BIOSOLUTIONS BY PAN™

/ MEDIA / REAGENTS / SERUM / BUFFER

SEAMLESS TRANSITION FROM **RUO** TO **GMP**



BREAKING NEWS:

ALL CATALOG PRODUCTS* ARE NOW ALSO AVAILABLE IN **GMP GRADE** UPON REQUEST.

*excluding Serum products

PRODUCT CATALOG

GMP · ISO 9001:2015 · ISO 13485 · FDA REGISTERED · TOP CONTRACT MANUFACTURING ORGANIZATIONS IN EUROPE · GATEWAY TO EUROPE · MADE IN GERMANY

PAN BIOTECH™

www.pan-biotech.com
info@pan-biotech.de

WELCOME PAN-BIOTECH

Since 1988, PAN-Biotech has stood for excellence in cell culture - with a clear mission: to support research and biotechnology with high-quality, reliable products.

Our vision: “Pioneering Cell Culture” - developing and manufacturing cell culture media, sera, serum-free systems and GMP-products under the **“Made in Germany”** quality standard. Today, PAN-Biotech is a global leader in supplying cell culture media, sera and GMP-compliant products for research, industry and clinical applications. Our extensive portfolio includes more than 1,800 catalogue items, with about 85 % in stock - ready for worldwide shipping within approximately 2 days.



PAN™ BIOTECH

/ PRODUCT PORTFOLIO

CELL CULTURE MEDIA
From classic media (e.g. RPMI, DMEM, CMRL) to cell-specific media for stem cells (MSC), HEK293, CHO, hybridomas, immune cells, insect cell lines and more. We also offer serum-free and custom formulations to optimize cell growth and performance.

SERA & SERUM-FREE SYSTEMS
High-quality sera (e.g. FBS, NCS, DHS, various animal sera) as well as human sera and alternatives. Since 1992, with Panexin - the world’s first serum replacement - PAN-Biotech has set standards for consistent, flexible and ethically responsible cell culture.

REAGENTS, BUFFERS & SPECIAL SOLUTIONS
For research and production processes, molecular biology, cell and gene therapy, vaccine and mRNA technology, antibody production and more. Also included: sterile water, GMP-grade water and water for injection (WFI).

CUSTOMIZED SOLUTIONS AND CONTRACT MANUFACTURING (CMO/CDMO/OEM)
Upon request, we deliver media, reagents or buffer systems based on custom formulations, including labeling, packaging, and batch sizes from small (1 L) to large scale (1,000 L). Our expertise ensures fast and flexible execution - even for demanding GMP processes.

/ QUALITY, PRODUCTION & GMP STANDARDS

PAN-Biotech manufactures at its facility in Aidenbach (Bavaria) under the motto **“Quality - Made in Germany.”**

Since 2008, PAN-Biotech has been certified according to **ISO 9001 and ISO 13485.**

A major milestone was reached in 2022: the commissioning of a new production plant operating under the highest European standards - GMP (EU Annex 1) - to deliver GMP-compliant products at state-of-the-art level.

Moreover, PAN-Biotech runs an internal Quality Testing & Research Center that performs microbiological, physicochemical and biochemical tests as well as validations according to Ph. Eur. and USP standards. This ensures the safety and consistency of every product.

/ VALUES & STRATEGY

Under the leadership of CEO Jens Hartmann, PAN-Biotech is guided by core values: Innovation, Integrity, Customer Focus, and uncompromising Quality.

Our strategic focus lies in key areas of modern biotechnology: cell and gene therapy, vaccine and mRNA technology, antibody production, and other forward-looking applications. This ensures that PAN-Biotech’s products meet the evolving demands of the life-science and pharmaceutical industry.

OVERVIEW
PRODUCT PORTFOLIO

PAN-Biotech provides a comprehensive portfolio of high-quality solutions for modern cell culture applications.

Our range includes premium sera, classic and specialized Media, GMP Grade products, and a broad selection of reagents, buffers, antibiotics, and water solutions to support reliable and reproducible workflows.

From research laboratories to regulated GMP environments, we combine standardized formulations with customized solutions and contract manufacturing services. With a strong focus on quality, consistency, and application-driven development, PAN-Biotech is a trusted partner for academia, biotechnology, and pharmaceutical industries worldwide.

NOTE: THE PRODUCTS LISTED ARE STANDARD SIZES
Other sizes are available in our shop or on request (e.g. bags).

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Discover our online shop! Here you will find our entire product range, the latest innovations and all the information you need at a glance.

www.shop.pan-biotech.de/en/



SERUM

Serum remains an indispensable component in many areas of cell culture research. That is why we offer the right serum for every application.

PAN-Biotech provides an extensive selection of bovine and other animal sera, which are available with various post-treatment options such as heat inactivation, gamma irradiation or other treatments see page 9.

FETAL BOVINE SERUM
FBS

/ FBS: FETAL BOVINE SERUM, SOUTH AMERICA ORIGIN

Bovine serum is the blood fraction remaining after the natural coagulation of blood, followed by centrifugation to remove any remaining red blood cells. Fetal bovine serum (FBS) containing an especially high amount of growth factors is the most widely used serum.

The production of bovine serum at PAN-Biotech is tightly controlled, from the collection of serum at the slaughterhouse and throughout the whole production cycle. All serum lots are virus and mycoplasma tested.

