# ErtelAlsop

The First Name in Liquid Filtration™

BioPharmaceutical

# Effective High Solid Filtration

## PXL Filter Media

### Complex of Filtration Mediums

PXL media is a complex of filtration mediums that enable significantly improved throughput and superior contaminant retention in high solids loading processes. Designed specifically for applications as an initial prefilter or clarification stage filter, PXL media is ideal for protecting price and contaminant sensitive process steps further downstream.

### Composition

Comprised of ErtelAlsop's XL Series depth filter media, PXL media has the filtration benefits and extremely low extractables content that comes from highly purified diatomaceous earth (DE). Couple this with our proprietary P200 web complex, and the PXL media is unparalleled by other traditional cellulosic based depth filter media in gross contaminant loading capabilities.

### Applications

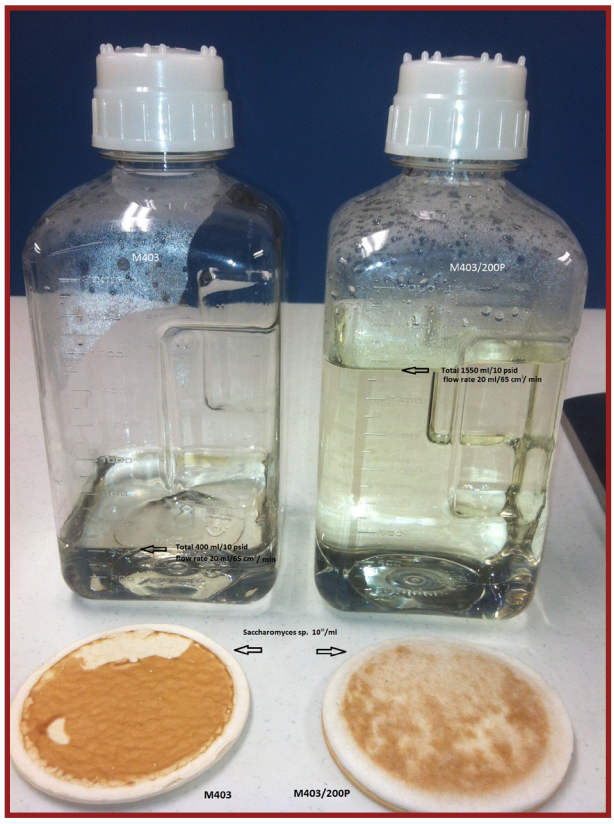
PXL media is designed to be the upstream bioprocessing filtration workhorse in those soft particulate, high cell count/low viability applications that readily foul the surfaces of other depth filter media. Filtering these solutions with regular depth media results in a rapid decline and termination of flow rate and throughput.

PXL media optimizes the filtration of soft particulate solutions over time by:

- Reduced fouling rate of the filter
- Reduced rate of operating pressure buildup
- Increased flowrate and throughput per setup

Some of the applications for PXL media are:

- Bulk Fermentation Cell and Debris Removal
- Bacteria
- Yeast
- Mold
- Mamalian Cell Culture Clarification
- Most other viscous bioprocess solutions with a high concentration of soft particulate




### Process Improvements

The effect of process improvements can be felt through cost savings in time and materials. Nowhere is that more evident than with the results seen with improved throughput that comes with the use of PXL media. With typical throughput improvements averaging 3 to 4x, the time involved in initial solids removal can be dramatically reduced and the amount of filtration area necessary can be significantly lowered all amounting to reduction in processing step costs.

With such dramatic improvements in solids removal through the use of ErtelAlsop's new PXL filter media, the use of other more expensive and capital equipment intensive techniques become less attractive. For example

- Centrifuges pose problems due to their lack of flexibility in sizing and their expense in ever larger systems as process scales increase.
- Chemical flocculants, while promising, lack federal approval and longer term effects on product stability, efficacy and patient exposure have yet to be fully studied.
- Filter presses, still widely used in some markets, lack closed processing, are labor and capital intensive.

