

Summary of capabilities

Groningen, Netherlands

Facility Facts:

Workforce: 200

Regulatory Approval: EMA & FDA

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Unique Offering:

Mammalian cell culture manufacturing. Scale up and cGMP manufacturing of recombinant proteins and monoclonal antibodies.

Specialized Capabilities:

- cGMP manufacturing for early and late clinical and commercial supply, including process validation and PPQ
- Over 6 years (>70 batches produced) commercial manufacturing experience
- Wide range of Single-Use technologies
- Modular set-up to match process needs
- Experience in Fed Batch, Perfusion, n-1 Perfusion, and XD® processes
- Experience with all commercial cell lines

Development Offerings:

Analytical Development Equipment	Assay Examples
	Size exclusion chromotography
	Analytical proteinA chromatography
HPLC/UPLC based assay using both UV and fluorescent detectors	Ion exchange chromatography (CEX, AEX)
	Glycan analysis
	Peptide-mapping (UV)
96-384 well ELISA plate reader with UV/Vis and fluorescent detection.	Product specific binding activity
	Product Identity
	Impurities: HCP, ProteinA, Long IGF,
	total protein
Spectrophotometer (UV/Vis)	
Solo VPE (UV/Vis)	Protein concentration
Capillary electrophoresis	R/NR CE-SDS
Capillary isoelectric focusing (Ice3)	cIEF for Identity and Purity
LAL reader (96 well)	Endotoxins
TOC reader	Total organic carbon
Bioburden filtration setup	Bioburden
FTIR	Raw material ID testing

Groningen Key Equipment List:

	Process		Equipment
cGMP Manufacturing	Upstream	Seed train	Shake flask Rocker-mixed bioreactor and up to 250 L Single-Use stirred tank bioreactors
		Fed-Batch	50 L, 1000 L and 2000 L Single-Use Stirred tank Bioreactors
		Perfusion	250L or 500L Single-Use Bioreactors (ATF and TFF-technology)
		Clarification	Pall Stax & Merck Millistak+ POD 3M Zeta Plus Encapsulated System
	Downstream	Column Chromatography	Prepacked columns Single-Use Bioprocess systems (3 L/h -510 L/h) Single-Use Bioprocess systems (45 L/h - 3500 L/h)
		TFF Filtration	Single-Use automatic TFF systems with 1.14 – 20 m2 membrane area capacity Single-Use TangenXTM SIUSTM holder for 0.5 m2 – 5 m2 membrane area capacity
		Bulk drug substance final filtration & filling	Disposable sterilizing grade filtration and filling assemblies
		Virus-Filtration (Nano- Filtration)	Planova Filtration from 1 – 4 m² Filters Virus Solve filtration Single-Use membranes up to 12.5m² Virosart filtration BioEx filtration

For detailed capabilities and capacity information please contact your Thermo Fisher Scientific representative.



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