Fetal Bovine Serum from different countries of origins is sterile filtered and quality tested.

Extensive analyses and tests are presented in Certificate of Analysis (CoA).



SERUM		SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
FBS PREMIUM SOUTH AMERICA	0,2 µm filtered 0,1 µm filtered	100 ml	P30-3301 P30-3301S	500 ml	P30-3302 P30-3302S
FBS SUPREME SOUTH AMERICA	0,2 µm filtered 0,1 µm filtered	100 ml	P30-3030 P30-3030S	500 ml	P30-3031 P30-3031S
FBS STANDARD SOUTH AMERICA	0,2 µm filtered 0,1 µm filtered	100 ml	P30-3305 P30-3304S	500 ml	P30-3306 P30-3306S
FBS SERA LOW	0,2 µm filtered 0,1 µm filtered	100 ml	P30-5100 P30-5100S	500 ml	P30-5500 P30-5500S
PANSERA ES FBS SPECIAL DESIGNED FOR EMBRYONIC STEMCELLS	0,2 µm filtered	100 ml	P30-2601	500 ml	P30-2602

SERUM ORIGIN
US & AUSTRALIA

/ FBS: FETAL BOVINE SERUM, US OR AUSTRALIA ORIGIN

Fetal Bovine Serum (FBS) supplied by PAN-Biotech is sourced from defined origins in the United States and Australia, both recognised by regulatory authorities for their compliance, traceability and high veterinary standards. The entire manufacturing process is strictly controlled – from raw material collection through sterile filtration to comprehensive quality control testing, including virus and mycoplasma screening – ensuring consistent, reliable performance in demanding cell culture applications.



SERUM		SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
FBS PREMIUM US ORIGIN	0,2 µm filtered 0,1 µm filtered	100 ml	P30-1401 P30-1401S	500 ml	P30-1402 P30-1402S
FBS PREMIUM AUSTRALIA ORIGIN	0,2 µm filtered	100 ml	P30-1301	500 ml	P30-1302
FBS STANDARD US ORIGIN	0,2 µm filtered 0,1 µm filtered	100 ml	P30-1405 P30-1405S	500 ml	P30-1406 P30-1406S

FBS also available in premium and standard grades originating from Australia and the US.

/ SPECIAL TREATMENTS FOR PREMIUM FBS ONLY

- Activated charcoal absorbed P30-2302
- Delipidised P30-3402
- Dialysed P30-2102
- Ultra low IgG P30-2802
- Tetracycline free P30-3602
- Heat inactivated (possible for all sera)
- Gamma irradiated (possible for all sera)
- EMEA tested (only for Australia and USA serum) P40-1302 and P40-1402

FBS
GOOD

SERUM		SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
FBS GOOD FILTRATED BOVINE SERUM	**EU APPROVED**	100 ml	P40-37100	500 ml	P40-37500

FBS SHOTS

NEW

/ FBS SHOTS: ARE AVAILABLE FOR ALL FBS PRODUCTS WITH 10 x 50 ml IN EACH BOX



MORE RELIABILITY FOR YOUR APPLICATIONS
Our "FBS SHOTS" service has been designed to streamline your laboratory workflows while enhancing the reproducibility of your results. The task often perceived as inconvenient and time-consuming: Aliquoting FBS is completely taken off your hands.

ADVANTAGES OF OUR FBS SHOTS
Efficient and safe handling of FBS is crucial for smooth laboratory processes and reliable results. The time required and the number of Freeze-Thaw-Cycles in particular have a major impact on the quality of your work.

FBS SHOTS offer significant time savings, maximum product safety, and a minimized risk of quality impairment – clear added value for any modern laboratory operation.

FBS SHOTS	SIZE	0.1 µm sterile filtered	PRODUCT NO.	0.2 µm sterile filtered	PRODUCT NO.
FBS PREMIUM SOUTH AMERICA ORIGIN	**10 x 50 ml**	X	P50-3302S	X	P50-3302
FBS SUPREME SOUTH AMERICA ORIGIN	**10 x 50 ml**	X	P50-3031S	X	P50-3031
FBS STANDARD SOUTH AMERICA ORIGIN	**10 x 50 ml**	X	P50-3306S	X	P50-3306
FBS SERA LOW SOUTH AMERICA ORIGIN	**10 x 50 ml**	X	P50-5500S	X	P50-5500

All of our FBS products are generally available as FBS SHOTS.
Some can be ordered directly through our shop, while others are available upon request.

