

ezSample Snap Vial - Phosphate (EZ-2337)

Introduction

The ezSample Snap Vial is designed to be used with the Wireless Colorimeter and Turbidity Sensor (PS-3215) or the PASPORT Water Quality Colorimeter (PS-2179) and PASCO data collection software. The vials contain a vacuum sealed color-forming reagent to test for the presence of phosphate in water samples.

Equipment

Included equipment:

- Phosphate test vials (30)
- Calibration ampoule
- A-8500 Activator Solution
- Sample cup

Required equipment:

- Wireless Colorimeter and Turbidity Sensor (PS-3215) or PASPORT Water Quality Colorimeter (PS-2179)
- SPARKvue or PASCO Capstone data collection software

Test procedures



CAUTION: Carefully read the Safety Data Sheet (SDS) before performing the test procedures. Always wear safety glasses and disposable gloves during testing.

1. Fill the sample cup up to the 25 mL mark with the sample.
2. Add 2 drops of A-8500 Activator Solution, as shown in Figure 1. Cap the sample cup and shake it to mix the contents.



Figure 1. Adding activator solution to the sample cup.

3. Place the ezSample Snap Vial (ampoule) tip into a depression at the bottom of the sample cup. Snap the tip by pressing it against the side of the cup. The ampoule will fill, leaving a small bubble to facilitate mixing, as shown in Figure 2.
4. Mix the contents of the ampoule by inverting it several times, allowing the bubble to travel from end to end.

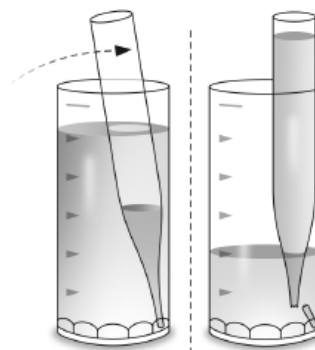


Figure 2. Snapping off the ampoule tip.

5. Wipe all liquid from the exterior of the ampoule. Wait 3 minutes for color development to occur.
6. Use the colorimeter to measure the concentration value of the ampoule. Refer to the colorimeter's manual for calibration and data collection instructions.

Recommended disposal procedures

Once you are finished with the phosphate ezSample Snap Vials, gather the vial contents into a properly labeled secondary container. Dispose of this container in accordance with your local waste regulations through a chemical waste management company.

Test method description

The phosphate ezSample test method employs stannous chloride chemistry.¹ In an acidic solution, orthophosphate reacts with ammonium molybdate to form molybdophosphoric acid, which is then reduced by stannous chloride to the intensely colored molybdenum blue. The resulting blue color is directly proportional to the phosphate concentration. Results are expressed in ppm (mg/L) PO_4^{3-} . To convert this measurement to ppm (mg/L) phosphorus alone, divide the result by 3. Condensed phosphates (pyro-, meta-, and other polyphosphates) and organically bound phosphates do not respond to this test. Sulfide, thiosulfate, and thiocyanate will cause low test results.

References

1. Method 4500-P D. *APHA Standard Methods*, 20th ed., p. 4-145, (1998)

Accuracy

The lower limit of the stated test range is the practical detection limit (PDL). Accuracy may be compromised if test results are outside of the test range. For best accuracy, further confirm test results obtained at or below the PDL.

Specifications and accessories

Visit the product page at [pasco.com/product/EZ-2337](https://www.pasco.com/product/EZ-2337) to view the specifications and explore accessories. You can also download experiment files and support documents from the product page.

Technical support

Need more help? Our knowledgeable and friendly Technical Support staff is ready to answer your questions or walk you through any issues.

-  Chat [pasco.com](https://www.pasco.com)
-  Phone 1-800-772-8700 x1004 (USA)
+1 916 462 8384 (outside USA)
-  Email support@pasco.com

Regulatory information

Limited warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

Copyright

This document is copyrighted with all rights reserved. Permission is granted to non-profit educational institutions for reproduction of any part of this manual, providing the reproductions are used only in their laboratories and classrooms, and are not sold for profit. Reproduction under any other circumstances, without the written consent of PASCO scientific, is prohibited.

Trademarks

PASCO and PASCO scientific are trademarks or registered trademarks of PASCO scientific, in the United States and in other countries. All other brands, products, or service names are or may be trademarks or service marks of, and are used to identify, products or services of, their respective owners. For more information visit www.pasco.com/legal.