



5185-5991 5 KDa MWCO 4 mL 5188-2798 5 KDa MWCO 15 mL
 5188-5201 30 KDa MWCO 4 mL 5188-2799 30 KDa MWCO 15 mL
 5188-5202 50 KDa MWCO 4 mL 5188-2800 50 KDa MWCO 15 mL

Agilent Spin Concentrators for Proteins

Instructions – 4 mL Concentrators



**5,000 Molecular Weight Cut-Off (MWCO)
 4 mL Spin Concentrator, Part No. 5185-5991**

| Equipment required | | 4 mL Spin Concentrators, pack of 25 |
|-------------------------------------|---|-------------------------------------|
| Centrifuge | | |
| Rotor type | Swing bucket or Fixed angle | |
| Minimum rotor angle | 25° | |
| Rotor cavity | To fit 15 mL (17 mm) conical bottom tubes | |
| Minimum effective speed | 2,000 g | |
| Recommended speed | 5,000 g | |
| Maximum speed | 7,500 g | |
| Concentrate recovery | | |
| Pipette type | Fixed or variable volume | |
| Recommended tip | Thin gel loader type | |
| Technical specifications | | |
| Concentrator sample volume capacity | | |
| Swing bucket rotor | 1-4 mL | |
| Fixed angle rotor | 1-4 mL | |
| Dimensions | | |
| Total Length | 122 mm | |
| Width | 17 mm | |
| Active Membrane Area | 2.0 cm ² | |
| Hold-up volume of membrane | <10 µL | |
| Dead stop volume | 20 µL | |
| pH range | pH 1 – 9 | |
| Materials of construction | | |
| Body | Polycarbonate | |
| Filtrate vessel | Polypropylene | |
| Concentrator cap | Polycarbonate | |
| Membrane | Polyethersulfone | |

Concentrating Proteins with 4 mL Concentrators:

- 1 Fill concentrator with sample within the working volume capacity range noted in the table above (ensure that the hinged lid is fully seated).
- 2 Insert assembled concentrator into centrifuge (when fixed angle rotors are used, angle the concentrators so that the printed windows face upwards/outwards).
- 3 Centrifuge at recommended speeds, taking care not to exceed the maximum g force indicated in the table above (20 minutes at 7,500 g is recommended for 30× concentration of 4 mL at 10°C).
- 4 Once the desired concentration is achieved, remove assembly and recover sample from the bottom of the concentrate pocket with a pipette.

Desalting/Buffer Exchange

- 1 Concentrate sample to desired level or at least 5×.
- 2 Empty filtrate container.
- 3 Refill concentrator with an appropriate buffer.
- 4 Concentrate the sample again and repeat the process until the concentration of the contaminating species is sufficiently reduced. Typically three wash cycles will remove 99% of initial salt content.

See **Notes** on next page.

Instructions – 15 mL Concentrators



**30,000 Molecular Weight Cut-Off (MWCO)
15 mL Spin Concentrator, Part No. 5188-2799**

| Equipment required | | 15 mL Spin Concentrators, pack of 10 |
|--|--|--------------------------------------|
| Centrifuge | | |
| Rotor type | Swing bucket or Fixed angle | |
| Minimum rotor angle | 25° | |
| Rotor cavity | To fit 30 x 114 mm conical bottom tubes or 29 x 104 mm round bottom tubes (50mL) | |
| Minimum effective speed | 1,000 g | |
| Recommended speed | 2,000 g | |
| Maximum speed | 3,000 g | |
| Concentrate recovery | | |
| Pipette type | Fixed or variable volume | |
| Recommended tip | Thin gel loader type | |
| Technical specifications | | |
| Concentrator sample volume capacity | | |
| Swing bucket rotor | 2-15 mL | |
| Fixed angle rotor | 2-8 mL | |
| Dimensions | | |
| Total Length | 76 mm | |
| Width | 25.5 mm | |
| Active Membrane Area | 4 cm ² | |
| Hold-up volume of membrane | <20 µL | |
| Dead stop volume | 50 µL | |
| pH range | pH 1 – 9 | |
| Materials of construction | | |
| Body | Polycarbonate | |
| Filtrate vessel | Polypropylene | |
| Concentrator cap | Polycarbonate | |
| Membrane | Polyethersulfone | |

Concentrating Proteins with 15 mL Concentrators:

- 1 Fill concentrator with sample within the working volume capacity range noted in the table above, taking care not to touch the membrane surface, and then close the hinged lid (ensure that the lid is fully seated).
- 2 Place concentrator into 50 mL centrifuge tube (**filtrate collection vessel – not supplied, user must provide**).
- 3 Insert assembled concentrator into centrifuge (when fixed angle rotors are used, angle the concentrators so that the printed windows face upwards/outwards). Spin at recommended speeds, taking care not to exceed the maximum g force indicated in the table above (20-40 minutes is common).
- 4 Once the desired concentration is achieved, remove assembly and recover sample from the bottom of the concentrate pocket with a pipette.

Notes:

- Spin concentrators are single use disposable items. Re-use is not recommended.
- For research use only.
- Select the most appropriate membrane cut-off for your sample. For maximum recovery, select a MWCO at least 50% smaller than the molecular size of the species of interest.
- These concentrators are designed for use with biological fluids or aqueous solutions only, not for organic solvents or strong acids or bases.
- Flow rates are affected by MWCO, porosity, sample size, concentration, viscosity, centrifuge force, and temperature. Adjust centrifuge force and time accordingly for your samples.
- Do not autoclave. Sterilize with a 70% ethanol solution.

Desalting/Buffer Exchange

See 4 mL Spin Concentrator instructions on the reverse side.

For more information or technical assistance, please call toll free: 1-800-227-9770 or visit our web site at: www.agilent.com/chem/bioreagents

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