



It's all about speed and consistency
Seamless manufacturing solutions
for Process Development

SAFC Biosciences™
| Accelerate Success™



Gain the imMEDIATE ADVANTAGE™

- Quick-turnaround
- Customized non-cGMP formulations in small volumes
- Designed for industrial-focused process development customers

Our offer

Fast, flexible and personalized custom non-cGMP manufacturing and testing services for media formulations, concentrates, feeds supplements and buffers. Every client has direct access to dedicated SAFC Biosciences™ staff with:

Media

- Extensive range of classical, serum free, protein-free and chemically defined media experience
- The ability to manufacture modifications of catalog or customer-owned formulations with assurance that products can be transferred to large scale production

To take advantage of SAFC Biosciences' responsive expertise in helping you meet your process development milestones or request pricing, contact your Business Development Manager or Customer Service. See back for contact details.

Liquid media		
Total order size liters	Packaging options	
	Bottles	Bags
1 to 4 L	100 mL, 500 mL, 1000 mL, 2000 mL	1 L
5 to 20 L	100 mL, 500 mL, 1000 mL, 2000 mL	1 L, 10 L, 20 L
21 to 50 L	100 mL, 500 mL, 1000 mL, 2000 mL	1 L, 10 L, 20 L
51 to 200 L	500 mL, 1000 mL, 2000 mL	1 L, 10 L, 20 L
Dry powder media		
Lot size	Packaging options	Fill capacity options
500 g to 5 kg	Plastic containers	By weight up to 5 kg

Concentrates, feeds and supplements

- Extensive experience manufacturing concentrates of media, trace elements, hydrolysates, amino acids, vitamins and blends of nutrient formulations
- Feasibility is formulation- and application-dependent and is verified prior to manufacture

Buffers

Powder and liquid buffer customization and blending capabilities

Buffers with modifications that have historically been produced	
Buffer Description	Past Modifications
Diamond Tween 80	various concentrations
EBSS	various concentrations
Ferric Citrate	
Guanidine Hydrochloride	various concentrations
HBSS	various concentrations
HEPES Free Acid	HEPES Sodium with NaCl
MES Free Acid	various concentrations and pH
MOPS Free Acid	various concentrations and pH
Phosphate buffered saline	with EDTA
Sodium Acetate	Ammonium Sulphate
Sodium Bicarbonate Solution	various concentrations
Sodium Chloride Solution	various concentrations and pH
Sodium Succinate	various concentrations
Tetramethylammonium Chloride Solution	
Tricine Solution	
Tris Acetate	various concentrations
Tris Borate EDTA	various concentrations
Tris HCl	various pH modifications
Tris/HCl Buffered Guanidine	various concentrations

Bioservices

This specialized service consists of a battery of tests for nutrient analysis designed to provide valuable information for cell and media optimization studies

Contact Customer Service with requests for custom nutrient analysis currently not listed below as new tests may be added.

Item No.	Tests to Support Nutrient Analysis
88103	Amino Acid Analysis (HPLC)
88102	Cholesterol
88202	Glucose
88101	Lipids/Fatty Acids
88100	Vitamin Analysis (HPLC)

Item No.	Tests to Support Stability
88210	Appearance
88208	Bioburden
88204	Endotoxin (LAL)
88212	Growth Promotion (MTT)
88224	Moisture
88206	Osmolality
88213	Osmolality (without sodium bicarbonate)
88207	pH
88214	pH (without sodium bicarbonate)

