1 tube as much as possible	store at 4°C send at room temperature store at 4°C send at room temperature
		CSF	sterile container	1 ml	store at 4°C send at room temperature

¹ for culture send sample the same day; for molecular biology, samples can be stored for up to a maximum of four days

Materials (continued)

Pathogen	Analysis	Suitable sampling material	Transport medium / container	Amount	Storage and dispatch ¹
		pleura	sterile container	as much as possible	store at 4°C send at room temperature
		respiratory sample (sputum, induced sputum)	sterile container	2 ml	store at 4°C send at room temperature
		secretion, haemorrhagic	sterile container	2 ml	store at 4°C send at room temperature
<i>Brucella</i> spp.	Culture or molecular biology	abscess material	sterile container	as much as possible	store at 4°C send at room temperature
		blood	<i>Culture:</i> blood culture bottle (aerobic bottle is sufficient)	sample twice	store at room temperature send at room temperature
			<i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	1 tube	store at 4°C send at room temperature
		joint puncture	sterile container	1 ml	store at 4°C send at room temperature
		bone marrow	<i>Culture:</i> sterile container without additives or aerobic blood culture bottle	2 ml or 1 blood culture bottle	store at 4°C store at room temperature send at room temperature
			<i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	1 tube	store at 4°C send at room temperature
		liver biopsy	sterile container	as much as possible	store at 4°C send at room temperature
		CSF	sterile container	1 ml	store at 4°C send at room temperature
		lymph node	sterile container	as much as possible	store at 4°C send at room temperature
spleen biopsy	sterile container	as much as possible	store at 4°C send at room temperature		
<i>Burkholderia mallei</i> and <i>Burkholderia pseudomallei</i>	Culture or molecular biology	wound swab	swab in transport medium for bacteria (e.g. ESwab Liquid Amies [Copan 490CE.A])	1 swab	store at room temperature send at room temperature
		abscess material	sterile container	as much as possible	store at 4°C send at room temperature
		blood	<i>Culture:</i> blood culture bottle (aerobic bottle is sufficient)	sample twice	store at room temperature send at room temperature
<i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	1 tube		store at 4°C send at room temperature.		

¹ for culture send sample the same day; for molecular biology, samples can be stored for up to a maximum of four days

Materials (continued)

Pathogen	Analysis	Suitable sampling material	Transport medium / container	Amount	Storage and dispatch ¹
		bone marrow	<i>Culture:</i> sterile container without additives or aerobic blood culture bottle <i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	2 ml or 1 blood culture bottle 1 tube	store at 4°C send at room temperature store at 4°C send at room temperature
		respiratory sample (sputum, tracheo-bronchial secretion, bronchial wash)	sterile container	5-10 ml (at least 2 ml)	store at 4°C send at room temperature
		urine	sterile container	5 ml	store at 4°C send at room temperature
<i>Coxiella burnetii</i>	Molecular biology	blood	Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	1 tube	store at 4°C send at room temperature
		endocardium biopsy	sterile container	as much as possible	store at 4°C send at room temperature
		bone marrow	Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	1 tube	store at 4°C send at room temperature
		liver biopsy	sterile container	as much as possible	store at 4°C send at room temperature
		CSF	sterile container	1 ml	store at 4°C send at room temperature
<i>Francisella tularensis</i>	Culture and molecular biology	swab from conjunctiva, throat	swab in transport medium for bacteria (e.g. ESwab Liquid Amies [Copan 490CE.A])	1 swab	store at room temperature send at room temperature
		blood	<i>Culture:</i> blood culture bottles (aerobic bottle sufficient) <i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	sample twice 1 tube	store at room temperature send at room temperature store at 4°C send at room temperature
		CSF	sterile container	1 ml	store at 4°C send at room temperature
		lymph node	sterile container	as much as possible	store at 4°C send at room temperature
		respiratory sample (sputum, tracheo-bronchial secretion, bronchial wash)	sterile container	5-10 ml (at least 2 ml)	store at 4°C send at room temperature
		ulcer material	sterile container	as much as possible	store at 4°C send at room temperature

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Materials (continued)

Pathogen	Analysis	Suitable sampling material	Transport medium / container	Amount	Storage and dispatch ¹
		urine	sterile container	5 ml	storage at 4°C send at room temperature
<i>Yersinia pestis</i>	Culture and molecular biology	blood	<i>culture:</i> Blood culture bottles (aerobic and anaerobic)	sample twice	storage at room temperature send at room temperature
			<i>Molecular biology:</i> Monovette® EDTA (red), citrate (violet/green); Vacutainer® EDTA (violet) citrate (blue/black);	1 tube	storage at 4°C send at room temperature
		bubonic aspirate	sterile container	1 ml	storage at 4°C send at room temperature
		CSF	sterile container	1 ml	storage at 4°C send at room temperature
		lung biopsy	sterile container	as much as possible	storage at 4°C send at room temperature
		lymph node	sterile container	as much as possible	storage at 4°C send at room temperature
		respiratory sample (sputum, tracheo-bronchial secretion, bronchial wash)	sterile container	5-10 ml (at least 2 ml)	storage at 4°C send at room temperature

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3 Sampling

Swab:

- **Vesicles, eschar, wounds:** prior to sampling, dab the wound surface (especially if the wound is deep) with a sterile swab and disinfect with alcohol. Then take a sample from the wound with a swab.
- **Conjunctiva:** remove ointments and make-up with a sterile swab and clean the skin around the eye with a mild disinfectant. Then take a sample from the location that is to be analysed with a swab.
- **Nose:** enter the nose with an approx. 2.5 cm swab, rotate carefully in the mucous membrane and re-extract.
- **Throat:** press tongue down with a spatula and take a sample from the location that is to be analysed with a swab.
- After sampling place the swab into the transport medium for bacteria (e.g. ESwab Liquid Amies [Copan 490CE.A]).
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, storage of the sample at room temperature is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).

