



## **HOW DO YOU WASH NANOPARTICLES?**

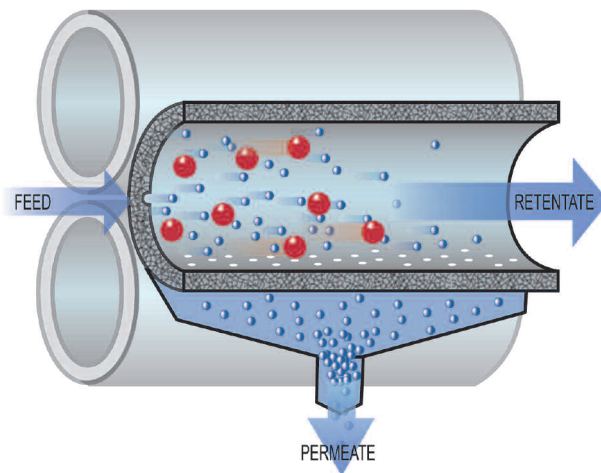
- Are you spending hours spinning, decanting and resuspending particles with inconsistent results?
- Are you worried about scaling up from R&D to pilot and production scale?

***IS THERE AN EASIER, MORE EFFICIENT SCALABLE TECHNOLOGY?...***

...THE ANSWER IS YES!

# KrosFlo<sup>®</sup> HOLLOW FIBER FILTERS & SYSTEMS

Spectrum Laboratories' KrosFlo<sup>®</sup> Hollow Fiber Filters are the preferred technology for cleaning Nanoparticles<sup>1,2</sup>. These unique Tangential Flow Filtration (TFF) Modules have been proven to efficiently clean liposomes, viral particles, colloids, magnetic particles, and nano tubes. Hollow Fiber Filtration eliminates the labor intensive steps of multiple centrifugations and resuspensions which often lead to inconsistent results.



Schematic of hollow fiber membrane showing Tangential Flow Filtration (TFF)



KrosFlo<sup>®</sup> MiniKros<sup>®</sup> Pilot System

The KrosFlo<sup>®</sup> Hollow Fiber (TFF) Modules are designed for use with Spectrum's KrosFlo<sup>®</sup> Systems which allow direct scale up from a few milliliters up to 1000's of liters. All the KrosFlo<sup>®</sup> Systems include a peristaltic pump, a digital pressure monitor with automated shut-off controls and real time data collection software.

Spectrum's KrosFlo<sup>®</sup> Hollow Fiber Filters and Systems make the Nanoparticle washing process scalable, reproducible and more efficient.

## References

1. A.G. Rinzler et.al. - Large-scale purification of single-wall carbon nanotubes: process, product and characterization. *Appl. Phy. A* 67, 29-37 (1998)
2. Scott Sweeney et.al. - Rapid purification and size separation of gold nanoparticles via diafiltration. *J. AM. CHEM. SOC.* 2006, 128, 3190-3197

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