Recommendations for Obtaining ACS Using the Orthogen® Device vet

Contents

ACS Preparation Flowchart

Aseptic blood draw (15 mL)

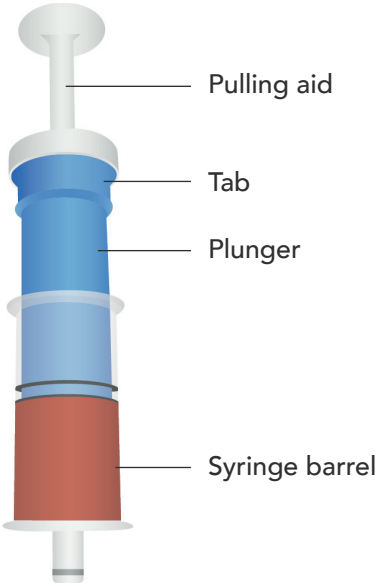
3-6 h incubation

3 min 1500 g centrifugation

Vial extraction (ACS 4-6 mL)

General Information

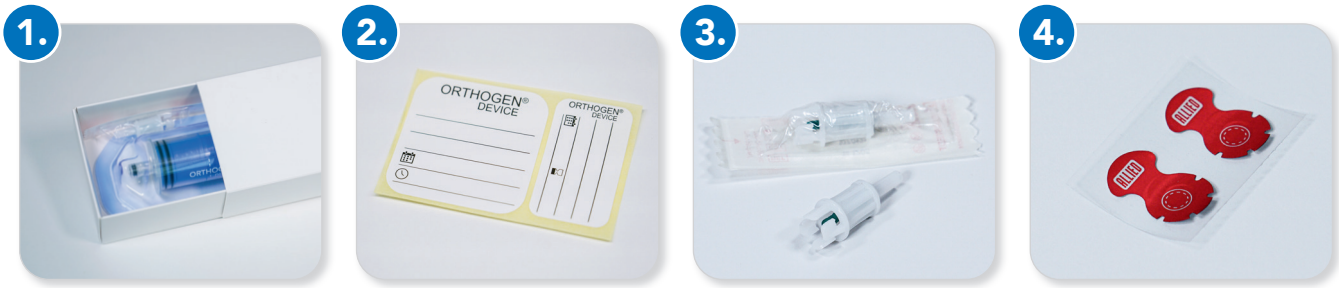
- Use sterile techniques. Do not use if packaging is damaged.
- Only qualified veterinary professionals should use the Orthogen® Device vet.
- Maintain veterinary hygiene standards. Follow blood handling and disposal protocols.
- Wear gloves. Label syringes and vials clearly. Dispose of if dropped or mislabelled.



Laboratory Setting and Materials

Orthogen® Device vet:

1. Orthogen® Device vet
2. Labels for device and vial
3. Sarstedt® multi sampling adapter
4. Steri-Tamp® stickers
5. Instruction manual



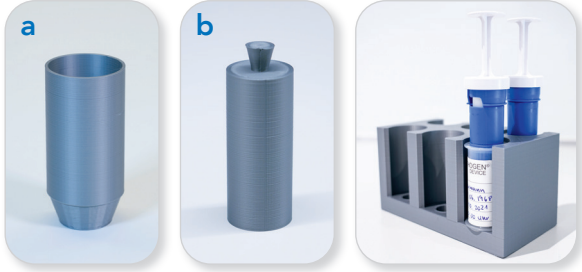
Materials that are not supplied by manufacturer:

Blood collection materials:

- Skin disinfectant suitable for animals
- Gloves
- Restraint, sedation or positioning aids
- Sterile swabs
- Butterfly cannula (21G)

Required laboratory equipment:

- Incubator (e.g., MF-6W Incubator)
- Centrifuge (e.g. Centrifuge with special inserts[a] and counterbalance[b], M-BASIC centrifuge by MPW)
- Stand suitable for Orthogen® Device vet



Blood Sampling Procedure

Planning

- Plan to begin **processing** within **3-6 hours** after blood collection.
- Turn on the **incubator** at least **40 minutes** before blood collection to reach 37°C.
- Withdraw blood from **fasted dogs** in the morning. This helps lower the hematocrit and avoids fatty serum (**less volume**). The ACS yield is thus optimized.

Blood Collection

Note: Open the blister packaging of the Orthogen® Device vet and place within easy reach for immediate use.

- After disinfecting the patient's skin, puncture the jugular vein using the butterfly cannula (21G).
- Connect the Orthogen® Device vet to the Sarstedt ® adapter by rotating it slightly clockwise.
- Slowly and evenly pull the plunger.
- Use both hands to hold the device.
- Thumbs must be on device's grips.
- Note: Blood collection requires slightly more force than usual.

Avoid pressing on the **O-rings** with your thumb, as this can deform the rings, making them leak.

Blood Collection: END

The Orthogen® Device vet is **fully filled** when you feel a distinct stop.
Indicators:

- Ring on the colored plunger
- Dashed line on the syringe barrel.

- **Note**: Air bubble in the syringe is **normal**.
- **Do not try to remove the air from the syringe.**
- Never let the plunger move towards the tip.
- After disconnecting Orthogen® Device vet from the adapter, place it in the stand **with the plunger facing upwards**.
- Do not store the devices horizontally.

Documentation

- Label each Orthogen® Device vet with the patient's data, **date and time of blood processing**.
- Begin incubation **immediately**.

Incubation

The incubation period: between 3-6 hours 37°C.

Flexible timing: sequential processing of Orthogen® Device vet collected at different times from various patients.

