

PLANOVA™ S20N Spotlight Vol. 2

for Plasma Derivatives

Next Generation Superior Cellulose Membrane

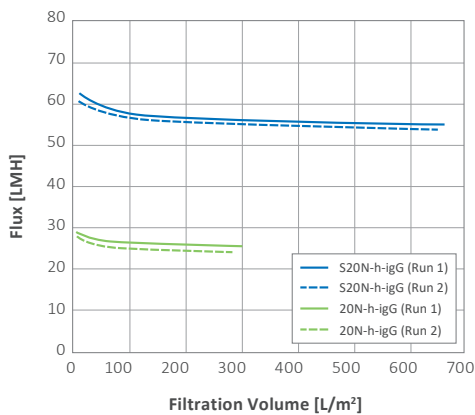
KEY FEATURES

Processing More, Faster

- 1** *Withstands higher pressure*
- 2** *Provides higher flux, shorter process time*
- 3** *Stable filterability with high throughput*

1. Planova™ S20N exhibits high flux thanks to higher pressure resistance

» S20N can provide stable filtration and higher flux while being resistant to clogging



Filtration Conditions

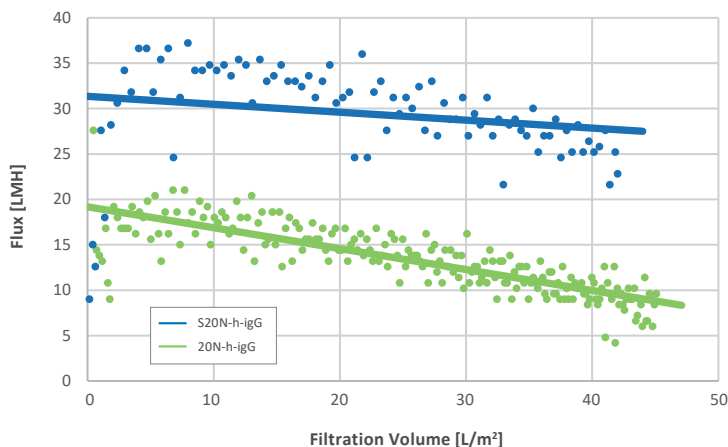
Constant pressure mode, 25°C
10 mg/mL h-IgG solution, pH 4.0, 1.8 mM NaCl

| | Pressure (kPa) | Volume in 5 h (L/m²) | Volume in 12 h (L/m²) |
|-------------|----------------|----------------------|-----------------------|
| 20N | 98 | 128 | 295 |
| S20N | 196 | 278 | 652 |

TAE37022 Asahi Kasei Medical (adopted)

2. Planova™ S20N processes product faster leading to shorter operation time

» S20N can process faster with minimal flux decay contributing to a scheduled operating time