BOVINE SERUM

/ BOVINE SERUM FROM DIFFERENT COUNTRIES OF ORIGIN IS STERILE FILTERED & QUALITY TESTED

SERUM		SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
BOVINE SERUM	VARIABLE ORIGINS	100 ml	P30-0601	500 ml	P30-0602
CALF SERUM - NEWBORN	VARIABLE ORIGINS	100 ml	P30-0401	500 ml	P30-0402

OTHER ANIMAL SERA



SERUM		SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
HORSE SERUM	sterile filtered	100 ml	P30-0701	500 ml	P30-0702
PIG SERUM	sterile filtered	100 ml	P30-0901	500 ml	P30-0902
GOAT SERUM	sterile filtered	100 ml	P30-1001	500 ml	P30-1002
SHEEP SERUM	sterile filtered	100 ml	P30-4101	500 ml	P30-4102
LAMB SERUM	sterile filtered	100 ml	P30-0801	500 ml	P30-0802
DONKEY SERUM	sterile filtered	100 ml	P30-0101	500 ml	P30-0102
RABBIT SERUM	sterile filtered	100 ml	P30-1101	500 ml	P30-1102
MOUSE SERUM	sterile filtered	100 ml	P30-0201	500 ml	P30-0202M
RAT SERUM	sterile filtered	100 ml	P30-01901E	500 ml	P30-01950
CHICKEN SERUM	sterile filtered	100 ml	P30-0301	500 ml	P30-0302



MEDIA

Classic Media comprise a portfolio of well-established basal cell culture media that have been used reliably for decades across research, development, and routine laboratory applications. These formulations provide defined nutritional environments for a wide range of mammalian and other animal cell types and serve as the foundation for standardized and reproducible cell culture workflows.

CLASSIC MEDIA

/ STANDARD CELL CULTURE MEDIA

Classic cell culture media form the foundation of *in vitro* research and are essential for maintaining cell viability, growth, and function under controlled conditions. PAN-Biotech's Classic Media portfolio comprises the most widely used and established basal media for mammalian cell culture, forming the foundation of countless routine and advanced workflows across research, bioprocess development, and applied life science laboratories.

The portfolio includes well-recognized standard formulations and other established media designed to support a broad range of cell types, including primary cells, continuous cell lines, suspension cultures, and organ-derived systems. Depending on the specific medium and application, these formulations can be supplemented with serum, growth factors, or additional additives and are available with different salt compositions and buffering systems.

Manufactured using high-quality raw materials and produced under stringent quality control systems, PAN-Biotech's Classic Media ensure lot-to-lot consistency, reliability, and reproducible performance. While the formulations themselves are based on well-established, publicly defined media compositions, careful raw material selection, controlled manufacturing processes, and comprehensive quality testing ensure consistent performance and suitability for demanding cell culture applications.

DMEM
(DULBECCO'S MODIFIED EAGLE'S MEDIUM)
DMEM is a standardized, widely used nutrient medium for human and various animal cell cultures. It is a modified version of Eagle's Minimum Essential Medium (EMEM) and contains four times the concentration of amino acids and vitamins, supporting robust cell growth across numerous applications.

DMEM/F-12
(DULBECCO'S MODIFIED EAGLE MEDIUM/
NUTRIENT MIXTURE F-12)
DMEM/F-12 is a versatile basal medium suitable for a broad range of mammalian cells. Commonly cultured cell types include MDCK, glial cells, fibroblasts and endothelial cells. Its balanced formulation makes it a widely adopted standard medium, also suitable as basal medium for serum free applications.

HAM'S F-10 MEDIUM
Ham's F-10 was formulated to support single-cell cultures, especially serum-free CHO systems. It contains a defined mixture of nutrients, vitamins, and amino acids and is widely used for primary cells, steroid-secreting cells, and various established lines. Supplementation with serum or growth factors may be required depending on the cell type.

NUTRIENT MIXTURE F-12
(HAM'S F-12)
Originally developed for serum-free, single-cell CHO cultures, Ham's F-12 includes increased zinc concentrations that improve plating efficiency and reproducibility. Although initially intended for low-density cultures, it is now widely used for many mammalian cell types. Depending on the application, supplementation with serum or proteins may be required.

IMDM
(ISCOVE'S MODIFIED DULBECCO'S MEDIUM)
IMDM is optimized for high-density, rapidly proliferating cultures, including Lymphocytes like Jurkat cells or COS-7 cells, and macrophages. Its enriched nutrient composition supports enhanced growth in demanding cell systems.

CMRL MEDIUM
(CONNAUGHT MEDICAL RESEARCH LABORATORIES MEDIUM)
CMRL is designed for a broad range of mammalian cells and tissues. It provides a rich nutrient base suitable for primary cultures, continuous cell lines, organ cultures, and cytogenetic applications. Serum supplementation may be necessary depending on cell requirements.

LEIBOVITZ'S L-15 MEDIUM
L-15 was developed for CO_2-free culture systems using a buffering system based on free basic amino acids, phosphate buffers, and elevated levels of galactose and sodium pyruvate to maintain physiological pH. It is suitable for human tumor and embryonic cells, nerve cells as well as established lines such as HeLa and HEp-2 and primary tissue explants.

MCDB 131 MEDIUM
MCDB 131 was originally developed for human microvascular endothelial cells and offers a defined nutrient environment for a range of primary cell types. It often requires supplementation with serum, growth factors, or additional nutrients to support sensitive cultures.

MCCOY'S 5A MEDIUM
McCoy's 5A is a general-purpose medium supporting many primary cells, established cell lines, and tissue explants. It is suitable for primary mammalian cells from bone marrow, skin, spleen, kidney, lung, rat embryos, and other tissues. The medium requires serum supplementation and a 5 % CO_2 environment.

MEDIUM 199
Originally formulated for nutritional studies of chick embryo fibroblasts, Medium 199 is available with Earle's or Hanks' salts. Preparations with Earle's salts use a bicarbonate/carbonic acid buffer system and are intended for CO_2 incubators, as atmospheric use results in a rapid pH increase.

