



**truCOLLECT™-plus -
Stabilization and Transport Kit (10)**

Whole blood specimen dry stabilization, transport, and storage

For Research Use Only
Not for use in diagnostic procedures

PN 520254

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INTENDED USE

The truCOLLECT™-plus Stabilization and Transport Kit is intended for remote collection of up to 80 µl of whole blood, its controlled desiccation, and storage. The truCOLLECT-plus Stabilization and Transport Kit is intended for use in life science applications, such as molecular biology. For DNA extraction, this kit is designed to be used with the truXTRAC® DNA Kit for truCOLLECT™-plus - Column (PN 520259) or Magnetic Bead (PN 520260). This Research Use Only (RUO) product is not intended for the diagnosis, prevention, or treatment of a disease. The truCOLLECT-plus is not designed nor is it intended for direct touch specimen collection (e.g., blood finger stick).

INTRODUCTION

Analysis of whole blood specimens is a fundamental, high-value technique for biomedical and life science research. For biomarker analysis, while freshly collected specimens are desired, the logistics of collection, stabilization, and long-term storage of fresh blood are problematic and expensive. An alternative to fresh blood is a dried blood specimen collection card technique (e.g., Dried Blood Spot). Dried blood cards, while having stability benefits and lower cost, were not designed for advanced analytical molecular biology techniques. DNA extraction from dried blood specimens remains difficult to adapt for use in downstream NGS-based analysis, due to inherently low DNA yields. Finally, sample identification and tracking using Dried Blood Spots can be challenging.

The truCOLLECT-plus Stabilization and Transport Kit is specifically designed for remote collection of whole blood, its controlled desiccation, and storage. With the truCOLLECT-plus system, whole blood specimens are collected in either EDTA venipuncture vacutainers or EDTA blood capillary tubes and easily transferred onto a porous fiber swab. The swab is attached to a 2D barcoded cap for sample identification and tracking. After applying up to 80 µl of anticoagulated blood onto the swabs, the cap/swab assembly is immediately inserted into a vial containing an immobilized desiccant and sealed. This vial enables consistent operator-independent, dry-stabilization of the specimen. In addition, this vial also minimizes sample-to-sample reproducibility, operator error, and environmental contamination. The sealed container can be shipped, in accordance with current shipping regulations, using standard shipping methods at ambient temperature.

In an appropriate laboratory environment, DNA is recovered from such dry-stabilized blood samples using Covaris Adaptive Focused Acoustics (AFA™). Uniquely, AFA-energetics™ ensures rapid rehydration and detachment of blood cells from the truCOLLECT-plus swabs. The DNA extraction buffer which is optimized for AFA-energetics, enables the efficient downstream isolation and subsequent column-based or magnetic bead-based purification of high quality, molecular biology grade DNA.

If you require any assistance with this product, please contact Covaris Application Support at ApplicationSupport@covaris.com.

REVISION HISTORY

Part Number	Revision	Date	Description of change
010461	01	7/18	Kit Release of truCOLLECT-plus – Stabilization and Transport Kit

KIT CONTENTS

- truCOLLECT-plus cap/swab assembly with barcode 10
- truCOLLECT-plus transport and storage container with desiccant 10
- Tamper evident indicator tape 10

STORAGE

Store at room temperature in a dry environment.

LABORATORY EQUIPMENT TO BE SUPPLIED BY USER

Required Laboratory Equipment and Accessories

- Precision pipette or transfer pipette to remove blood from primary collection tube and deliver up to 80 µl of whole blood onto the truCOLLECT-plus swabs
- Powder-free disposable gloves

Optional Laboratory Equipment and Accessories

- 2D barcode reader

DNA EXTRACTION & PURIFICATION KITS (NOT INCLUDED)

- truXTRAC DNA kit for truCOLLECT-plus – Column (Covaris, PN 520259)
- truXTRAC DNA kit for truCOLLECT-plus – Magnetic Bead (Covaris, PN 520260)

SAMPLE COLLECTION, DRY STABILIZATION, TRANSPORT, & STORAGE

This procedure is intended for blood specimens collected into EDTA Blood Collection Tubes (BCT) or blood collection devices such as the MiniCollect EDTA system (i.e., Greiner Bio-One). The truCOLLECT-plus is not to be used for direct touch specimen collection (e.g., finger stick). The specimen must be transferred from the primary blood collection device onto truCOLLECT-plus swab as described in the procedure below.



WARNING: As biological specimens are potentially a biohazard, Good Laboratory Practices must be followed. Appropriate equipped laboratory, trained personnel, and supplies (such as gloves, glasses, and clothing) are required to handle lab materials safely. Follow Universal Precautions (See Appendix).

1. Write the type of specimen or identity and the date of specimen transfer on the label of the desiccant/storage container.
2. Open the desiccant/storage container by gently pressing upwards on the tab on the cap attached to the container.
3. Open the whole blood primary collection tube.
4. Carefully remove the truCOLLECT-plus cap/swab assembly from the pouch by holding the cap. Do not touch the swabs attached to the cap.



