

Mercury SPOT Kit

10 Test Kit

(Product# MSK-10)

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INTRODUCTION

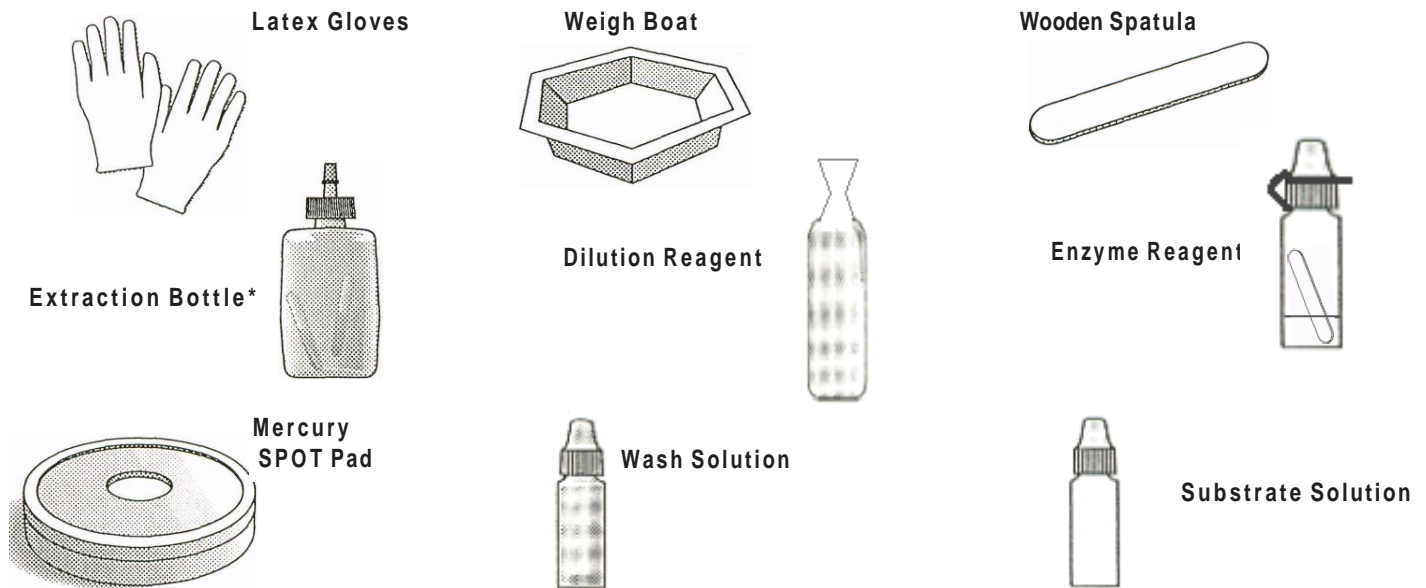
This test kit is designed to identify mercury contaminated soils, map the contaminated area and monitor the remediation of contaminated sites. This kit contains everything needed to analyze ten soil samples, although it is recommended that a portable balance be used to obtain an accurate sample weight. This test is able to identify soils containing mercury at concentrations of 1 ppm or greater. This test can be modified to screen mercury at regulatory levels by dilution of the sample extract. Call a Technical Service Representative at *Mercury Science* (866) 861-5836 for customized test kits to meet your requirements.

CAUTION!

PLEASE READ THIS GUIDE COMPLETELY BEFORE PERFORMING YOUR FIRST TEST. The extraction bottle in this test kit contains concentrated acids. The kit has been designed to minimize the risk of user contact with these acids. However, gloves (provided in this test kit), eye protection, and protective clothing should always be worn.

KIT COMPONENTS

Note: Only one bottle of Wash Solution and one bottle of Substrate Solution are provided with the 10 Test Kit. These bottles contain enough solution to perform 10 tests. Do not discard these bottles until all tests are performed.



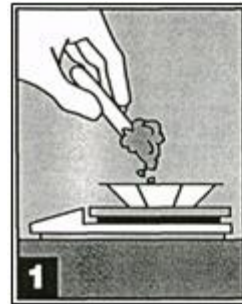
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The Extraction Bottle contains glass ampoules with concentrated acids! Do not remove these ampoules from the bottle!

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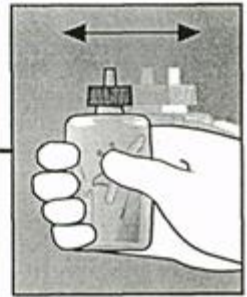
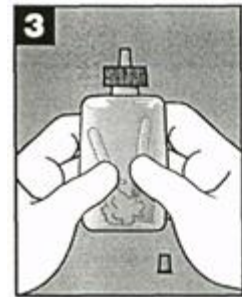
1. Weigh between 1.9 and 2.1 grams of the soil sample in the WEIGH BOAT. (If a balance is not available, use enough soil to cover the bottom of the weigh boat to a depth of approximately 1/8th inch.)