MEM
(MINIMUM ESSENTIAL MEDIUM)
MEM is one of the most widely used synthetic media and supports a broad range of cell types grown in monolayers. Its balanced formulation makes it suitable for numerous standard applications. MEM with Earle's salts is intended for cultivation with 5 % CO_2 while formulations with Hanks' salts are suitable for closed systems.

a-MEM
(ALPHA-MEM)
a-MEM is a modified version of MEM that includes non-essential amino acids, sodium pyruvate, thioctic acid, vitamin B12, biotin, and ascorbic acid. Formulations with additional nucleosides are also available. It supports both suspension and adherent cells, including keratinocytes, primary rat astrocytes, and human melanoma cells.

RPMI 1640
RPMI 1640 supports many cell types when supplemented with serum or a suitable serum replacement. It is particularly suited for human T- and B-lymphocytes, bone marrow cells, and hybridoma cells.

WILLIAM'S E MEDIUM
William's E Medium requires supplementation, typically with 5–10 % FBS. It uses a sodium bicarbonate buffer system and thus requires a 5 % CO_2 environment to maintain physiological pH. It is commonly used for hepatocyte cultures.

CLASSIC MEDIA

CLASSIC MEDIA	SIZE	PRODUCT NO.	L-GLUTAMINE	STABLE GLUTAMINE	SODIUM PYRUVATE	PHENOL RED
ALPHA MEM	500 ml	P04-21050			X	X
ALPHA MEM	500 ml	P04-21500	X		X	X
ALPHA MEM	500 ml	P04-21250		X	X	X
ALPHA MEM	500 ml	P04-21350		X	X	X
DMEM	500 ml	P04-01548				
DMEM	500 ml	P04-01500			X	X
DMEM	500 ml	P04-02500		X	X	X
DMEM	500 ml	P04-03500				X
DMEM	500 ml	P04-03550	X			X
DMEM	500 ml	P04-04510		X	X	X
DMEM	500 ml	P04-05550	X		X	X
DMEM/F12	500 ml	P04-41450			X	X
DMEM/F12	500 ml	P04-41500	X		X	X
DMEM/F12	500 ml	P04-41150		X	X	X
CMRL 1066 MEDIUM	500 ml	P04-84600				
HAM'S F10 MEDIUM	500 ml	P04-12500	X		X	X
HAM'S F12 MEDIUM	500 ml	P04-14550			X	X
HAM'S F12 MEDIUM	500 ml	P04-14500	X		X	X
IMDM	500 ml	P04-20250			X	X
IMDM	500 ml	P04-20150	X		X	X
LEIBOVITZ'S L-15	500 ml	P04-27055			X	X
LEIBOVITZ'S L-15	500 ml	P04-27500	X		X	X
MCCOY'S 5A MEDIUM	500 ml	P04-05500	X			X
MCCOY'S 5A MEDIUM	500 ml	P04-06500		X		X

CLASSIC MEDIA	SIZE	PRODUCT NO.	L-GLUTAMINE	STABLE GLUTAMINE	SODIUM PYRUVATE	PHENOL RED
MCDB 131 MEDIUM	500 ml	P04-80057			X	X
MCDB 131 MEDIUM	500 ml	P04-80053	X		X	X
M199 WITH EBSS	500 ml	P04-07500				X
M199 WITH EBSS	500 ml	P04-07050	X			X
M199 WITH EBSS	500 ml	P04-07250		X		X
MEM EAGLE WITH EBSS	500 ml	P04-08050				X
MEM EAGLE WITH EBSS	500 ml	P04-08500	X			X
MEM EAGLE WITH EBSS	500 ml	P04-08056	X			X
MEM EAGLE WITH EBSS	500 ml	P04-09500		X		X
RPMI 1640	500 ml	P04-17500				X
RPMI 1640	500 ml	P04-18000				X
RPMI 1640	500 ml	P04-16500	X			X
RPMI 1640	500 ml	P04-16515	X			
RPMI 1640	500 ml	P04-18047	X		X	X
RPMI 1640	500 ml	P04-18500		X		X
RPMI 1640	500 ml	P04-18050		X		X
SCHNEIDER'S DROSOPHILA MEDIUM	500 ml	P04-90500				
SCHNEIDER'S DROSOPHILA MEDIUM	500 ml	P04-91500	X			
WILLIAM'S MEDIUM E	500 ml	P04-29050			X	X
WILLIAM'S MEDIUM E	500 ml	P04-29150		X	X	X
WILLIAM'S MEDIUM E	500 ml	P04-29510			X	



SPECIALIZED MEDIA

Our Specialized Media portfolio comprises precisely formulated cell culture media developed to meet the specific biological and regulatory requirements of distinct cell types and applications. From cytogenetics and stem cell research to biopharmaceutical production and vaccine development, each medium is designed to deliver reproducible performance, high consistency, and reliable results in demanding laboratory environments. Backed by stringent quality standards and decades of expertise, these media provide a solid foundation for advanced research and diagnostics.