- Note: biopsies, aspirates/punctures, liquids and secretions are more suitable for bacteriological analyses than smears. Whenever possible, samples should be taken PRIOR to starting an antimicrobial therapy.

Biopsies:

- Sampling by surgery.
- Place small biopsies on a sterile gauze pad moistened with some physiological saline solution to prevent the sample from drying up. Place larger samples without physiologic saline solution in a sterile container. DO NOT use formalin!
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).
- Note: whenever possible, samples should be taken PRIOR to starting an antimicrobial therapy.

Blood cultures:

- Sampling according to standard technique for collecting venous blood after SKIN DISINFECTION.
- Fill the blood culture bottles with a sterile 10 ml Monovette/Vacutainer or a butterfly. When using a butterfly, always inoculate the aerobic blood culture bottle first. Mix blood and medium by carefully tilting the bottle back and forth.
- Keep the inoculated blood cultures at room temperature until they are dispatched (on the same day).
- Note: whenever possible, samples should be taken PRIOR to starting an antimicrobial therapy (or, if already initiated, sampling should be done after a pause in therapy if possible, or immediately prior to giving the next dose).

Blood samples (blood, serum, plasma):

- Sampling according to standard technique for collecting venous blood.
- Use of transport media/containers specified in the table “materials”.
- Intermediate storage of samples at 2-8°C is possible for a maximum of 4 days.

Bone marrow:

- Sampling according to standard technique for bone marrow puncture.
- Use of transport media/containers specified in the table “materials”.
- Note: for sampling native material fill a syringe with sterile heparin and empty it completely PRIOR to aspiration.

- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C (or at room temperature for blood culture bottles) is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).

Cerebrospinal Fluid (CSF):

- Sampling according to standard technique for lumbar puncture technique.
- Collect sample in sterile container and firmly close it.
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).
- Note: whenever possible, samples should be taken PRIOR to starting an antimicrobial therapy.

Punctures or aspirates:

- Sampling according to standard puncture technique.
- Collect puncture or aspirate in a sterile container and firmly close it. DO NOT use formalin.
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).
- Note: whenever possible, samples should be taken PRIOR to starting an antimicrobial therapy.

Respiratory samples:

- **Sputum:** rinse the mouth with tap water; collect sputum by coughing up secretion from the inner air passages after several deep breath intakes. Amount: 5-10 ml (at least 2 ml).
- **Tracheo-bronchial secretion:** collect secretion by aspiration. Amount: 5-10 ml (at least 2 ml).
- **Bronchial wash:** collect secretion by rinsing, e.g. with sterile physiological saline solution. Amount: 10-20 ml (at least 2 ml).
- Collect material in a sterile container and firmly close.
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).

Secretions:

- Collect secretion in a sterile container and firmly close it. DO NOT use formalin.
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).

Urine:

- The sample should be collected as fresh midstream urine, preferably voided in the morning, when the patient has not passed water for at least 3 hours.
- Wash hands with soap, clean genitals with warm water (without soap).
- Do not use the first urine portion; collect the second portion in a sterile urine beaker.
- Pour sample into a sterile container and close well.
- Immediate dispatch to the laboratory increases the rate of successful verification. If this is not possible, intermediate storage of the sample at 2-8°C is possible (for culture for a maximum of one day; for molecular biology for a maximum of four days).

4 Characterisation of materials for analysis

Each sample must be unambiguously labelled. Surname, first name, date of birth and sex of patient are mandatory. An internal lab number may be given, if useful.

5 Filling in the order form

An order form must be completed for each analysis request sent to the SPIEZ LABORATORY. The following information must be entered in the form:

- Sender information: name, complete address, telephone and possibly fax number (for communicating results and queries)
- Patient information: name, date of birth, complete address and possibly an internal lab number
- Sample information: designation of material, date and time of sampling
- Case information: clinical problem, if possible case history information
- Requested analysis: selection of analysis sought

Packaging and dispatch

Clinical samples sent to the SPIEZ LABORATORY must comply with directives P650 for UN 3373, Category B (ADR 4.1.4.1).

Packaging involves three components: a primary container, a secondary container (e.g. plastic bag or tube) and an outer parcel (e.g. lined envelope or box). Either the secondary container or the outer parcel must be rigid. In the case of liquid samples the secondary container must contain sufficient suitable material to absorb the entire amount of fluid (the secondary container may contain several primary containers).

Procedure:

- Take the sample, close the primary container and disinfect it.
- Place the primary container in a secondary one and disinfect the latter too.
- Place the filled in request form between secondary and external parcel. Dispatch can be done at ambient temperature (no cooling required).
- The external parcel must be characterised as follows: Rhombic label (UN 3373) and directly adjacent the official designation "Biological material, Category B".
- Write your address (sender).
- Send the parcel to the address below.

Contact information and address

SPIEZ LABORATORY
Bacteriology
Austrasse
3700 Spiez

Tel. 058 468 15 99 (direct) *or*
Tel. 058 468 14 01 (reception)
Fax 058 468 14 02

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