



Heavy Metals & Essential Elements Collection Kit

Blood Spot + Dried Urine Collection Instructions

Carefully Review Prior to Collection

Available online at www.zrtlab.com



Click here to view the collection video
or visit **www.zrtlab.com/collection-videos**

Section 1: Identify Your Panel Requirements

Begin by identifying your panels. In Section 6 of the Test Requisition Form, locate the test code associated with your selected panels and match it to the list below.

Tip: Consider combination panels, as they may provide your selected tests at a more cost-effective rate while delivering broader clinical insight.

Collection Materials

Blood Spot Card

Dried Urine Strips



(1)



(2)

Please Note: Collection steps and required kit materials vary by panel, your panel may not require all materials provided in this kit.

Test Code + Panel		Collections Required
Heavy Metals & Essential Elements Panels		
B-224	ICPMS Toxic and Essential Elements Blood: Zn, Cu, Mg, Se, Cd, Hg	
U-326	ICPMS Iodine Urine: I, Crtn	
U-327	ICPMS Toxic and Essential Elements Urine: I, Br, Se, Li, As, Cd, Hg, Crtn	
BU-744	Blood Spot Thyroids + Dried Urine ICPMS Iodine Blood: TSH, FT3, FT4, TPOab, Tgbn, TT4 Urine: I, Crtn	
BU-745	Blood Spot Thyroids + Dried Urine ICPMS Toxic and Essential Elements Blood: TSH, FT3, FT4, TPOab, Tgbn, TT4 Urine: I, Br, Se, Li, As, Cd, Hg, Crtn	
BU-746	Blood Spot + Dried Urine ICPMS Toxic and Essential Elements Blood: Zn, Cu, Mg, Se, Cd, Hg Urine: I, Br, Se, Li, As, Cd, Hg, Crtn	

Additional Panels Available for this Kit

B-201 Sex Hormone Binding Globulin

Blood: SHBG

**B-202 Prostate-Specific Antigen**

Blood: PSA

**B-203 Thyroid-Stimulating Hormone**

Blood: TSH

**B-204 Luteinizing Hormone and Follicle-Stimulating Hormone**

Blood: LH, FSH

**B-205 Anti-Müllerian Hormone**

Blood: AMH

**B-206 High-Sensitivity C-Reactive Protein**

Blood: hsCRP

**B-207 Insulin, Fasting**

Blood: IN

**B-208 Hemoglobin A1c**

Blood: HbA1c

**B-220 Thyroids**

Blood: TSH, FT3, FT4, TPOab, Tgbn, TT4

**B-221 Lipids**

Blood: HDL, TG, CH, LDL, VLDL

**B-222 CardioMetabolic**

Blood: IN, HBA1c, HDL, TG, CH, hsCRP

**B-223 LCMS Vitamin D**

Blood: D2, D3



B-240	LCMS Hormones 3 with SHBG Blood: E2, Pg, T, SHBG	
B-241	LCMS Hormones 5 with SHBG Blood: E2, Pg, T, DS, C, SHBG	
B-242	LCMS Hormones 7 with SHBG Blood: E2, E3, E1, Pg, T, DS, C, SHBG	
B-243	LCMS Hormones 7 with SHBG and Thyroids Blood: E2, E3, E1, Pg, T, DS, C, SHBG, TSH, FT3, FT4, TPOab, Tgbn, TT4	

Section 2: Choose Your Collection Day

Before You Begin

Read all instructions thoroughly and decide the ideal day to collect. Mark it on your calendar. List all current medications on the test requisition.

! Failure to follow instructions may compromise lab results or interpretation.