CAUTION: Do not touch the truCOLLECT swab area.
The truCOLLECT-plus can be placed upside down on the cap if needed.

5. If desired, scan and note the 2D barcode number on the side of the cap/swab assembly as shown in Fig. 1

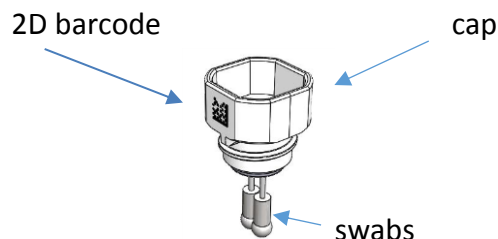
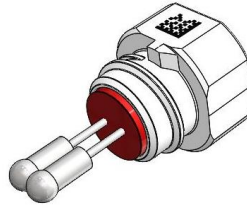
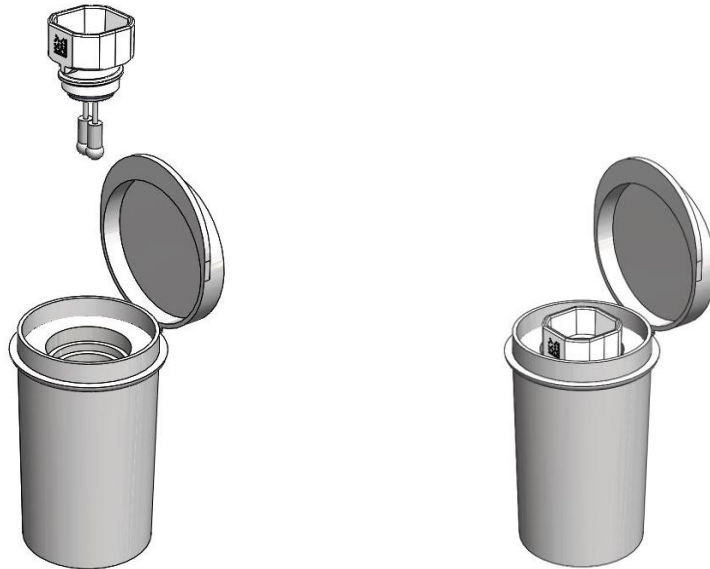


Figure 1: cap/swab assembly

6. Hold the truCOLLECT-plus sideways to apply the sample.



7. Draw the sample (up to 80 μ l) into the pipette tip and dispense slowly for 10-15 seconds directly onto the swabs. The blood takes 15-20 seconds to wick into the swabs, and a portion of the blood will be visible between the swabs.
8. After sample application, wait 15 seconds and verify no blood is dripping from the swabs.
9. Being careful to avoid touching the walls of the container, immediately insert the cap/swab into the desiccant/storage container.



10. Carefully snap close the desiccant/storage container cap.



CAUTION: The desiccant/storage container must be firmly closed to ensure sample dry stabilization.

11. If desired, apply the tamper evident indicator tape to the desiccant/storage container by centering and wrapping the label over the cap and affixing to opposite sides of the container. Do not cover the sample information on the label.
12. Samples may be stored at room temperature in a dry environment until processing.

13. If shipping is required, dry the sample overnight in the desiccant/storage container.
 - a. For domestic shipments in the United States, please follow the USPS Packaging Instructions for nonregulated infectious materials (USPS Packaging Instructions 6G):
http://pe.usps.com/text/pub52/pub52apxc_023.htm#ep1000450
 - b. For international shipments, please follow
http://pe.usps.com/text/pub52/pub52c3_024.htm, section 346.325 Nonregulated Materials, which identifies the packaging requirements that must be met for international mail.
 - c. Always comply with current shipping regulations.

14. These swabs are designed for high-recovery DNA extraction and purification using a Covaris Focused-ultrasonicator and the following kits:
 - a. truXTRAC DNA kit for truCOLLECT-plus – Column (Covaris, PN 520259)
 - b. truXTRAC DNA kit for truCOLLECT-plus – Magnetic Bead (Covaris, PN 520260)

UNIVERSAL PRECAUTIONS

Universal Precautions should be followed on all specimen samples, regardless of whether a sample is known to contain an infectious agent. Laboratories handling specimen samples are advised to comply with applicable parts of the following governmental and clinical standards, or their equivalent in the country of use:

- Centers for Disease Control (CDC), Universal Precautions for Prevention of Transmission of HIV and Other Bloodborne Infections, published 1987, updated 1996
- Clinical and Laboratory Standards Institute (CLSI), GP17-A3 Clinical Laboratory Safety; Approved Guideline - Third Edition, published 2012, ISBN 1-56238-797-9
- Clinical and Laboratory Standards Institute (CLSI), M29-A4 Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline, Fourth Edition, published 2014, ISBN 1-56238-961-0
- Occupational Safety and Health Administration (OSHA), 29 CFR 1910.1030 Bloodborne Pathogens
- International Standards Organization (ISO) 15190:2003, Medical Laboratories – Requirements for Safety

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