

## Sample Zeroing Accessory Pack A-0025, A-0503, A-0504

Before a photometric instrument can be used to obtain measurements, it must be set to “zero”. A sealed ZERO ampoule is supplied in CHEMetrics® Vacu-vials® kits for use when samples are colorless and clear. The Sample Zeroing Accessory Packs are used to correct for potential errors when samples are colored or turbid.

### Procedure

Use Table 1 to choose the Sample Zeroing Accessory Pack that is applicable for use with a particular CHEMetrics Vacu-vials kit. Kit specific Vacu-vials instructions define the appropriate test procedure for using the Sample Zeroing Accessory Pack under Instrument Set-up, however generic procedures are presented below.

**A-0025:** Fill the A-0025 test tube with the sample to be tested (diluted, if applicable). Immediately use the test tube to zero the instrument.

**A-0503 or A-0504:** Fill the sample cup with the sample to be tested (diluted, if applicable). Snap the tip of the A-0503 or A-0504 ampoule in the sample. Invert the ampoule to mix and immediately use it to zero the instrument.

### Analysis Tips

Photometric instruments vary in their absorbance threshold zeroing limits and will display error messages when that threshold is exceeded. If a CHEMetrics photometer is unable to tolerate a particular water sample's background color or turbidity, the following errors will be displayed:

- V-2000: “Waiting” for > 1 minute, then “REPEAT”.
- V-3000: “Zero adjustment error”.
- SAM: Error code E27, E28 or E29.

For best accuracy, invert the test Vacu-vial ampoule immediately prior to insertion into the instrument in order to mimic the characteristics of the sample used to zero the photometer.

Use of the Sample Zeroing Accessory Pack to zero the instrument when testing colored or turbid samples provides a marked accuracy improvement over use of the ZERO ampoule supplied in Vacu-vials test kits for the same sample.

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**TABLE 1**

Analyte	Vacu-vials Kit Cat. No.	Sample Zeroing Accessory Pack Cat. No.
Ammonia	K-1413	A-0025
	K-1503	A-0503
	K-1513	A-0025
	K-1523	A-0504
Chloride	K-2103	A-0503 – CHEMetrics Photometers Only
Chlorine	K-2513	A-0025
	K-2523	A-0025
Chlorine Dioxide	K-2703	A-0025
Chromate	K-2803	A-0503
Copper	K-3503	A-0503
Cyanide	K-3803	A-0503 – CHEMetrics Photometers Only
DEHA	K-3903	A-0503
Hydrogen Peroxide	K-5543	A-0503
Iron	K-6003	A-0503
	K-6023	A-0503
	K-6203	A-0503
Manganese	K-6503	A-0503
Molybdate	K-6703	A-0503
Monochloramine	K-6803	A-0025
Nitrate	K-6903	NOT APPLICABLE
	K-6913	A-0025
	K-6923	NOT APPLICABLE
	K-6933	NOT APPLICABLE
Nitrite	K-7003	A-0025
	K-7013	A-0025
Ozone	K-7423	A-0025
	K-7433	NOT APPLICABLE
Dissolved Oxygen	K-7513	A-0503
	K-7553	A-0503
Peracetic Acid	K-7913	A-0025
Phenols	K-8003	A-0503
	K-8023	A-0504
Phosphate	K-8503	A-0503
	K-8513	A-0503
Silica	K-9003	A-0503
Sulfate	K-9203	NOT APPLICABLE
Sulfide	K-9503	A-0503
	K-9523	A-0504
Zinc	K-9903	A-0503 – CHEMetrics Photometers Only
	K-9923	A-0503 – CHEMetrics Photometers Only