Men, Children, & Non-Menstruating Women (Hormone Users: See Section 3)

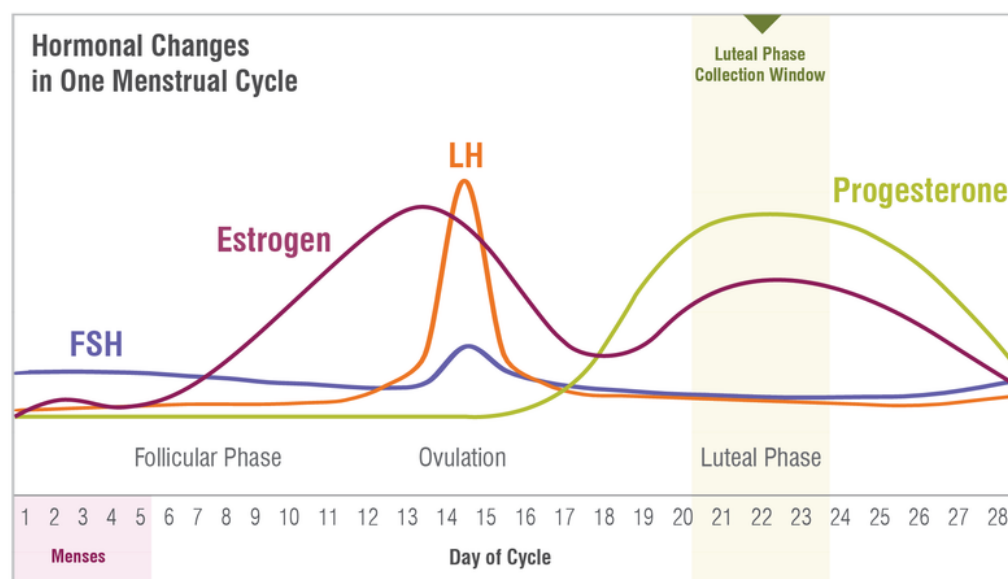
Collect any day of the month.

Menstruating Women

- If testing FSH for fertility reasons, collect on day 3 of menstrual cycle.
- If testing Estradiol (E2), Progesterone (Pg) or Testosterone (T):

Note: Day 1 = First day of your period flow (not spotting).

- **Regular Cycles** (your cycle is about the same length each month):
 - **Cycle length 23–26 days:** Collect day 17, 18 or 19
 - **Cycle length 27–30 days:** Collect day 21, 22 or 23
 - **Cycle length 31–34 days:** Collect day 25, 26 or 27
 - **For longer or shorter cycles:** Collect 5–7 days before the expected start date of your next period.
- **Infrequent or Unpredictable Cycles:** Collect any non-bleeding day.



This illustration is an example of a 28-day cycle. Hormonal changes and day of ovulation vary with cycle lengths.

ZRT LABORATORY

Section 3: Hormone Users *Skip if not using hormones.*

Write all hormones used on your requisition. Failure to do so may result in incorrect reference ranges and commentary.



Do NOT stop hormone usage — continue as prescribed.

Avoid contamination: Change sheets, pillowcases, and towels the night before collection; avoid touching bathroom surfaces that may contain hormone residue.

Topical, Oral, Troche or Sublingual Therapies

The day before testing, continue use of hormones as prescribed. Make sure any night dosage is applied at least 12 hours before planned morning collection. For example, dose before 8pm for an 8am collection. If using oral progesterone, your dosage can be right before bed.

Do **NOT** use bare hands for topical hormone application for at least two days prior to collection (apply hormones with gloves or applicator). Avoid using hormones on the face, lips and neck.

Patches, Vaginal Rings, Pellets or Injectables

Test half-way between doses. For example, collect 3 days after a once-a-week patch or 2 weeks after a once-a-month injection.

7-Keto DHEA

Avoid for 3 days prior to collecting. Does not apply to regular DHEA.

Steroids (e.g. glucocorticoids, hydrocortisone, prednisone)

Talk to your health care provider about appropriate timing.

Section 4: Prepare for Collection

To ensure **accurate** results, begin preparing for your collection according to the timeline below.

3 Days Prior to Collection

Avoid anti-aging/anti-wrinkle facial creams and biotin/vitamin B7 (hair and nail formulas).

1 Day Prior to Collection

Diet & Supplement Considerations: If you take iodine and/or selenium supplements (e.g. Iodoral, multi-vitamin) daily, continue to take them as usual when testing. If you eat foods high in iodine or selenium, or take supplements only periodically, avoid them the day before and day of your urine collection. Foods highest in iodine include seafood, seaweed (kelp) and dairy products. Foods highest in selenium include Brazil nuts.

