



ALFA WASSERMANN Promatix 1000™

Alfa Wassermann's continuous flow ultracentrifuge efficiently captures AAV vectors of any serotype.

Significantly improved recovery rates to 50%

Expanded yield with continuous flow loading

Dramatically reduce turn around times over conventional column purification

Successful Adeno associated virus (AAV) vector purification has been achieved in large quantities using the Alfa Wassermann AW Promatix 1000™ continuous flow ultracentrifuge*.

Sf9 cells were cultured, expanded and then infected for viral vector production using recombinant baculoviruses. Cell pellets were subject to lysis, DNA digestion then clarification by low speed centrifugation in preparation for loading to the continuous flow ultracentrifuge.

The continuous flow ultracentrifuge used a 120ml rotor containing an iodixanol density gradient, through which the clarified lysate flows while the ultracentrifuge rotor is spinning at 35,000 rpm, 100,000 xg.

During the product loading phase simultaneously waste material will flow out of the rotor and the viral vector will be captured in the gradient and be concentrated. During the run time the vector reaches its iso-dense layer and is concentrated.

At the end of the run the AAV is harvested with a 50% yield and found to be essentially pure using one-step purification.



* Patent Pending

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SEPARATION TECHNOLOGIES

Alfa Wassermann Separation Technologies (AWST),

a division of Alfa Wassermann Inc., is the leader in ultracentrifugation solutions for process development and industrial scale manufacturing, with 45 years of experience in the design, manufacture and service of continuous flow Ultracentrifuges.

The bioprocess industry has relied on AWST's experience in manufacturing continuous flow Ultracentrifuges to efficiently and reliably separate viruses, virus like particles and viral vectors for the development and manufacture of vaccines and other bio-products.

The **Promatix 1000™ bio-separation system** is designed to be used to develop protocols for the separation, fractionation and concentration of viral vectors, virus-like particles, viruses, viral and bacterial vaccines, macromolecules and cellular organelles.

The **PKII Ultracentrifuge system** is sized for scale up process development and pilot scale production, being suitable for use in cGMP manufacturing.

The **KII Ultracentrifuge system** is designed for industrial scale production and is fully validated to meet cGMP requirements.

A range of rotors allow batch and continuous flow operations up to two hundred liter process volume per day. A range of scalable rotors allows a protocol developed using the Promatix 1000™ Ultracentrifuge to be scaled-up to the KII Ultracentrifuge while retaining similar recovery and critical process parameters.

Alfa Wassermann, Inc. 4 Henderson Drive . West Caldwell, NJ 07006 . USA
T 1-800-220-4488 F 1-973-276-0383 E info@awst.com

Alfa Wassermann B.V. . Poppmolenlaan 24 . 3447 GK Woerden . The Netherlands
T +31 348 487 300 F +31 348 433 000 E office@AlfaWassermann.nl

awst.com

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