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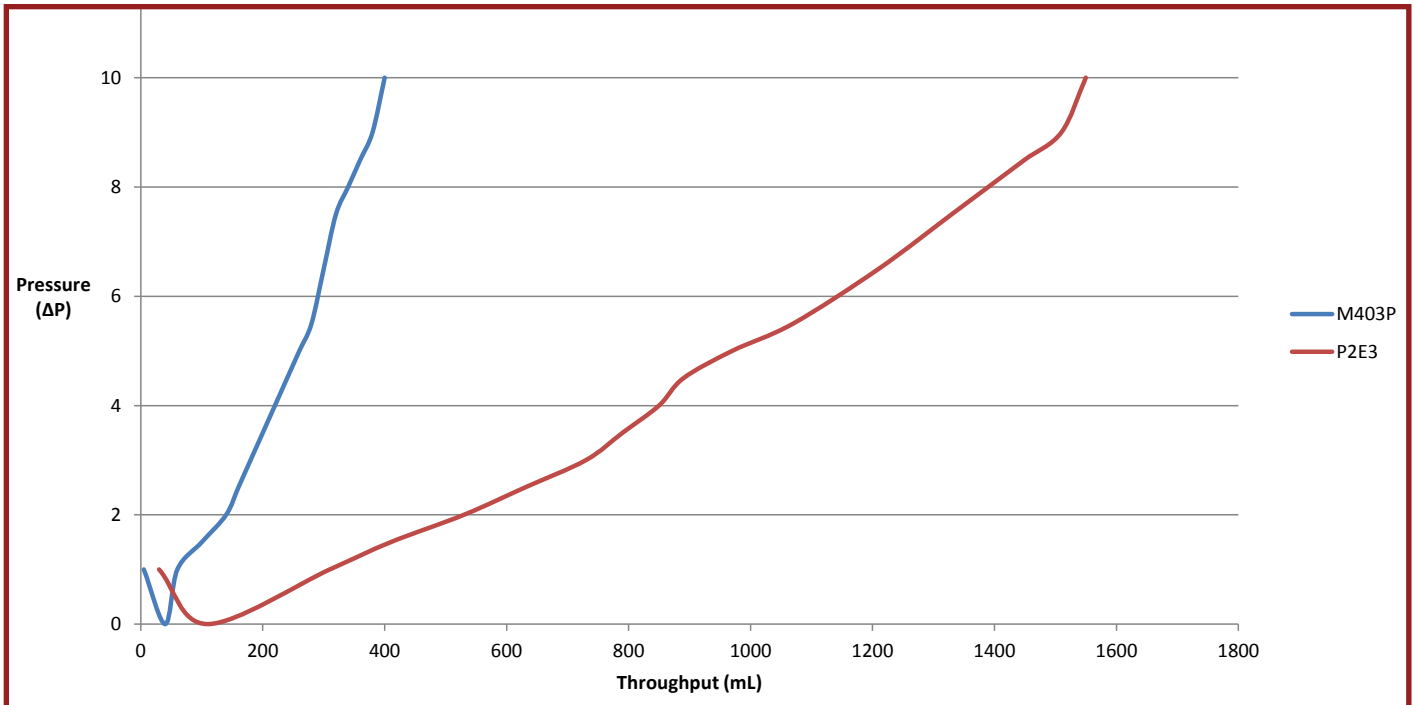
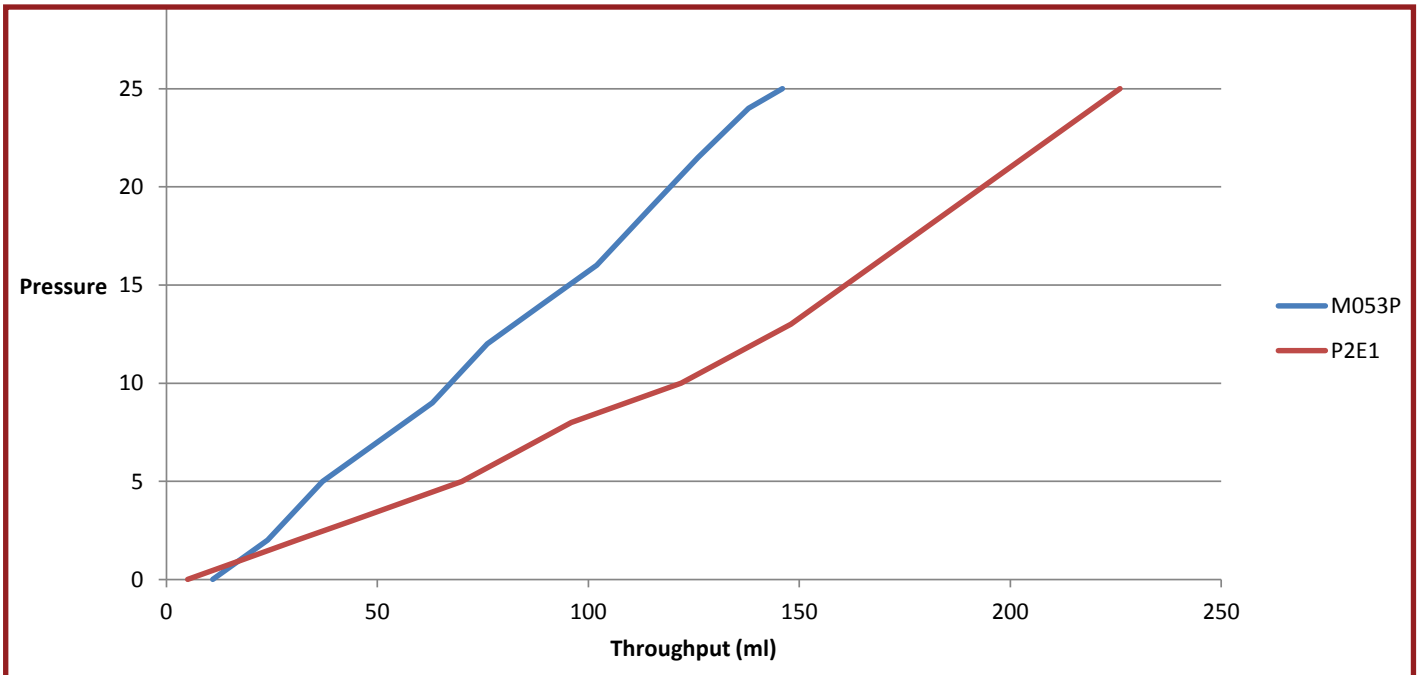
## XL Series M403P Throughput




