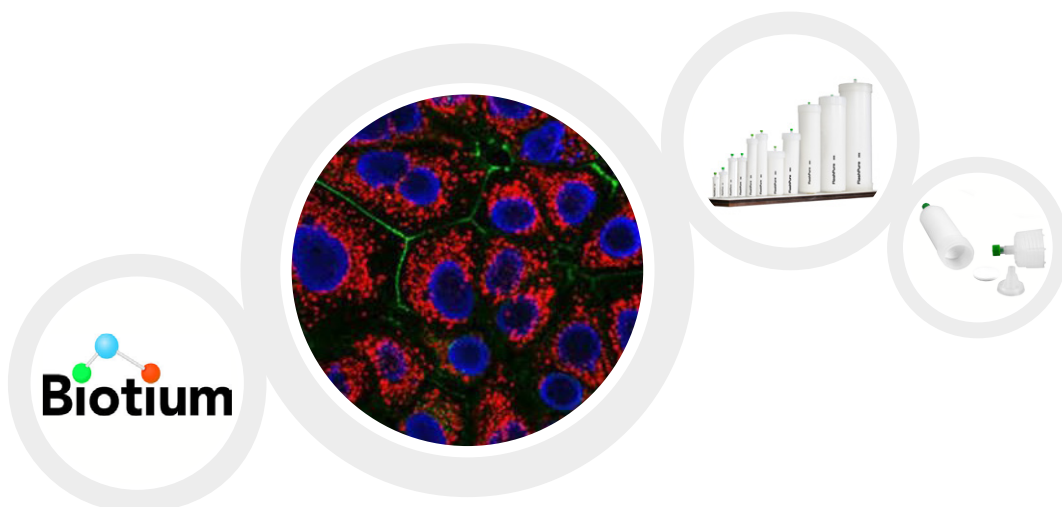


Case Study

Purification of water-soluble fluorescent dyes



Customer: Biotium, USA

Biotium is a small technology company in USA, has licensed several of its patented technologies to a number of major international biotech companies including Sigma-Aldrich, Agilent, BioRad, Qiagen, BD Biosciences, EMD Millipore, Fluidigm, Essen BioScience, Caliper Life Sciences, Illumina, and others. The company covers a number of industry-leading technologies: GelRed™ and GelGreen™ nucleic acid gel stains, EvaGreen™ DNA-binding Dye, CF™ dyes, Mix-n-Stain™ Antibody Labeling Kits, NucView™ Caspase 3/7 Enzyme Substrate, AccuClear™ and AccuBlue™ DNA Quantitation Kits, PMA™ DNA Modification Agent.

Application: Dye Purification

CF™ dyes are a series of highly water-soluble fluorescent dyes spanning the visible and near-infrared (NIR) spectrum for labeling biomolecules, especially proteins and nucleic acids. Developed by scientists at Biotium using new breakthrough chemistries, CF™ dyes rival or exceed the quality of other commercial dyes, such as Alexa Fluor® dyes.

Equipment: Reveleris® Prep Flash System and FlashPure EcoFlex Alumina Neutral Cartridge

Reveleris® Prep together with the FlashPure EcoFlex Alumina Neutral cartridge is used to separate acid sensitive and highly water-soluble fluorescent dyes.

Benefit/Conclusion: High resolution and loading capacity

The Reveleris® Prep offers the flexibility to switch between Prep HPLC and Flash chromatography, provides large sample capacity and optimal resolution. An integrated ELSD detector permits monitoring of compounds or impurities with no UV active chromophore. The new FlashPure EcoFlex Alumina Neutral Cartridge provides excellent separation quality for acid sensitive samples as well as allowing versatility in separating diverse functional groups. The loading capacity was excellent in comparison to regular chromatography while maintaining ease of use and throughput of the Reveleris® system.

"Both the separation quality and loading capacity performed well. We are definitely using the cartridges in favour of regular columns."

Dr. Mikhail Guzaev, Biotium, California USA