Day of Collection

If you are testing CardioMetabolic Panel tests (e.g. insulin, triglycerides) ZRT recommends fasting (no food or drink other than water) 10-12 hours overnight before collecting in the morning.

Refrain from drinking more than 8 oz of water in the hour before each dried urine strip collection to allow your urine to concentrate.

Blood Spot Collection Timing

Collect blood sample within 1 hour of waking. Fill all the circles on the card completely, if possible, but prioritize well-saturated spots over partially filled.

! Important

Samples that do not meet criteria below may not be usable for testing. Each blood spot must:

- Soak through the collection card so that blood shows through on the back.
- Be spherical and fill as much of the circle as possible.
- Contain one drop per circle, no overlapping.



Section 5: Urine Collection Timing

Follow the timing guidelines below to ensure accurate test results.



Sample 1: Upon Waking

Collect your first urination immediately upon waking for the day.

- Don't eat or drink anything but water, take vitamins or supplements, or take medications (except as advised by your health care provider) until after the first collection.
- Refrain from drinking more than 8 oz in the hour before each collection to allow your urine to concentrate.

Hormone Users: After the first morning collection, supplement with your regular morning hormone dose (AVOID VAGINAL HORMONE USE). Wash hands thoroughly afterwards – especially if you are using topical hormones.

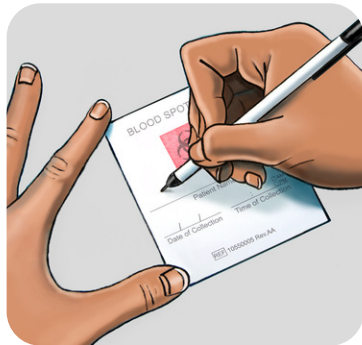


Sample 2: Before Bed

Collect just before bedtime. Limit drinking to 8 oz the hour before.

Hormone Users: If you supplement hormones at night before bed, collect your last (night) sample before using hormones (e.g. oral or topical progesterone).

Section 6: How to Collect Blood

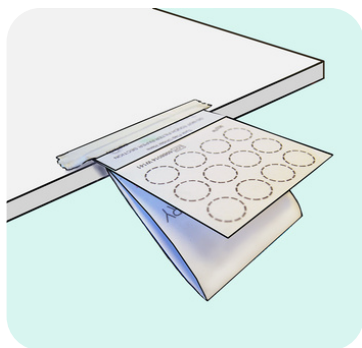


STEP 1

Collect blood sample within **1 hour** of waking.

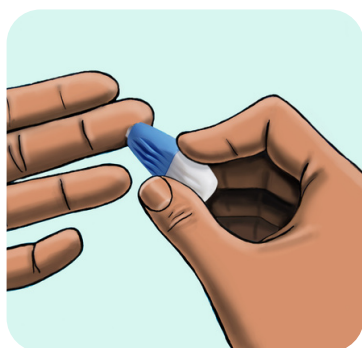
- Write your name, the date and time of collection on the card prior to washing hands.
- Wash hands with soap and water.
- Use a clean towel to dry hands.
- Make sure hands are warm for improved circulation.

Tip: To encourage blood flow before nicking finger, rub hands together/swing arm and/or run hand under warm water.



STEP 2

Open the cover on the collection card. Fold it back and away from the filter paper. Avoid touching the filter paper. Tape card to a flat surface like a table, below heart under waist level. Open the alcohol prep pad and sterile gauze. Select finger. Middle or ring finger of non-dominant hand is recommended.



STEP 3

Wipe finger with alcohol prep pad and allow to air dry. Twist cap off lancet and press small white section firmly against the side of finger pad until lancet clicks. Wipe away the first blood drop with gauze.



STEP 4

Position finger over circle on blood spot card and gently milk (don't squeeze) blood from the finger. Collect so that your hand is below your waist, allowing gravity to assist with blood flow.

Tip: Squeeze arm from elbow to base of finger.