Example schedule:

Patient 1: 9:00 AM
Patient 2: 10:00 AM
Patient 3: 11:00 AM

Processing time: 2:00 - 3:00 PM focus on this topic

Document the LOT number in the patient's history for tracing.

Centrifugation

Preparation:

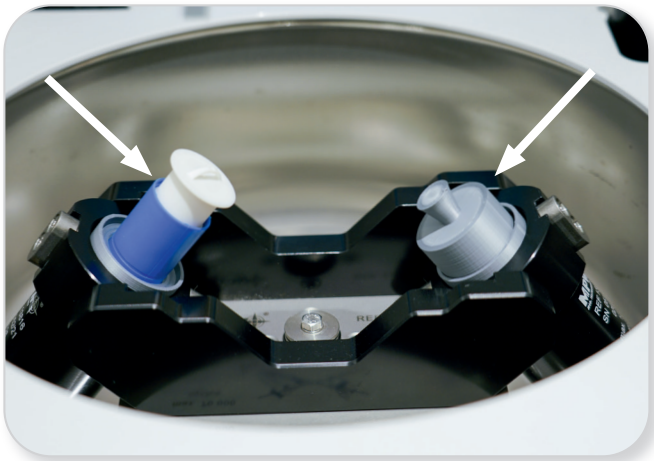
1. Unscrew the white pulling aid from the plunger.
2. Remove the tab completely by reaching under its free end with your right thumb and pulling it off
3. The tab may break. If it does, ensure you remove all parts of the tab.

The **complete removal** of the tab is essential for the serum to properly enter the vial.
Ensure the white vial holder remains in position while removing the tab.

Centrifugation

- The white vial holder should protrude from the top of the plunger.
- Grip the Orthogen® Device vet **only by the syringe barrel or plunger**.
- Place the device in the centrifuge with the tip facing **downwards**.
- Place the Orthogen® Device vet opposite each other in the centrifuge or use a counterbalance.

Note: provided counterbalance can be safely used when collected blood volume is from 7.5 to 15 mL.

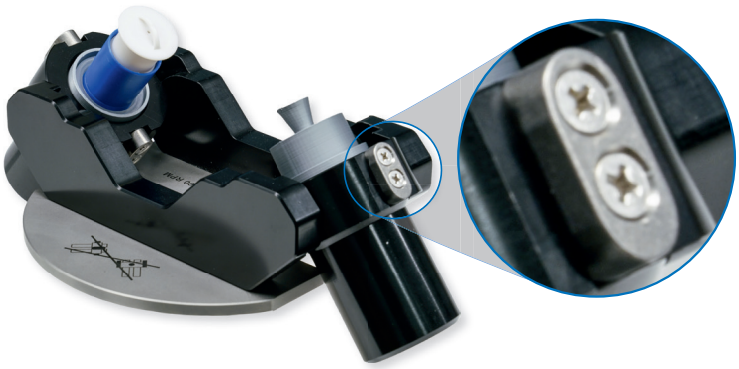


Programming

Program the **swing-out** centrifuge with the following settings:

Centrifuge Model	RPM	RCF	Time (min.)
e.g. MPW M-BASIC, Eppendorf 5702	3100	1500	3
Drucker Boost 4+ Flex	2800	1470	3

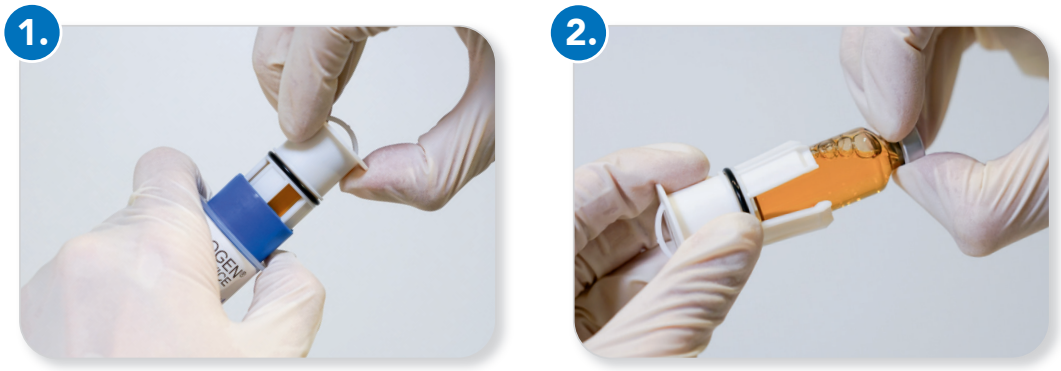
MPW M-BASIC bucket positioning:



Orthogen® Device vet **adapter**:

Vial Removal

1. Pull the white vial holder out of the Orthogen® Device vet by gripping under the white rim with two fingers and pulling slowly but firmly.
2. Remove the vial from the vial holder by gripping the head of the vial with two fingers at the taper and pulling.



Insert the empty vial holder back into the empty Orthogen® Device vet with the plate facing upwards.

ACS Storage

- Apply enclosed Steri-Tamp® sticker on the vial port **before freezing every time**.
  - Refreezing can be done three times.
- Label the vial with patient's data, processing and expiry date (12 months).
- Place all labeled vials from one patient into a storage package and label the package with the patient data.
- The serum-filled vials can be stored at -18°C or colder.

Note: The vial has a capacity of approximately 7 mL and will contain an individual amount of ACS of 4-6 mL. Variations in serum yield may be due to:

a. Different hematocrit levels
b. Hydration status
c. Fatty serum

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