SPECIALIZED MEDIA

/ AMNIOTIC FLUID & CVS CELLS

AMNIOPAN
COMPLETE MEDIUM FOR AMNIOTIC FLUID AND CVS CELLS

Amniopan is a complete, ready-to-use medium specifically developed for the short-term cultivation of human amniotic fluid cells (AFC) and chorionic villus samples (CVS). Based on α-MEM, the formulation includes fetal bovine serum, L-glutamine, antibiotics, hormones and growth factors, providing reliable conditions for cytogenetic workflows such as karyotyping, FISH and related diagnostic methods. The medium supports fast cell attachment, efficient proliferation and high-quality metaphase preparation, ensuring consistent results independent of batch variations. Manufactured under a strictly supervised quality system, Amniopan offers dependable performance for laboratory diagnostics.

AMNIOTIC FLUID/CVS	SIZE	PRODUCT NO.
AMNIOPAN	500 ml	P04 -70500

/ STEM CELLS

Stem cells are a fundamental component of regenerative medicine and biopharmaceutical research. They are defined by two key properties: self-renewal (the ability to proliferate while maintaining their undifferentiated state) and potency (the capacity to differentiate into specialized cell types). Beyond tissue regeneration, stem cells play important roles in immunomodulation, disease modeling, and drug discovery.

MESENCHYMAL STEM CELLS (MSCs)

Mesenchymal stem cells, also known as mesenchymal stromal cells, are adult multipotent stem cells capable of differentiating into various cell types including osteoblasts, chondrocytes, myocytes, and adipocytes. They were first identified by Alexander Friedenstein in the late 1960s, who described colony-forming fibroblast-like cells in bone marrow with osteogenic, chondrogenic, and adipogenic potential. MSCs can be isolated from several adult and perinatal tissues, including bone marrow, adipose tissue, umbilical cord tissue, and dental pulp. MSCs have gained significant attention in the biopharmaceutical industry and clinical research due to their immunomodulatory, anti-inflammatory, and pro-regenerative properties. Currently, numerous registered MSC clinical trials are ongoing globally, investigating treatments for conditions ranging from graft-versus-host disease to neurological disorders.

SERUM-FREE MEDIA FOR MSCs

POWERSTEM MSC 1
This specialized medium is formulated to support cultivation of human mesenchymal stem cells in a serum- and xeno-free environment, ensuring consistent and reproducible experimental conditions. It is specifically designed for the proliferation of human mesenchymal stem cells wile conserving their multi-lineage potential. By adding specific differentiation factors, MSCs can be differentiated *in vitro* to the desired cell types.

MESENPAN
A specialized, xeno- and serum-free medium developed for the cultivation and expansion of human mesenchymal stem cells while maintaining differentiation potential. Based on a defined formulation with specific growth factors and supplements, it supports MSC growth under controlled conditions and provides a reliable environment for maintaining cell morphology and proliferation capacity.



EMBRYONIC STEM CELLS (ESCs)

Embryonic stem cells are pluripotent cells derived from the inner cell mass of human blastocyst. ESCs can differentiate into any cell type from all three germ layers, making them valuable for regenerative medicine and drug discovery applications. Human ESCs have been investigated for their potential to generate specialized cells for replacing damaged or diseased tissues. Research and early-stage clinical studies have examined ESC-derived cells in areas such as spinal cord injury, age-related macular degeneration, diabetes, and neurodegenerative diseases.

STEMPAN DMEM
A specialized Dulbecco's Modified Eagle Medium formulation optimized for mouse embryonic stem cell culture. This medium contains specific concentrations of glucose, amino acids, and vitamins tailored to support ESC self-renewal while maintaining an undifferentiated state of the cells.

STEMPAN E14 GMEM
Based on Glasgow Minimum Essential Medium, this formulation is specifically designed for the E14 mouse embryonic stem cell line, one of the most widely used ESC lines in research. The medium composition supports the unique metabolic requirements of ESCs while maintaining their undifferentiated state.

STEM CELLS: SERUM-FREE MEDIA FOR MCSs	SIZE	PRODUCT NO.	
POWERSTEM MSC 1 KIT	500 ml	P04 -77350K	
MESENPAN KIT	500 ml	P08-50400K	
STEM CELLS: EMBRYONIC STEM CELLS (ESCs)			
STEMPAN DMEM	500 ml	P08-50500	Minimum order quantity: 20 pieces
STEMPAN E14 GMEM	500 ml	P08-50600	Minimum order quantity: 20 pieces

SPECIALIZED MEDIA

/ LYMPHOID CELLS / MYELOID CELLS

Hematopoietic cells originate from two major lineages – lymphoid and myeloid – which together form the foundation of the immune system and blood cell production. These cell types are critical for immunotherapy development, antibody production, and studying hematological diseases. The culture of these cells requires specialized media formulated to support their specific growth requirements and functional properties.

MARROWPAN
A complete medium formulated for the short-term *in vitro* culture of bone marrow cells, hematopoietic cells and leukemic blood cells. Based on α-MEM and supplemented with fetal bovine serum, L-glutamine, antibiotics, hormones and growth factors, it supports the expansion of myeloid and lymphoid cell populations and provides optimal conditions for applications such as karyotyping and FISH. The medium is compatible with hematopoietic mitogens and is designed to deliver high and reproducible metaphase quality, independent of batch variations.