**P2E3 double layer media**
Demonstrated a 74% (3.88x) increase in throughput over single layer media alone

## XL Series M053P Throughput




**P2E1 double layer media**
Demonstrated a 46% increase in throughput over single layer media alone.

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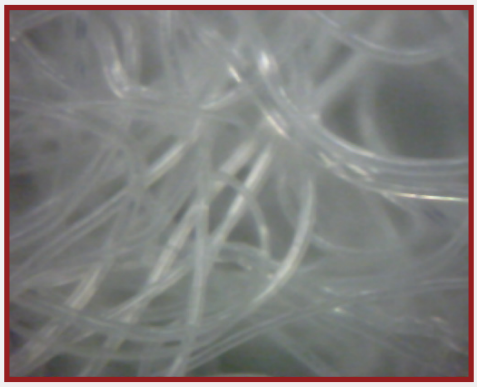
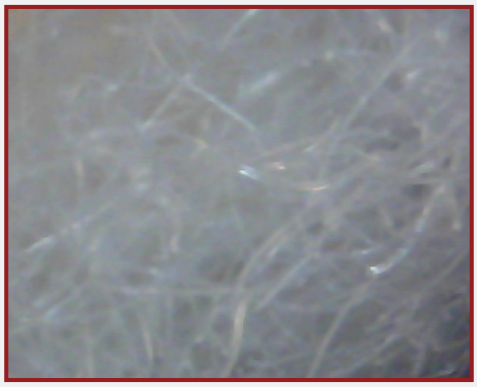
# P200 Web Complex



*200x Magnificaiton*



*Cross Section*

## Available Product Range/Scalable Formats

ErtelAlsop has made PXL media available in six different sizes of scalable, single-use disposable MicroCap capsules as well as 12 inch and 16 inch diameter lenticular filters for use in housings. Effective filter areas (EFA) range from as little as 23cm² to as much as 3.8 m² per 16 inch Pak cartridge.

ErtelAlsop's 12 inch diameter and 16 inch diameter lenticular filters are available in a number of different formats containing either flat gasket or locking double o-ring end fittings.

To learn more about the choice of models we offer, please contact our sales department by phone at 800-553-7835, or visit our website, www.ErtelAlsop.com for further information.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# Pak Cartridge Ordering Information

**Example: 12POY4P2E610** is a 12 inch, double O-Ring, poly core Pak cartridge with 10 cells of P2E6 double layer media, and EPDM gaskets.

| Diameter | Core | Height | Gasket | Grade | # of Cells |
|---|---|---|---|---|---|
| 12=12 inch | PO=Polypropylene Core Double O-Ring End Cap | X=7-9/16" Flat Gasket 8-9/16" Double O-Ring | 2=Neoprene | **See Media Grades Table** | 3-10 |
| 16=16 inch | PF=Polypropylene Core Flat Gasket End Cap | Y=10-7/8" Flat Gasket 11-7/8" Double O-Ring | 3=Viton | | |
| | | | 4=EPDM | | |
| | | | 6=Silicone | | |
| | | | 7=Teflon Encap. | | |
| | | | 8=Other | | |

# MicroCap Ordering Information

**Example: P2E6CAP05MTB** is a MC5 capsule with P2E6 double layer media, 1/2 in. sanitary clamp inlet/outlet, and vent valves.

| Media Grade | Type | Size | Inlet/ Outlet | Description | Vent | Description |
|---|---|---|---|---|---|---|
| **See Media Grades Table** | CAP | 01 | H | Stepped Hose Barb | O | Luer Lock |
| | | 02 | 3H MT | 3/8 in. Hose Barb 1/2 in. Sanitary Clamp | B | Vent Valve |
| | | 05 | | | | |
| | | 10 | TC | 11/2 in. Sanitary Clamp | C | Inlet/Outlet ¼ in. Bleed Valve |
| | | 20 | | | | |
| | | 30 | | | | |

# PXL Media Grades

| Media Grade | Nominal Retention |
|---|---|
| P2E6 | 0.8 – 2.75 microns |
| P2E5 | 1.0 – 3.0 microns |
| P2E4 | 2.5 – 6.0 microns |
| P2E3 | 5.0 – 12.0 microns |
| P2E2 | 10.0 – 17.0 microns |
| P2E1 | 15.0 – 20.0 microns |

For additional product information visit **ErtelAlsop.com**

**Technical Bulletin PXL - 15**

ErtelAlsop
132 Flatbush Avenue
Kingston, NY 12401 US

ErtelAlsop.com
845.331.4552 Telephone
845.853.1526 Fax

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vipur
Purification Solutions

Mariahilfer Straße 113/18, 1060 Wien
+ 43 1 99 74 281
office@vipur.at