

VMRD Lab Tips: Beware of Bio-Tek Bottom Wash

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We all know that hog wash is to be eschewed, but we have recently encountered another type of wash that should be avoided as it can cause needless headaches—and possibly invalid results—with some of our ELISA assays. We have always enjoyed working with Bio-Tek Instruments, Inc. They make good equipment, their people are easy to work with, and they have good technical support. We have recently discovered, though, that many of their plate washers have a feature that, if used, is deleterious to the performance of our assays. This feature is called “bottom wash.” When bottom wash is enabled, a wash cycle consists of the machine’s dispensing a small amount of wash in the bottom of the wells, aspirating it out, and finally completely filling and aspirating the wells. Because of the way our plates are coated, the use of bottom wash effectively doubles the amount of washing that the antigen-antibody complex receives. In some of our assays, this does not matter too much, but in some, for instance the Anaplasma cELISA, bottom wash deprives the assay of much of its ability to differentiate positives from negatives. As a rule our washing recommendations should be strictly observed. More washing is not better. Less washing is not better. When we recommend three washes, you can be sure that we have tried one, two, three, four, and five washes, and three worked the best. Doubtless there are applications where the Bio-Tek bottom wash feature is a great thing, but for VMRD assays, we highly recommend that bottom wash be turned off.

Invitation for a Lab Tip: Got a Lab Tip? We invite you submit any tricks of the trade that you are using in your laboratory. If your tip is chosen for publication in the VMRD Newsletter you will be rewarded for your advice with a tin of the world famous Cougar Gold Cheese! Submit your tip to: luke@vmrd.com.