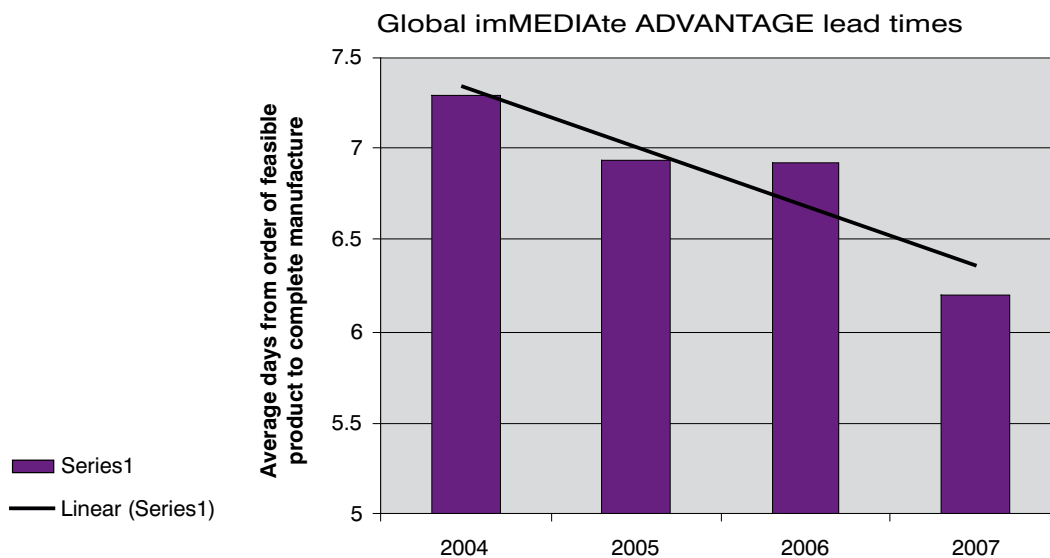


Biomanufacturing

Scale-up solutions

Responsive to your timelines

- Orders manufactured within 10 business days or less



- Multiple manufacturing locations throughout the United States and Europe ensure global responsiveness



- More than 300 raw materials are stocked and managed in imMEDIATE ADVANTAGE, ensuring that your custom formulation can be produced when needed

Seamless Scale-up

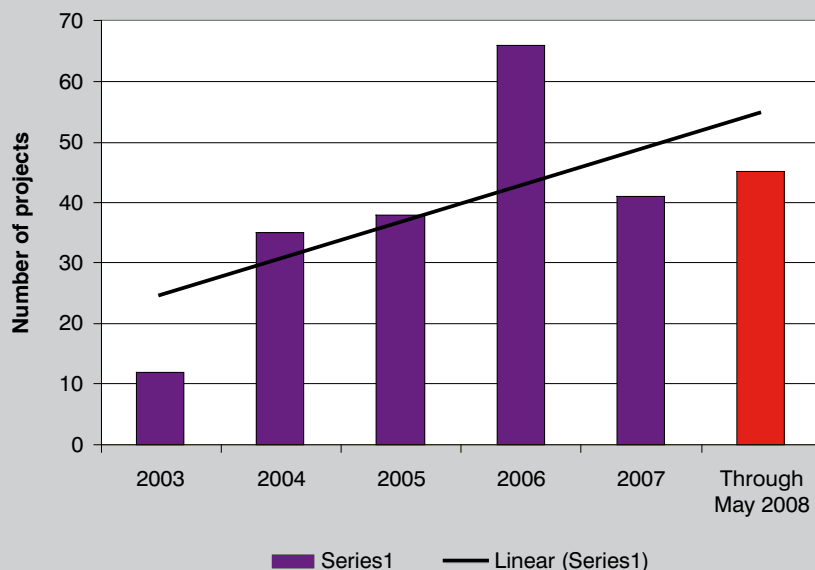
- The same manufacturing technology is utilized at the small scale as what is utilized at the large scale
- All components are used in cGMP manufacturing, have been QA released and meet stringent Raw Material Specifications
 - Only new/prototype formulations calling for unique components or applications would affect the ability to provide QA released cGMP components
- Certificate of Compliance are available per request

Standard Testing
pH
Osmolality
Physical Appearance
Abbreviated Sterility (for liquid formulations)
Solubility (for dry powder formulations)

Speed, Consistency and Confidence

- Over a decade of experience with imMEDIATE ADVANTAGE product scale-up
- Over 4,300 unique product numbers have been generated for customer specific applications
- 1249 batches of liquid media, buffers, dry powder media, concentrates and feeds were custom produced in 2007
- Over 500 products have been transferred from imMEDIATE ADVANTAGE to cGMP large-scale manufacture
- Over 1500 orders in 2007 with less than a 0.5% defect rate
- Over 75 projects since 2006 have been multi-department feasibility tested for scale-up
- Over 300 raw materials are stocked and managed through imMEDIATE ADVANTAGE

Projects scaled-up from imMEDIATE ADVANTAGE to cGMP



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Clinical Pipeline and imMEDIATE ADVANTAGE™ phase map

Legend

Solid colors represent customer responsibility or task.

Light colors represent SAFC Biosciences capability (product/service) to support the task.

Colors represent key value drivers for specific customer tasks.

Reliability

Efficiency

Performance

Speed

Acronyms

GMP Good Manufacturing Practice/Process

MFG Manufacturing

PD Process Development

RM Raw Materials(s)

DSP Downstream Purification

*** What NOT to utilize imMEDIATE ADVANTAGE for:**

- Master Cell Banking
- cGMP manufacture of clinical material
- Regulatory documentation or traceability