LYMPHOID CELLS / MYELOID CELLS	SIZE	PRODUCT NO.	
MARROWPAN	**500 ml**	**P04-70250**	
LYMPHOID CELLS			
WITH PHA (PHYTOHEMAGGLUTININ) **PANSERIN 701**	**500 ml**	**P04-710701**	
WITHOUT PHA **PANSERIN 413**	**500 ml**	**P04-71413**	
CHEMICALLY-DEFINED MEDIA **PANCELL T KIT**	**500 ml**	**P04-710414K**	
FOR CYTOGENETIC INVESTIGATIONS **PANSERIN 411S**	**500 ml**	**P04-7411S1**	
SERUM-CONTAINING MEDIA **LYMPHOPAN**	**100 ml**	**P04-70700**	Minimum order quantity: 20 pieces
PANTUM L24	**500 ml**	**P04-00024**	
MYELOID CELLS			
ERYTHROPLUS KIT	**500 ml**	**P04-20251K**	

/ LYMPHOID CELLS

Lymphoid cells include T cells, B cells, and natural killer cells, all of which are essential components of the adaptive immune system. These cells are extensively used in cell-based immunotherapy applications, particularly in CAR-T cell therapy and antibody production.

WITH PHA (PHYTOHEMAGGLUTININ)

PANSERIN 701
A serum-free medium supplemented with phytohemagglutinin (PHA), a lectin that functions as mitogen by binding to glycoproteins on the T cell surface, triggering activation and proliferation. This medium is essential for expanding T cells for immunotherapy applications, where large numbers of activated T cells are required.

WITHOUT PHA

PANSERIN 413
This serum-free formulation supports lymphoid cell culture without mitogenic stimulation, maintaining cells in a more quiescent state. This is useful for studying resting lymphocyte biology or for applications where controlled activation is required. The medium provides essential nutrients and growth factors that support cell viability without inducing proliferation.

CHEMICALLY-DEFINED MEDIA

PANCELL T KIT
A completely chemically defined medium where every component is known and quantified. This level of definition is crucial for regulatory compliance in cell therapy manufacturing and ensures reproducibility. The medium supports T cell expansion and function while eliminating undefined components that could introduce variability or safety concerns.

FOR CYTOGENETIC INVESTIGATIONS

PANSERIN 411S
Specifically formulated for chromosome analysis and cytogenetic studies. This medium maintains optimal metaphase index in cultured lymphocytes, essential for karyotyping and detecting chromosomal abnormalities. The formulation includes components that synchronize cell division, allowing for better visualization of chromosomes during metaphase.

SERUM-CONTAINING MEDIA

LYMPHOPAN
Lymphopan is a serum-supplemented medium designed to support the cultivation and maintenance of lymphocytes in research applications. The formulation provides essential proteins and nutrients that help sustain viability and cellular function, making it particularly suitable for primary lymphocyte cultures and subsets that are otherwise difficult to maintain. Because adult peripheral blood lymphocytes are naturally arrested in the G0 phase and do not proliferate spontaneously, mitogenic stimulation is required, typically by adding phytohemagglutinin-L (PHA-L).

PANTUM L24
A complete growth medium tailored for the cultivation of peripheral blood lymphocytes. It is based on a modified RPMI 1640 formulation and contains natural mitogen phytohemagglutinin (PHA), enabling efficient activation and proliferation of lymphocytes. The medium includes purified plasma proteins, lipids, growth factors, a soybean-derived nutrient fraction, iron-transport proteins and enriched trace elements, creating an environment that supports stable and reproducible lymphocyte culture. Pantum L24 is supplied as a ready-to-use liquid medium.

/ MYELOID CELLS

ERYTHROPLUS
A specialized medium designed for the culture and differentiation of erythroid cells. This formulation is free from any animal-derived components and contains specific components, that promote optimal growth and proliferation. For culturing erythroid cells, it is necessary to supplement with application-specific growth factors, such as erythropoietin and human recombinant stem cell factor. The medium is essential for studying erythropoiesis, modeling blood disorders, and potentially producing red blood cells for transfusion applications.

SPECIALIZED MEDIA

/ HEK CELLS

HEK293 cells were generated in 1973 by transfection of human embryonic kidney cells with sheared adenovirus 5 DNA and are widely used in biopharmaceutical research and production.

They support recombinant protein expression and viral vector manufacturing. They are particularly valuable for proteins and viral vectors requiring human-specific post-translational modifications.

ADHERENT HEK Cells

PANSERIN 293 A
This serum-free medium is optimized for adherent HEK293 cell culture, supporting cells that grow attached to culture surfaces. Adherent culture is often preferred for viral vector production and when harvesting secreted proteins from the medium. The formulation maintains cell attachment while promoting high-density growth and protein production.

NON-ADHERENT HEK Cells

PANSERIN 293 S
Specifically formulated for suspension-adapted HEK293 cells, this medium enables scalable production in bioreactors. HEK293 cell lines are used for the production of recombinant proteins, virus-like particles and viral vectors. Suspension culture allows for higher cell densities and easier scale-up, critical for commercial biopharmaceutical production.

HEK CELLS	SIZE	PRODUCT NO.
ADHERENT HEK CELLS **PANSERIN 293 A**	**500 ml**	**P04-710608**
NON-ADHERENT HEK CELLS **PANSERIN 293 S**	**500 ml**	**P04-710609**

/ KERATINOCYTES

Keratinocytes are the primary cell type of the human epidermis, comprising about 90 % of epidermal cells. These cells are essential for skin barrier function and

are widely used in dermatological research, toxicity testing, and regenerative medicine applications for treating burns and wounds.

