

INSTRUCTIONS FOR USE

IntelliFlow™

Platelet Stabilization Tube

Product Name	Platelet Stabilization Tube
Catalog Number	ZK202603
Package Size	50 tubes per pack
Regulatory Status	FOR VETERINARY USE ONLY.

FOR VETERINARY USE ONLY.

1. INTENDED USE

The Platelet Stabilization Tube is a vacuum blood collection tube containing a proprietary platelet stabilization solution. It is designed to preserve platelets' basal activation status as it exists at the time of sample collection, protecting against the artifactual activation that begins once platelets leave the body, in veterinary whole blood samples for up to 7 days at either room temperature 72–82°F (22–28°C) or refrigerated 36–46°F (2–8°C) conditions; users should validate performance for their specific animal species and research protocols.

The tube is intended for use as a sample stabilization container for downstream flow cytometric analysis of platelet activation markers and surface glycoproteins in veterinary applications.

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2. PRINCIPLE OF THE PROCEDURE

Once platelets leave the body, they begin to activate spontaneously. Under standard collection and storage conditions (3.2% sodium citrate or citrate-based anticoagulant tubes at 72–82°F (22–28°C) or 36–46°F (2–8°C), the percentage of CD62P-positive (activated) platelets increases substantially within hours, rendering samples unsuitable for accurate assessment of in vivo platelet activation status.

The Platelet Stabilization Tube contains a proprietary stabilization solution that inhibits further ex vivo platelet activation following blood collection into the tube. Whole blood samples collected into the tube maintain their platelet activation profile, as measured by CD62P expression, for up to 7 days under either ambient or refrigerated storage.

Preserved samples can subsequently be analyzed using standard flow cytometry protocols on any commercially available flow cytometer, with antibodies from any major vendor.

3. MATERIALS PROVIDED

Each package contains:

Platelet Stabilization Tubes (standard vacuum blood collection tube format)
Instructions for Use

Tube specifications:

Format: Standard vacuum blood collection tube
Material: Laboratory-grade glass
Closure: Yellow cap
Additive: Proprietary platelet stabilization solution (0.5 mL pre-filled)
Vacuum: Calibrated to draw 0.5 mL of blood (blood-to-stabilization solution ratio 1:1)

Draw volume: 0.5 mL

Label: Product identification, lot number, expiration date

Outer diameter: 8 ±0.5 mm

Length: 75 ±2.0 mm

4. MATERIALS REQUIRED BUT NOT PROVIDED

Standard flow cytometry reagents and antibodies (compatible with major vendors including BD Biosciences and Beckman Coulter)

Flow cytometer (any commercially available instrument)

5. STORAGE AND STABILITY

Unopened product (before use):

- Store at room temperature (72°F to 82°F / 22°C to 28°C)
- Transport: 15-30°C (59-86°F)
- Shelf life: 24 months from date of manufacture
- Do not freeze
- Protect from direct sunlight
- Use before the expiration date printed on the label

After sample collection:

- Store at either room temperature (approximately 72-82°F / 22-28°C) or refrigerated (approximately 36-46°F / 2-8°C)
- Samples remain stable for up to 7 days under either condition
- No cold chain required for shipping
- Do not freeze samples after transfer

INDICATIONS OF PRODUCT DETERIORATION

Do not use the Platelet Stabilization Tube if any of the following are observed in an unfilled tube:

1. Cloudiness or visible precipitate in the stabilization solution.
2. Discoloration of the stabilization solution.
3. Loss of vacuum (tube fails to draw blood or draws significantly less than the stated volume).
4. Visible cracks, chips, or damage to the glass tube.

If any indication of product deterioration is observed, do not use the tube. Contact IntelliFlow Tech LLC Technical Support at intelliflowtech@gmail.com or 1-818-278-9388 / 1-984-528-9102 | www.intelliflowtech.com.

FREEZING AND THAWING

Blood samples in the Platelet Stabilization Tube:

1. Do not freeze whole blood samples stored in the Platelet Stabilization Tube. Freezing will cause hemolysis and compromise sample integrity.
2. If downstream analysis requires frozen plasma, centrifuge the blood sample first to obtain plasma, then transfer the plasma fraction to a separate labeled cryogenic tube prior to freezing.
3. Plasma may be stored frozen at -4°F (-20°C) or -112°F (-80°C) for long-term storage. Thaw at 36-46°F (2-8°C) and mix gently before use. Follow the downstream assay manufacturer's instructions for processing.

6. SPECIMEN COLLECTION AND HANDLING

Step 1 — Blood Collection

Draw blood directly into the Platelet Stabilization Tube via standard veterinary venipuncture under negative pressure. Allow the vacuum to draw exactly 0.5 mL of blood into the tube until filling stops. Do not overfill.

Step 2 — Mixing

Gently invert the Platelet Stabilization Tube 5 to 10 times immediately after collection to ensure thorough mixing of the blood with the stabilization solution. Do not shake.

Step 3 — Storage

Store the Platelet Stabilization Tube at either room temperature 72–82°F (22–28°C) or refrigerated 36–46°F (2–8°C) until analysis. Samples remain stable for up to 7 days under either condition.

Step 4 — Analysis

At any point within the 7-day window, process the stored sample according to standard flow cytometry protocols for platelet marker analysis. No special pretreatment is required beyond standard sample preparation steps.

