

## Antibody Concentration and Clean up kit (1 Spin Cartridge)

**Catalog No.:** AC048-001

**Quantity:** 1 set

**Reaction:** 1 Spin Cartridge

**Kit Contents:** AC048-001-T1: 1 Spin Cartridge/Collecting tube assemblies  
AC048-001-C: 1 Bottle of Conjugation Buffer/

**Background:** Antibodies are sometimes only available at low concentrations and often contain low molecular weight substances that interfere in labeling reactions with enzymes, biotin, streptavidin and fluorophores.

The Antibody Concentration and Clean Up Kit **AC0048** allows for the quick and easy concentration of antibodies and proteins. The kit can also be used to reduce the concentration of many unwanted additives often found in antibody formulations such as Azide, Glycine or Tris.

The antibody clean up kit method utilizes a simple spin column to easily and quickly remove excess buffer from the antibody thereby providing a more concentrated antibody solution. The clean up kit also allows the experimenter to perform a simple buffer exchange to transfer the antibody into a more favorable conjugation buffer.

### Protocols: 1. Concentration of Antibody Solution

**Step 1:** Add antibody to Spin Cartridge **AC0048-001-T1**.

**Step 2:** Spin for 1 to 3 minutes\* in a microfuge at maximum speed to reduce the buffer volume in the spin cartridge to between 50 and 100 µl.

**Step 3:** Repeat steps 1 to 2 as many times as is necessary to process the entire antibody to the desired concentration. It may be necessary to discard the excess buffer collected in the collection tube between spins.

**Step 4:** Recover the concentrated antibody from the Spin Cartridge.

**NB.** It is advisable not to spin the antibody dry as reconstitution of the antibody will be difficult and significant antibody loss and degradation may occur.

\*Spin times will vary depending on buffer composition and volume as well as centrifuge speed.

**Note:** Other proteins present in the buffer such as BSA will also be concentrated using this

method. To remove unwanted proteins Use our Abselect kit **AC047**.

## 2. Buffer Exchange using Spin Column assembly

**Step 1:** Add up to 0.5ml antibody to Spin Cartridge **AC048-001-T1**.

**Step 2:** Spin for 1 to 3 minutes\* in a microfuge at maximum speed to reduce the buffer volume to 100 µl.

**Step 3:** Discard the excess liquid in collection tube.

**Step 4:** Add 400 µl Conjugation Buffer **AC048-001-C** to the antibody in the Spin Cartridge.

**Step 5:** Spin for 1 to 3 minutes\* in a microfuge at maximum speed to reduce buffer volume to 100 µl.

**Step 6:** Discard the excess liquid in collection tube

**Step 7:** Repeat steps 1 to 6 at least 5 times to exchange antibody buffer.

**Step 8:** Recover antibody from the Spin Cartridge.

**Note:** Each cycle leads to a reduction in the concentration of low molecular substances. By performing as many as 5 repeat steps the concentration of small molecules such as Glycine and Tris will be reduced 2500 fold. However, the concentration of proteins such as BSA will be unchanged. To remove unwanted proteins use our Abselect kit **AC047**  
The exchange process is more efficient if the volume is reduced to 50 µl instead of 100 µl at each cycle.

\*Spin times will vary depending on buffer composition and volume as well as centrifuge speed.

## 3. Test For Protein

Wherever possible protein values should be determined using an absorbance at 280nm. For an IgG using a 1cm light path an OD280 of 1.0 is equal to an antibody concentration 0.714 mg/ml.

When using Bradford type reagents it is important to use an IgG standard curve. The absorbance generated by this type of reagent is dependent on the protein used. For example using a BSA standard curve to determine the protein concentration of an IgG solution will result in a two fold under estimate of the IgG concentration.

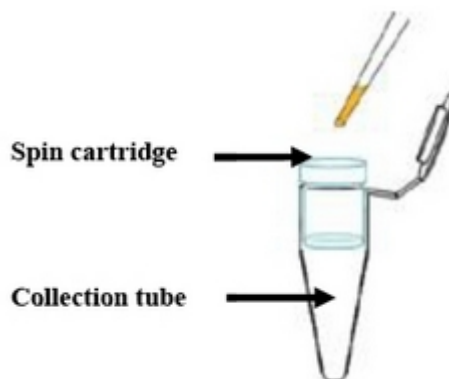
## Storage:

**Storage of Kit:** The kit is shipped at ambient temperature. Store the kit at 4°C upon receipt.

**Storage of Antibody:** Store at 4°C. Other storage conditions (e.g. frozen at -70°C) may also be satisfactory. The sensitivity of any particular antibody to freeze- thaw should be determined by experimentation on small aliquots.

**Pictures:**

**Figure 1:** Spin cartridge / collecting tube assembly.



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