PANSERIN 801
A complete serum-free medium designed for the cultivation of human keratinocytes which concurrently prevents the overgrowth with fibroblasts.

PANSERIN 802
An optimized formulation for keratinocyte culture with enhanced growth factors and supplements. This medium supports extended passage of keratinocytes while maintaining their differentiation potential, crucial for applications requiring large cell numbers such as skin grafting and tissue engineering.

KERATINOCYTES	SIZE	PRODUCT NO.
PANSERIN 801 KIT	**500 ml**	**P04-710801K**
PANSERIN 802 KIT	**500 ml**	**P04-710802K**

/ ENDOTHELIAL CELLS

Endothelial cells line blood vessels and play critical roles in vascular biology, angiogenesis, and barrier function. They are widely used

in research on cardiovascular diseases, in the development of vascular grafts, and understanding tumor angiogenesis.



SERUM-FREE ENDOTHELIAL MEDIA

ENDOPAN 300 SL
A serum-free complete medium that supports cell growth of human umbilical vein endothelial cells (HUVEC) and endothelial cells.

MICROVASCULAR ENDOTHELIAL CELLS

ENDOPAN MV
Specifically optimized for microvascular endothelial cells. These cells are crucial for studying capillary formation, blood-brain barrier function, and microvascular diseases. The medium contains specific growth factors like VEGF and FGF that are essential for microvascular endothelial cell survival and proliferation.

SERUM-REDUCED

ENDOPAN 3 COMPLETE MEDIUM
A serum-reduced formulation that minimizes serum content while maintaining optimal endothelial cell growth. This represents a compromise between fully defined serum-free conditions and traditional serum-containing media, offering improved consistency while retaining some beneficial serum factors.
This complete medium system is developed for the *in vitro* culture of human endothelial cells containing all components necessary for optimal growth.
Endopan 3 Complete is a low-serum medium enriched with growth factors, making it also suitable for the cultivation of human mesenchymal cells.

PROGENITOR ENDOTHELIAL CELLS

ENDOPAN PRO
Designed for endothelial progenitor cells (EPCs), which are circulating cells capable of differentiating into mature endothelial cells. EPCs are important for vascular regeneration and are being investigated for treating ischemic diseases. The culture medium maintains the progenitor state of the cells while allowing controlled differentiation when appropriate signals are provided.

ENDOTHELIAL CELLS	SIZE	PRODUCT NO.
SERUM-FREE ENDOTHELIAL MEDIA **ENDOPAN 300 SL KIT**	**500 ml**	**P04-0065K**
MICROVASCULAR ENDOTHELIAL CELLS **ENDOPAN MV KIT**	**500 ml**	**P04-0020K**
SERUM-REDUCED **ENDOPAN 3 COMPLETE MEDIUM KIT**	**500 ml**	**P04-0010K**
PROGENITOR ENDOTHELIAL CELLS **ENDOPAN PRO**	**500 ml**	**P04-00700**

SPECIALIZED MEDIA

/ FIBROBLASTS

Fibroblasts are the most abundant cells in connective tissue, responsible for producing extracellular matrix and collagen. They play a crucial role in wound healing, tissue maintenance, and are widely used in disease modeling, particularly for genetic disorders affecting connective tissue.

EMEM FIBROBLAST
Based on Eagle's Minimum Essential Medium, this formulation is optimized for fibroblast culture with additional or higher concentrations of amino acids and vitamins and thus optimized for improved growth of fibroblasts.
The medium maintains fibroblast morphology and function through multiple passages. 10 % FBS must be supplemented.

FIBROBLASTS	SIZE	PRODUCT NO.
EMEM FIBROBLAST	500 ml	P04-08049

/ CHO CELLS

Chinese Hamster Ovary (CHO) cells are one of the most widely used mammalian host systems in biomanufacturing, especially for producing recombinant therapeutic proteins and monoclonal antibodies.

CHO cells are capable of human-like post-translational modifications, are genetically stable, and scale well in suspension. Their compatibility with chemically defined, serum-free media enables high reproducibility, process control and regulatory acceptance.

PANCELL CHO-K1 KIT
is a chemically defined, animal-component-free, protein-free medium system—composed of batch, feed, and boost components. With no L-Glutamine and no undefined hydrolysates, it offers maximal process control and scalability. The included feeding plan supports fed-batch and perfusion process development across CHO suspension cultures.

PANCELL CHO-KIT
A comprehensive media system that includes base medium and feeds for CHO cell culture. This kit approach allows for fed-batch processes that can achieve high cell densities and product titers. The protein-free formulation simplifies downstream purification and reduces the risk of contamination with adventitious agents.

CHO CELLS	SIZE	PRODUCT NO.
PANCELL CHO-K1 KIT	500 ml	P04-71101K
PANCELL CHO-KIT	500 ml	P04-71102K

/ MDCK CELLS

MDCK cells are an epithelial cell line derived in 1958 from the kidney of a normal adult Cocker Spaniel. The cell line is widely used in pharmaceutical research for drug transport studies, virology research, virus production (particularly influenza vaccines), and as a model for epithelial barrier function. These cells have clear apico-basolateral polarity and form well defined tight junctions, making them ideal for studying transcellular transport.

