# Product Information

## Beta-Lactamase Activity Colorimetric Assay Kit

### I. Kit Contents:

| Components | K2184-200<br>200 assays | Cap Color | Part Number |
|---|---|---|---|
| PCA | 20 ml | WM | K2184-C-1 |
| Neutralization Solution | 4 ml | NM | K2184-C-2 |

### II. Introduction:

Numerous bioassays need removal of proteins from samples before analysis. The perchloric acid (PCA) precipitation is a commonly used way to removes majority of proteins and stabilizes many of the small molecule analytes. The Deproteinizing Sample Preparation Kit applies a PCA precipitation method, offers a special tool for sample preparation in various small molecules. By using the kit, proteins are precipitated, excess PCA is removed, samples are neutralized. This assay is a fast and easy way for preparation of many samples.

### III. Storage and Handling:

Store kit at room temperature. Put kit components on ice to chill before use. There may be some precipitation in the neutralization buffer. Shake bottle gently a few times to resuspend before using.

### IV. Deproteinizing Sample Preparation Protocol:

The following protocol can be proportionally scaled up for preparation of larger or smaller sample volumes.

1. Protein Precipitation:

For biological samples with protein concentration less than ~ 20 mg/ml (tissue homogenate, cell lysate, urine, etc.), take 500 µl of sample, mix with 100 µl of ice cold PCA in 1.5 ml microfuge tubes, vortex briefly to mix well, place on ice for 5 min. Centrifuge at 13,000 x g for 2 min. Accurately transfer 480 µl of the supernatant to a fresh tube.

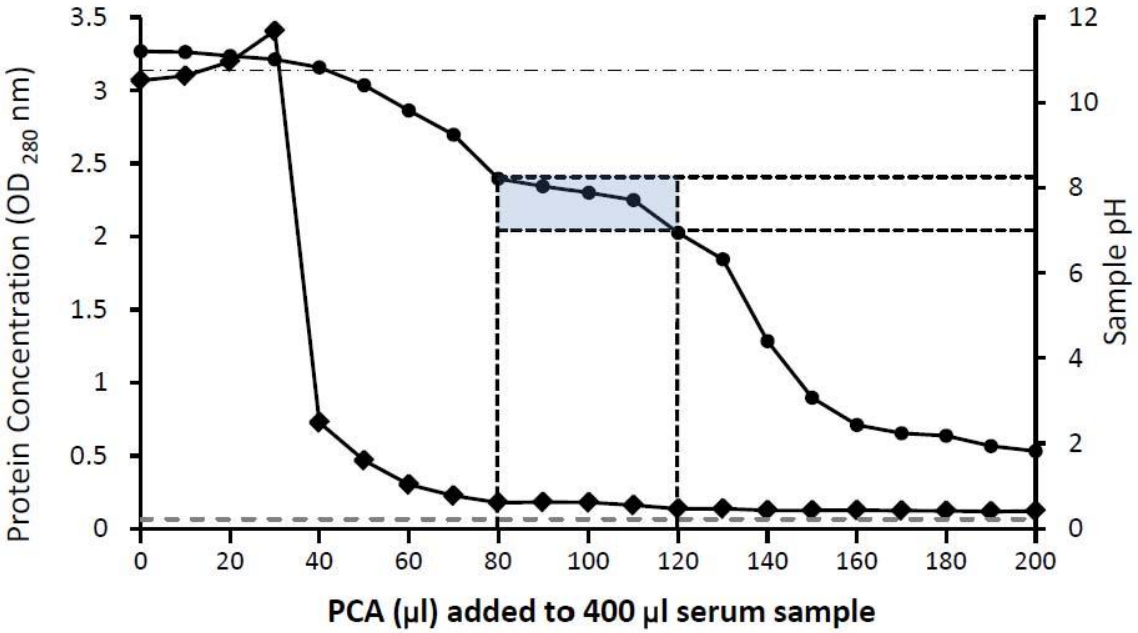
For serum and other very high protein concentration samples, take 400 µl of sample and mix with 100 µl of ice-cold PCA, place on ice for 5 min. Centrifuge at 13,000 x g for 2 min. Accurately transfer 380 µl of the supernatant to a fresh tube. Depending on the nature of the analyte, the samples in PCA may be frozen at -70℃ for up to a month for storage at this stage.

2. Sample Neutralization:

Add 20 µl of ice-cold Neutralization Solution (resuspend the fine precipitate) and mix to neutralize the sample and precipitate excess PCA. There may be some gas ($CO_2$) evolution so vent the sample tube. Place on ice for 5 min. Spin briefly ( ~ 1 - 2 min). Samples are now deproteinized, neutralized, and PCA has been removed. The samples may now be used in a variety of assays directly.

Note 1: The deproteinized samples have been diluted to 80 % of the original concentration (quantitation results should be divided by 0.8 to correct measured values back to original sample concentrations). For serum samples, the dilution is to 76 % so divide assay values by 0.76 to correct values to original sample concentrations.

Note 2: For further analysis of samples, if assay buffer is 0.1 M or stronger, samples up to 50 µl may be used directly in 100 µl assay reactions. If lower concentration buffers are used in the assay, correspondingly smaller sample volumes should be used to maintain assay reaction pH without significant changes.

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