



## UPPA -I & II Pack

### For Concentrating Dilute Proteins

#### INTRODUCTION

UPPA-I & II Pack uses our proprietary reagent Universal Protein Precipitation Agent (UPPA, *Patented*). Protein solutions as dilute as 1ng/ml can be quantitatively concentrated into a small volume. Protein precipitation is not affected by the presence of detergents, chaotropics, or other common laboratory agents. The protein precipitate is suspended in a small volume buffer. If the protocol is followed correctly, the recovery is generally 100%.

#### APPLICATIONS

The UPPA-I & II Pack is suitable for concentrating proteins for running gels, protein purification, protein assays, and other applications. This is not suitable for those proteins which may lose some of their biological activities when precipitated, for such proteins use either Column-PROTEIN Concentration™ kit (Cat# 786-126) or OrgoSol PROTEIN Concentration™ kit (Cat# 786-125).

#### ITEM(S) SUPPLIED Cat. # 786-122

UPPA-I	250ml
UPPA-II	250ml

#### ITEMS NEEDED BUT NOT SUPPLIED

Centrifuge, Centrifuge Tubes, Microfuge, & Spin Columns

#### STORAGE CONDITIONS

The kit is shipped at ambient temperature. Upon arrival, store at RT.

#### PROTOCOL

##### Important Note

*Perform the entire procedure in the cold (ice bucket) unless specified otherwise. Concentration should be performed in a centrifuge tube. For small volumes, use microfuge tubes. Always position microfuge tubes in the centrifuge at the same orientation, i.e. cap-hinge facing out-ward. This will allow the pellet to remain glued to the same side of the tube during repeated centrifugations and minimize the loss of protein pellets.*

1. Mix 1 volume of protein solution with 3 volumes of UPPA-I (See Example below). Vortex the mixture and incubate at 4-5°C (ice bucket) for 10-15 minutes.
2. Add 3 volumes of UPPA-II in to the mixture of protein and UPPA-I (See Example below). Vortex and centrifuge the tube.

**Example:** For 0.1ml protein solution, add 0.3ml UPPA-I, incubate and then add 0.3ml UPPA-II. Also, read modifications, below - PROCESSING LARGE SAMPLES

3. Centrifuge the tube at 15,000xg for 5 minutes to form a tight pellet.
4. As soon as the centrifuge stops, remove the tube from the centrifuge. (**NOTE:** Pellets should not be allowed to diffuse after centrifugation is complete).
5. Carefully and without disturbing the pellet remove the entire supernatant by using a pipet tip.
6. Suspend the protein pellet in an appropriate volume of buffer of your choice as per the experiment conditions.



**PROCESSING LARGE SAMPLES:**

Samples containing >100µg protein produces large and tightly packed protein pellets, which require a longer time to dissolve in Buffers. Grinding of the protein pellet with a pestle will accelerate solubilization of the pellet. We recommend use of microfuge tubes and tight fitting pestle for processing samples containing larger than 100µg protein.

**RELATED PRODUCTS**

1. **Spin-OUT™** is a spin column suitable for buffer exchange or removal of small molecules from protein and nucleic acid solutions.
2. **Detergent-OUT™** & **OrgoSol-Detergent-OUT™** are for the removal of SDS, Triton-X100 and other detergents from protein solutions.
3. **Non-Interfering Protein Assay™** is a protein assay that is not affected by the presence of common laboratory agents such as detergents, reducing agents, EDTA, dyes etc.
4. **Tube-O-DIALYZER™** is for the dialysis of small samples.

**NOTE:** For other related products, visit our web site at [www.GBiosciences.com](http://www.GBiosciences.com) or contact us.

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