# Protein concentration - Filter devices/concentrators



# Filter devices, centrifugal tubes, Amicon<sup>®</sup> Ultra



Concentration of biological samples containing antigens, antibodies, enzymes, nucleic acids, or microorganisms; purification of macromolecular components found in tissue culture extracts or cell lysates; concentration of dilute or pre-purified proteins from column eluents; desalting or diafiltration.

- Recovery of concentrated sample >90%
- · Direct pipettor sample access eliminates a processing step
- High recovery Ultracel® low binding ultrafiltration membrane
- Vertical design reduces polarisation and is compatible with all rotor types
- Transparent filter allows you to see concentrated sample
- Heat-sealed Ultracel® membrane eliminates adhesives and the risk of downstream extractables
- Minimise spin times, maximise results

**Ultra-fast spin times** - Concentrate or diafilter 4mL to 15mL sample volumes in as little as 15min with Amicon\* Ultra devices. They are compatible with all rotor types.

**High recovery** - Amicon\* Ultra 4mL to 15mL devices incorporate Ultracel\* regenerated cellulose membrane providing maximum recovery. The hydrophilic microstructure ensures the lowest possible adsorption of protein and other macromolecules, and the highest recovery of fully functional proteins. Retentate recovery is typically >90%.

| Membrane MWCO | Solute/concentration | Retentate volume, mL | Concentration factor, X | Retentate recovery, % |
|---------------|----------------------|----------------------|-------------------------|-----------------------|
| 10,000        | Cyto C (0.25mg/mL)   | 0.24                 | 61.65                   | 93.03                 |
| 30,000        | BSA (1mg/mL)         | 0.30                 | 50.99                   | 97.94                 |
| 100,000       | IgG (1mg/mL)         | 0.28                 | 53.39                   | 89.03                 |

## Ultracel™ membrane selection guide

Molecular weight cut-offs range from 10,000 to 100,000 and are designed for use with a range of sample types to provide maximum sample recoveries. Choose the membrane that will retain 95% or greater of the molecular weight of your target sample.

| Membrane NMWL | Protein Solute MWC0 | UF Rejection |
|---------------|---------------------|--------------|
| 10,000        | Cytochrome c 2,400  | >95%         |
| 30,000        | BSA 67,000          | >95%         |
| 100,000       | IgG Fr II 156,000   | >90%         |

UF Rejection = percentage of product/solute that is retained by the UF membrane

## Maximum centrifugal force for Amicon® Ultra-4 and Amicon® Ultra-15

| -                             | 4mL     | 15mL                                       |
|-------------------------------|---------|--|
| Swing out bucket              | 4,000xg | 4,000xg                                    |
|                               |         | 3,500xg for concentrated/viscous solutions |
| Fixed angle (23° 35° and 45°) | 7 500xa | 5.000va                                    |

| 4mL          |           |           |          |
|--------------|-----------|-----------|----------|
| Catalogue No | Alt. No   | MWCO, kDa | Pack qty |
| FDR-588-408K | UFC800308 | 3         | 8        |
| FDR-588-409Y | UFC800324 | 3         | 24       |
| FDR-588-410A | UFC800396 | 3         | 96       |
| FDR-588-010Q | UFC801008 | 10        | 8        |
| FDR-588-030K | UFC801024 | 10        | 24       |
| FDR-588-050E | UFC801096 | 10        | 96       |
| FDR-588-070V | UFC803008 | 30        | 8        |
| FDR-588-090P | UFC803024 | 30        | 24       |
| FDR-588-110M | UFC803096 | 30        | 96       |
| FDR-588-102L | UFC805008 | 50        | 8        |
| FDR-588-104H | UFC805024 | 50        | 24       |
| FDR-588-106D | UFC805096 | 50        | 96       |
| FDR-588-130G | UFC810008 | 100       | 8        |
| FDR-588-150A | UFC810024 | 100       | 24       |
| FDR-588-170R | UFC810096 | 100       | 96       |

## 15mL

| Catalogue No | Alt. No   | MWCO, kDa | Pack qty |
|--------------|-----------|-----------|----------|
| FDR-588-108W | UFC900308 | 3         | 8        |
| FDR-588-124B | UFC900324 | 3         | 24       |
| FDR-588-196W | UFC900396 | 3         | 96       |
| FDR-588-190L | UFC901008 | 10        | 8        |
| FDR-588-210L | UFC901024 | 10        | 24       |
| FDR-588-230C | UFC901096 | 10        | 96       |
| FDR-588-250T | UFC903008 | 30        | 8        |
| FDR-588-270N | UFC903024 | 30        | 24       |
| FDR-588-290H | UFC903096 | 30        | 96       |
| FDR-588-302D | UFC905008 | 50        | 8        |
| FDR-588-304W | UFC905024 | 50        | 24       |
| FDR-588-306S | UFC905096 | 50        | 96       |
| FDR-588-310E | UFC910008 | 100       | 8        |
| FDR-588-330V | UFC910024 | 100       | 24       |
| FDR-588-250P | UFC910096 | 100       | 96       |

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