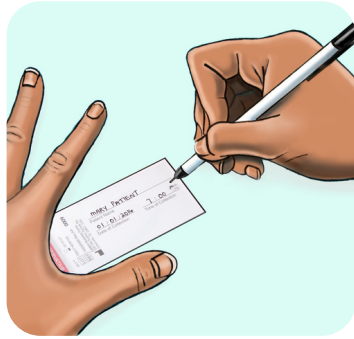
STEP 5

As blood drop forms and is ready to fall, touch the drop onto the center of the circle (one drop per circle). Continue collection, preferably until all circles have been filled – but it is more important to have several good sized spots than to fill all the circles. When finished, apply bandage.

STEP 6

Leave blood spot card open to dry – minimum 4 hours. Once sample is dry, close cover. Store card in a cool, dry location away from direct sunlight until it is shipped.

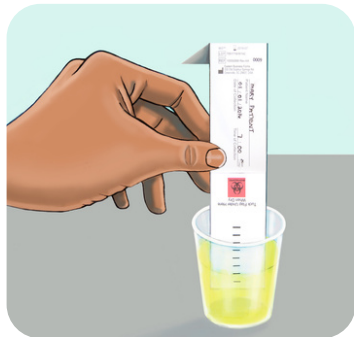
Section 7: How to Collect Urine



STEP 1

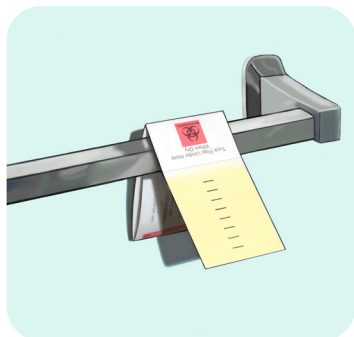
At each collection time:

- Remove a collection card from the baggie.
- Write your name, the date and time of collection on the card prior to collecting the sample.



STEP 2

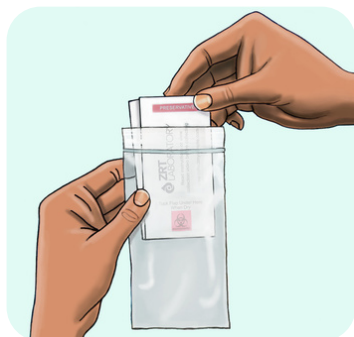
Open the cover on the collection card. Fold it back and away from the filter paper. **Avoid touching the filter paper.** Saturate the filter paper by directly urinating onto it, or by collecting your urine in a clean cup and dipping the filter paper up to the top black dash line.



STEP 3

Hang or tape the collection card in a secure place to dry* – like over a towel rack. Make sure that the urine-saturated filter paper does not touch anything.

***Note:** Do not leave dry samples out of bag for more than 24hrs.

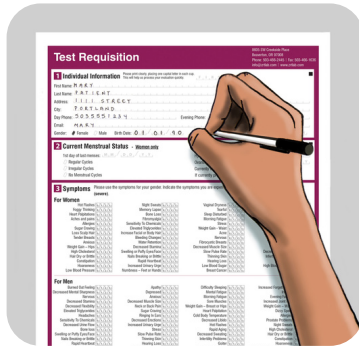


STEP 4

Allow to dry completely for at least **6 hours.*** Once dry, refold the collection card and place sample back into the baggie and seal. Repeat steps 1-4 for each collection.

***Note** that samples **MUST** be completely dry before being placed in the kit box for shipping. Failure to ensure that samples are dry may result in the need for recollection.

Section 8: Finish & Send



STEP 1

Complete all paperwork. Make sure all sections are filled and your form is signed.



STEP 2

Place the **sample(s)**, the **Test Requisition form** and any **additional paperwork** back into the plastic test kit box. Make sure to include payment (if applicable). Snap test kit lid shut.



STEP 3

Place the entire kit box inside the return packaging. Affix the prepaid label or postage if applicable. Return using the appropriate carrier.

Important Notes

- Urine samples that are wet, unsealed, too dilute (from excess fluid intake before collection), or more than 30 days old will result in sample rejection by the laboratory.
- **What if I miss a urine collection?** If you miss a collection time, collect the sample at the same time the next day (for example, collect an evening sample the following evening). Update the requisition form and the time on the card. Allow to dry completely for at least 6 hours.* Once dry, refold the card, return it to the baggie, seal, and repeat steps 1–4 for each collection.