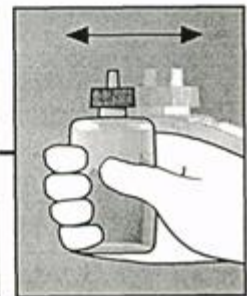
2. Transfer the soil sample to the extraction bottle. Screw the filter cap onto the EXTRACTION BOTTLE and remove the red tip from the filter cap.



3. Crush the two glass ampoules inside by squeezing the sides of the EXTRACTION BOTTLE. Shake the extraction jar vigorously using a SIDE-TO-SIDE MOTION (*Not up and down*) until the soil and extraction acids are well mixed. Wait at least two minutes before proceeding with the next step.

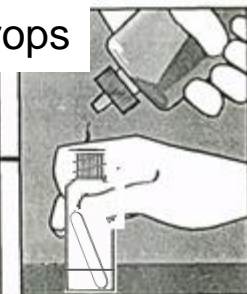
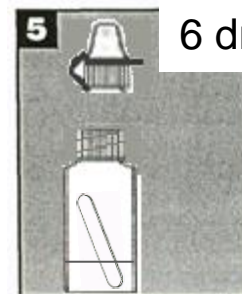


4. Remove the filter cap from the extraction bottle. Slowly and carefully add the entire contents of the DILUTION REAGENT to the EXTRACTION BOTTLE. Screw the filter cap tightly onto the EXTRACTION BOTTLE and shake the bottle gently using a SIDE-TO-SIDE MOTION (*Not up and down*) until the soil and the extraction solution are well mixed. Allow the soil to settle for one minute.



5. Unscrew the dropper cap from the small ENZYME REAGENT bottle without spilling the contents. Squeeze **SIX** drops of the soil extract from the EXTRACTION BOTTLE into the ENZYME REAGENT bottle.

Note: Do not discard the dropper cap. It is used in Step 6.



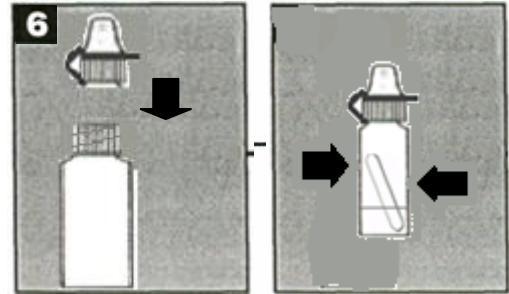
6 drops

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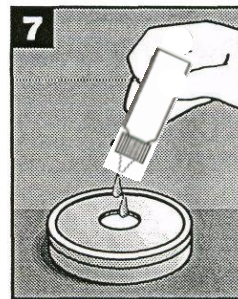
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6. Screw the dropper cap tightly onto the ENZYME REAGENT bottle. Carefully squeeze the bottle until the glass ampoule inside the bottle breaks.

Shake the ENZYME REAGENT bottle gently until the contents are thoroughly mixed.

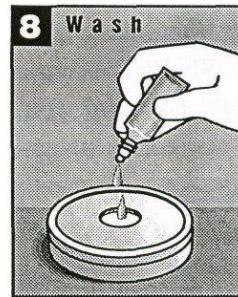


7. Squeeze **SIX** drops from the ENZYME REAGENT tube onto the membrane in the center of the MERCURY SPOT PAD. Allow the drops to be completely absorbed by the pad.



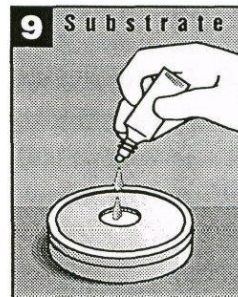
Sample
6 drops

8. Squeeze **EIGHT** drops of the WASH solution onto the MERCURY SPOT PAD. Allow the drops to be completely absorbed by the pad.



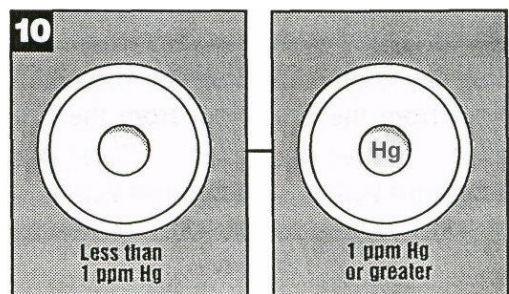
Wash
8 drops

9. Squeeze **SIX** drops of the SUBSTRATE solution onto the MERCURY SPOT PAD.



Substrate
6 drops

10. Observe the MERCURY SPOT PAD for two to four minutes. If a blue “Hg” develops on the center of the membrane against a white or light blue colored background, the soil sample contains mercury at a concentration of 1 ppm or more. If no distinct letters are visible, the soil sample contains less than 1 ppm mercury.



If you have any questions regarding your kit performance, call Mercury Science at (866)861-5836.