7. PERFORMANCE CHARACTERISTICS

Stability of CD62P expression in the Platelet Stabilization Tube (n = 10 healthy donors)

Note: The following data was generated using human blood samples via the transfer method. Blood was collected from healthy human donors into standard 3.2% sodium citrate tubes and transferred into Platelet Stabilization Tubes. CD62P-positive platelet percentages were measured at 0 hours, 6 hours, Day 3, Day 5, and Day 7, under both 72–82°F (22–28°C) and 36–46°F (2–8°C) storage conditions.

Time Point	72-82°F / 22-28°C (% CD62P+)	36-46°F / 2-8°C (% CD62P+)
0 hour	1.3	1.3
6 hours	1.1	1.2
Day 3	1.5	1.2
Day 5	1.4	1.2
Day 7	1.5	1.2

Standard deviation across all time points: < 2%

Comparison to standard citrate tubes (same donors, identical conditions):

Time Point	Standard Citrate 72-82°F / 22-28°C	Standard Citrate 36-46°F / 2-8°C
0 hour	4.8	4.8
6 hours	17.4	18.7
Day 3	22.7	33.1
Day 5	27.8	44.7
Day 7	41.4	65.1

Under standard citrate storage, CD62P-positive platelets reached 41.4% (72-82°F / 22-28°C) and 65.1% (36-46°F / 2–8°C) by Day 7, showing a substantial increase in CD62P levels over the same period. Under Platelet Stabilization Tube storage, CD62P levels remained at or below 1.5% throughout the 7-day period under both temperature conditions.

Compatibility

The Platelet Stabilization Tube is a standardized product with one specification. It has been validated for use with flow cytometry reagents from major vendors including BD Biosciences and Beckman Coulter. It is compatible with

all commercially available flow cytometers following standard sample preparation protocols. No vendor-specific customization or protocol modification is required.

8. LIMITATIONS

This product is FOR VETERINARY USE ONLY.

Performance data has been established using human whole blood samples.

The product is designed to preserve platelets' basal activation status for analysis of activation markers (e.g., CD62P) and platelet surface glycoproteins, protecting against the artifactual activation that begins once platelets leave the body. If agonist stimulation is required as part of the study protocol, agonist must be added to citrate-anticoagulated blood prior to collection into the Platelet Stabilization Tube.

For optimal results, blood should be drawn directly into the Platelet Stabilization Tube using standard veterinary venipuncture technique.

Overfilling or underfilling will result in an incorrect blood-to-additive ratio and may lead to suboptimal product performance. The vacuum is calibrated to draw exactly 0.5 mL.

Do not reuse the tube or its contents.

9. WARNINGS AND PRECAUTIONS

1. FOR VETERINARY USE ONLY.
2. Do not use tubes past the expiration date printed on the label.
3. Do not draw blood into the Platelet Stabilization Tube past the expiration date. If sample collection occurs on or before the expiration date, samples should be processed within the stated stability window.
4. Do not use tubes for collection of materials to be injected into animals. This tube is a direct blood collection reagent.
5. Product is intended for use as supplied. Do not dilute or add other components to the tube.
6. Overfilling or underfilling of tubes will result in an incorrect blood-to-additive ratio and may lead to suboptimal product performance.
7. Store as directed. Improper storage may affect product performance.
8. Treat all blood samples as potentially biohazardous. Follow universal precautions and institutional biosafety guidelines.
9. Use personal protective equipment (gloves, lab coat, eye protection) during sample handling.
10. Dispose of used tubes and associated materials as biohazardous waste in accordance with local, state, and federal regulations.
11. Do not use if the tube is damaged, cracked, or has lost its vacuum.

CAUTION — GLASS TUBE HANDLING

- a. Glass has the potential for breakage. Precautionary measures should be taken during all handling, transport, and storage of glass tubes.
- b. All biological specimens and materials coming into contact with them should be treated as potentially biohazardous and capable of transmitting infection. Dispose of in accordance with applicable federal, state, and local regulations. Avoid contact with skin and mucous membranes.
- c. Used tubes and associated materials should be disposed of as infectious medical waste.
- d. To remove the stopper, gently rock it from side to side, or grasp with a simultaneous twisting and pulling action. A thumb-roll procedure for stopper removal is NOT recommended as tube breakage and injury may result.
- e. Safety Data Sheet (SDS) can be obtained by contacting IntelliFlow Tech LLC at intelliflowtech@gmail.com or 1-818-278-9388 / 1-984-528-9102.

10. DISPOSAL

Used tubes containing blood samples should be disposed of as biohazardous waste in accordance with local, state, and federal regulations.

11. REGULATORY STATUS

United States: FOR VETERINARY USE ONLY.

12. SYMBOLS USED ON LABELING

Symbol	Meaning
REF	Catalog number
LOT	Batch code
Hourglass icon	Use by date (expiration)
Factory icon	Manufacturer
Thermometer icon	Storage temperature range

ORDERING INFORMATION

Field	Information
Distributor	IntelliFlow Tech LLC
Address	16192 Coastal Highway, Lewes, DE 19958, United States
Email	intelliflowtech@gmail.com
Phone	1-818-278-9388
Catalog Number	ZK202603
Package Size	50 tubes per pack

13. MANUFACTURER AND DISTRIBUTOR INFORMATION

Manufactured in China by:

Jiangsu Maik Medical Apparatus Co Ltd

No 59, JiangShen Road, Jiangyan District, Taizhou City, China 225500

Distributed in the United States by:

IntelliFlow Tech LLC

16192 Coastal Highway, Lewes, DE 19958, United States

Email: intelliflowtech@gmail.com

Tel: 1-818-278-9388 / 1-984-528-9102

Website: www.intelliflowtech.com

14. DOCUMENT INFORMATION

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