WHITEPAPER

Focus on Concentrates for Flexibility in Your Laboratory

BIOCARE MEDICAL

Concentrated Antibodies Are Both Easy to Use and Offer Great Advantages

Working with antibody concentrates can seem intimidating to new users. However, regular users of concentrated antibodies quickly find that they are both easy to use and offer great advantages.

While ready-to-use antibody formats come pre-diluted to a set concentration, antibody concentrates can be titered to any desired dilution factor. Even though most antibody vendors provide a recommended antibody dilution, it is good laboratory practice to test dilutions above and below this recommendation for a thorough optimization range (i.e., if the recommended dilution is 1:50, consider testing 1:25, 1:50, and 1:100 to see which works best in your lab). This flexibility gives users a leg up in staining optimization by providing great control over sensitivity and specificity when titering to higher and lower concentrations, respectively. Concentrates are especially economical when it comes to staining specificity, as higher dilutions with lower antibody density are less likely to bind to non-target elements in the tissue. In other words, the farther you take them out, the more specific they become! This feature can be a highly effective cost-saving measure for any lab interested in bringing down their cost per test.

Concentrated antibody formats can also open a world of possibilities for antibody cocktailing. Unlike ready-to-use antibody cocktails, concentrates make cocktail combinations and concentrations totally customizable. Concentrate users can mix and match markers from different host species and in varying ratios, bringing the highest level of staining quality to their fingertips.

How To Dilute Antibodies, 1mL (1,000 µL) Working Solution with 1:100 Dilution

Step 1: Calculate Antibody Volume

Total Desired Working Solution Volume ÷ Dilution Factor = Antibody Volume

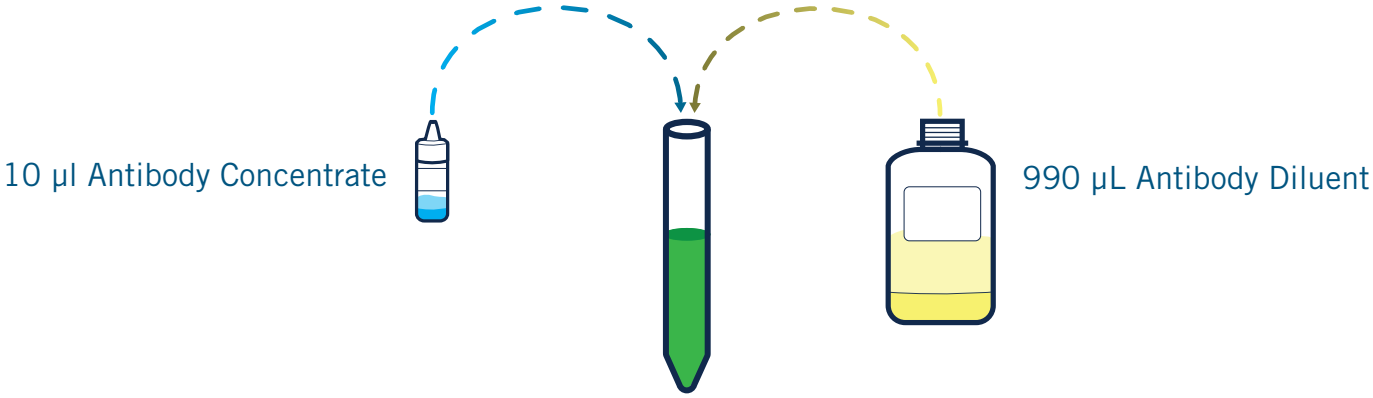
Sample: 1000 µL ÷ 100 = 10 µL

Step 2: Calculate Diluent Volume

Total Desired Working Solution - Volume of Concentrated Antibody = Diluent Volume

Sample: 1000 µL - 10 µL = 990 µL

To make a 1 mL (1,000 µL) working solution of diluted antibody with a dilution factor of 1:100, divide 1,000 µL by 100, which equals 10. Take 10 µL from the concentrated primary antibody stock vial and add into 990 µL of diluent.



1 mL Finished Working Solution, Ready to Use

To learn more about how concentrates can bring cost savings and flexibility to your lab, please contact us at 1-800-799-9499 or visit our website at www.biocare.net.