Filtration Conditions

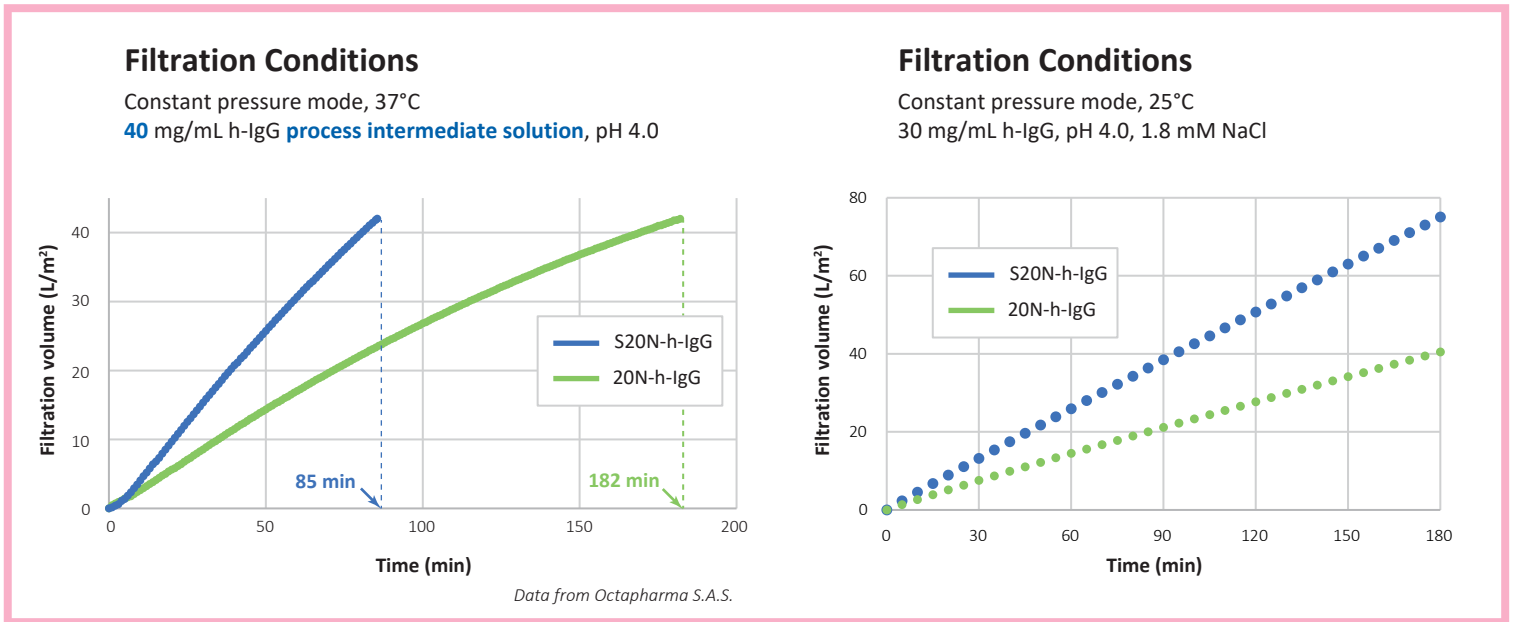
Constant pressure mode, 37°C
40 mg/mL h-IgG process intermediate solution, pH 4.0

| | TMP (kPa) | Volume (L/m²) | Average flux (LMH) | Time (h) |
|-------------|------------|---------------|--------------------|------------|
| 20N | 89 | 45.1 | 13.3 | 3.4 |
| S20N | 187 | 42.0 | 29.7 | 1.4 |

Data from Octapharma S.A.S.

3. Planova™ S20N shows higher throughput across different solution concentrations

» S20N allows more protein to be processed even under different solution conditions



Filter spec comparison

| | Planova 20N | Planova S20N |
|----------------------|--------------------------------------|--------------------|
| Hollow fibers | Regenerated cellulose | |
| Max TMP | 98 kPa (14.2 psi) | 216 kPa (31.3 psi) |
| Post-use IT | Leakage test plus gold particle test | Leakage test only |

Contributes to shorter operation time as well

Planova™ S20N Technical Support and Training Service

- » Responsive technical support and training from virus filtration experts
- » Hands-on training with Planova Operators Course (both in-person and virtual)
- » Full support across all phases from process development to manufacturing



From Asahi Kasei Bioprocess

We appreciate your interest in our products. This Planova S20N Spotlight highlights high performance of protein throughput, following high virus removal capability covered in Vol. 1. In the two years since Planova S20N small scale filters were first launched, we have received satisfactory results and feedback from customers as they implemented/tested Planova S20N filters in their process development. We would like to share with all our customers in the near future the knowledge and know-how gained from these evaluations and in-house data through webinars, scientific reports, conferences and at our Planova Workshop. Thanks to the efforts of the technical team, development of commercial-scale filters is making strong progress. We endeavor to continue contributing to product safety, smoother process development and manufacturing efficiency for plasma-derived medicinal products.

PLANOVA™
Assurance Beyond Expectation

