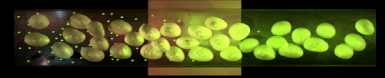


# MaxCyte® VLX™ Transfection System

## Large Scale Flow Electroporation



Transfection to the  $N^{th}$  Power.

### The Ultimate in Transient Transfection Scalability!



The MaxCyte® VLX™ Large Scale Transfection System is a small-footprint, easy-to-use instrument specifically designed for extremely large volume transient transfection in a sterile, closed transfection environment. Using proprietary flow electroporation technology, the MaxCyte VLX can transfect up to  $2 \times 10^{11}$  cells in less than 30 minutes with high cell viability and transfection efficiencies. This cGMP-compliant system is ideal for the rapid production of recombinant proteins, monoclonal antibodies, viral vectors, vaccines & VLPs from the bench through cGMP pilots and commercial manufacturing. The unique capabilities of the MaxCyte VLX allow researchers to:

- Produce gram scale quantities of proteins and antibodies
- Use transient transfection of CHO, HEK, Vero, and other difficult-to-transfect cells for protein production from R&D through large scale cGMP applications
- Transiently transfect up to  $2 \times 10^{11}$  cells in < 30 minutes
- Eliminate the need for creation of stable cell lines
- Shorten the timeline for development of proteins and antibodies

Plasmid	eGFP	EPO-IRES-eGFP
Volume of Cells	380 mL	1 L
Number of Cells	$3.8 \times 10^{10}$	$2.2 \times 10^{10}$
Cell Viability	95%	97%
eGFP+	82%	-
EPO Production (IU/ $10^6$ cells)	-	17

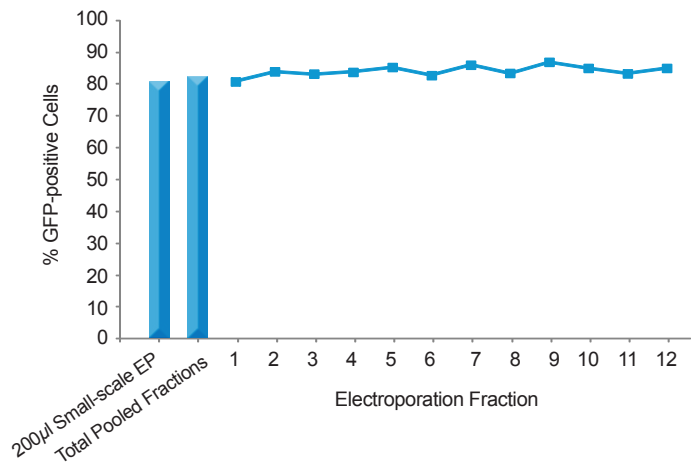
**High-quality Transfection using the MaxCyte VLX.** K562 cells grown in a 25L WAVE Bioreactor™ were harvested, washed and resuspended in MaxCyte electroporation buffer. Cells were transfected via flow electroporation using the MaxCyte VLX at the designated volumes with either an eGFP or EPO-IRES-eGFP expression vector. Cell viability, GFP expression and erythropoietin (EPO) production were assessed.

What if you could produce a gram of protein without constructing a single stable cell line?

The MaxCyte VLX Large Scale Transfection System can transiently transfect from  $5 \times 10^5$  to  $2 \times 10^{11}$  cells providing maximum processing flexibility with robust, high quality results. Optimized electroporation protocols designed specifically to maximize protein expression enable gram scale production from even historically difficult-to-transfect cells such as CHO and Vero cells. The MaxCyte VLX uniquely meets the speed, reproducibility and safety needed for the manufacturing of human therapeutics and makes protein production via transient transfection a viable alternative to the development of stable cell lines.

## MaxCyte Large Scale Flow Electroporation

MaxCyte scalable transfection systems perform both small scale static electroporation and large scale transfection using flow electroporation, both avenues providing comparable transfection efficiencies and cell viability allowing for seamless transfection scale up. MaxCyte flow electroporation provides a rapid, consistent method for the transfection of up to  $2 \times 10^{11}$  cells, including cells commonly used for protein and antibody production such as CHO, HEK and Vero cells. This unmatched transfection capacity is instrumental for the cost effective use of transient transfection in the production of proteins and antibodies, thus eliminating the reliance on stable cell lines and greatly shortening the timeline for therapeutic protein development and manufacturing.



**Robust, Large Scale Transfection using MaxCyte VLX Flow Electroporation.** K562 cells were transiently transfected with  $80 \mu\text{g/mL}$  pGFP DNA using small scale static electroporation (EP) or large scale flow EP ( $3.8 \times 10^{10}$  cells in 380mL). 30mL fractions were collected throughout the flow electroporation run and analyzed 48 hrs post transfection for GFP expression using FACS analysis. Cells from the small scale EP and a pool of all fractions from the large scale EP were also analyzed for comparison to individual flow fractions.

## MaxCyte VLX Instrument Specifications

Item	Specification
Instrument Dimensions (W x D x H)	30" x 18" x 20"
System Weight	158 lbs
Input Power & Fuse Requirements (Factory configured)	100-120VAC, 50-60Hz, 8A Fuse 2X Slow Blow, 250V, 5X20mm or 230VAC, 50-60Hz, 4A Fuse 2X Slow Blow, 250V, 5X20mm
Operating Humidity	93% maximum
Operating Temperature	15°C – 25°C
Storage Temperature	0°C – 45°C
Modes of Operation	Flow & Static
Process Volumes (per run)	50uL - 1L
Flow Mode Throughput	60mL/minute

Contact us today to arrange a customized demonstration.

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