

## Sample Preparation Kit for the PPSQ™-50A System

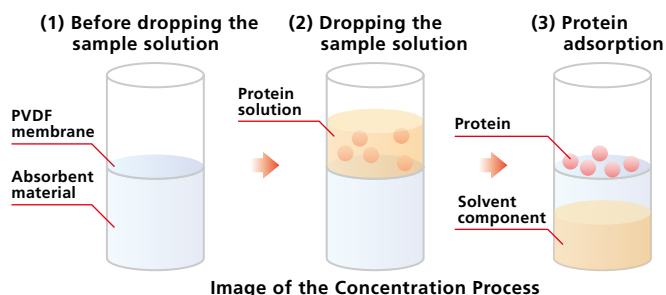
# Membrane Holder Kit

Significant time is required for preparation of Protein Sequencer samples. However, with the Membrane Holder, the pretreatment required for PPSQ sample preparation, namely concentration and desalting, can be simply performed in a short period of time. The membrane holder can be used repeatedly by cleaning it with 70 % isopropanol or similar. This kit includes two types of membrane holders: a wiper type with high desalting efficiency, and a syringe type, which can complete sample preparation in a short period of time, offering flexibility to suit your analysis needs.

## Complex Sample Preparation Completed Simply in a Short Time with a Simple Workflow

### ► Concentration Function

By removing the solvent component from the sample solution, the protein can be retained on the PVDF membrane. This function enables a larger volume of sample to be prepared compared to the method of dropping the sample directly onto the PVDF membrane and drying it. Also, sample preparation can be completed faster in comparison to the method of removing the solvent by using a centrifuge, etc.



### ■ Existing Sample Preparation Method



Sample drying and re-dissolution  
**Several hours**

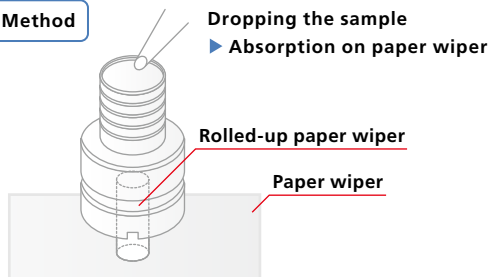
Retention on the PVDF membrane  
**30 min to 1 hour**

**Analysis**

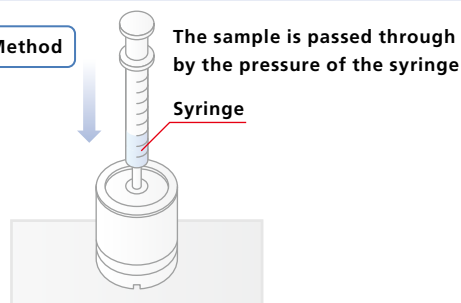


### ■ Using a Membrane Holder

#### Wiper Method



#### Syringe Method



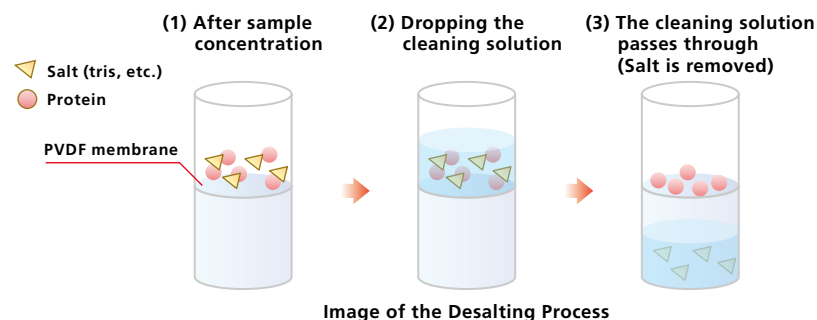
Wiper method: **15 to 20 min**  
Syringe method: **2 to 3 min**

**Analysis**

**Complex sample preparation completed simply in a short time!**

## ► Desalting Function

After sample concentration, it is possible to remove salt and other components that may interfere with analysis by adding a cleaning solution such as 0.1 % TFA. In addition, easier sample preparation can be completed using a desalting column, etc.



## ■ Example of Analysis of Erythropoietin

(No Desalting Process: Analysis (1) / With Desalting Process: Analysis (2))

Reductively alkylated (pyridyl ethylated) erythropoietin\* was concentrated on the PVDF membrane using the membrane holder wiper method, and desalted by adding 0.1% trifluoroacetic acid (TFA). Amino acid sequence analysis of the sample was performed using the PPSQ-53A isocratic system.

\* Sigma-Aldrich E5546

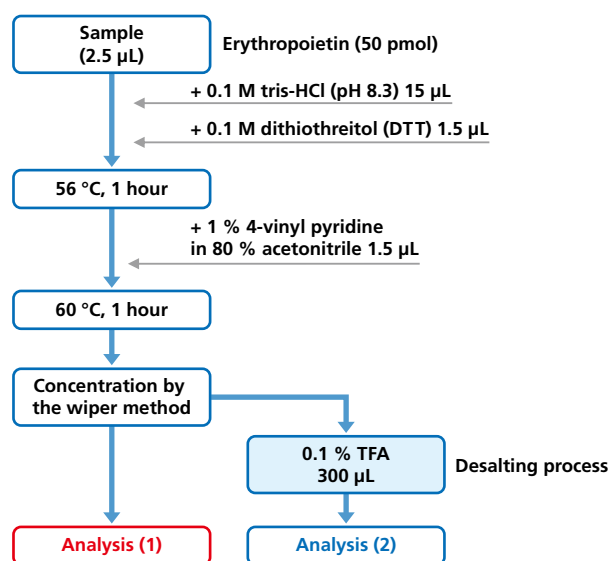


Fig. 1 Sample Pretreatment Method

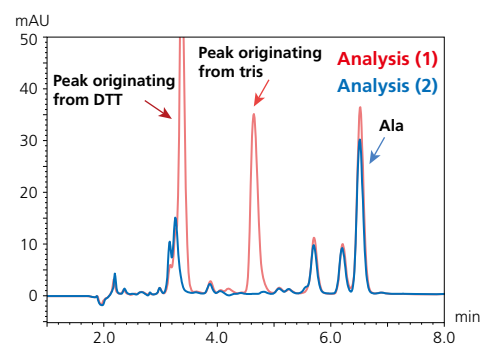


Fig. 2 Unprocessed Chromatogram of the First Residue during Sequence Analysis of Erythropoietin (50 pmol)

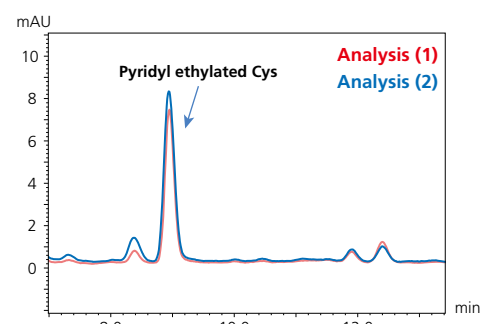
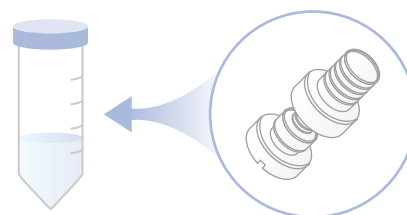


Fig. 3 Unprocessed Chromatogram of the Seventh Residue during Sequence Analysis of Erythropoietin (50 pmol)

## Can Be Used Repeatedly So Cost Is Reduced

The membrane holder can be used repeatedly by cleaning it with 70 % isopropanol, etc.



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