SERUM FREE MEDIUM FOR MDCK
This specialized formulation supports MDCK cell growth without serum, crucial for vaccine production where serum components could interfere with purification or introduce contaminants. The medium maintains epithelial characteristics including tight junction formation and transepithelial resistance, essential for barrier function studies.

MDCK CELLS	SIZE	PRODUCT NO.
SERUM FREE MEDIUM FOR MDCK	500 ml	P04-71105

/ VERO CELLS

The Vero cell line was originally established from the kidney of an African green monkey in 1962. Vero cells are one of the most important continuous cell lines for vaccine production, particularly for viral vaccines and a variety of pathogen studies.

They are WHO-approved for human vaccine manufacturing and have been used to produce vaccines for polio, rabies, influenza, and recently COVID-19.

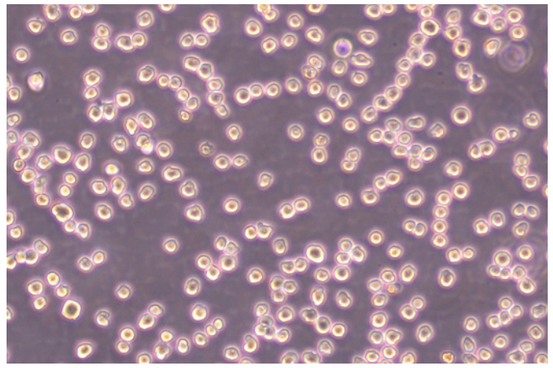
PANSERIN PRO VERO
A specialized medium optimized for Vero cell culture in vaccine production settings. The formulation supports high-density growth while maintaining the cells' susceptibility to viral infection.
The medium is designed to meet regulatory requirements for vaccine production, with defined components that facilitate downstream purification processes.

VERO CELLS	SIZE	PRODUCT NO.
PANSERIN PRO VERO	500 ml	P04-710613

SPECIALIZED MEDIA

/ HYBRIDOMA / MYELOMA CELLS

Hybridomas are immortalized cells produced by fusing antibody-producing B cells with myeloma cells, creating cell lines that continuously produce monoclonal antibodies. These cells revolutionized antibody production and remain important for research antibody manufacturing and some therapeutic antibody production.



PROTEIN-CONTAINING MEDIA

PANSERIN 413
An optimized formulation with specific protein supplements that enhance monoclonal antibody production. This medium supports both cell growth and the secretory machinery required for high-level antibody expression.

PROTEIN-FREE MEDIA

CHOLESTEROL-FREE

HYBRIDBOOST
An innovative defined, serum-free medium for high-performance hybridoma cultures, featuring stable glutamine, recombinant human insulin, and no added hydrolysates. Its built-in surfactant supports agitated systems, while the low animal-protein content supports tight process control. For cholesterol-dependent lines, supplementation is recommended, and adaptation protocols are provided.

ISF-1
A serum-free, cholesterol-free formulation that supports hybridoma growth through multiple passages while maintaining antibody production. It contains low levels of animal components, stable glutamine, and bicarbonate buffering. The built-in surfactant enables robust growth in suspension; external cholesterol may be added if required for specific lines.

CHOLESTEROL-CONTAINING

PANSERIN H8000
A protein-free medium containing cholesterol, which is essential for membrane integrity and certain cellular functions. This formulation provides the benefits of defined, protein-free culture while maintaining the cholesterol required for optimal cell growth and antibody production in many hybridoma lines.

HYBRIDOMA / MYELOMA CELLS	SIZE	PRODUCT NO.	
PROTEIN-CONTAINING Media			
PANSERIN 413	**500 ml**	**P04-71413**	
PROTEIN-FREE Media			
CHOLESTEROL-FREE **HYBRIDBOOST**	**500 ml**	**P04-995905**	
CHOLESTEROL-FREE **ISF-1**	**1,000 ml**	**P04-995968**	
CHOLESTEROL-CONTAINING **PANSERIN H8000**	**500 ml**	**P04-718000**	Minimum order quantity: 20 pieces

/ NEURONS

Neural cell culture is fundamental for neuroscience research, drug discovery for neurological diseases, and developing cell therapies for neurodegenerative conditions. These cultures require specialized media that support the unique metabolic needs of neurons while maintaining their electrical activity and synaptic connections.

NEUROPAN
A comprehensive neural cell culture medium that supports neuronal survival and meets the special cell culture requirements of pre-natal and embryonic neuronal cells from hippocampus, cortex and other regions of the brain. The formulation includes neurotrophic factors and supplements required for maintaining neuronal membrane integrity and function. It allows for both long- and short-term maintenance of homogeneous populations of neuronal cells without the need of an astrocyte feeder layer.

NEUROPAN SUPPLEMENT
A concentrated supplement designed to support growth and survival of neuronal cells from the central nervous system. This supplement allows excellent long-term viability of rat embryonic hippocampal neurons after several weeks in culture. Glial cell growth is reduced to less than 0.1 % for a largely pure neuronal cell culture.

Neuropan Supplement, when used with Neuropan basal medium has been demonstrated to give optimal growth and long-term survival of rat embryonic hippocampal neurons, growth and survival of neurons from embryonic rat striatum, substantia nigra, septum and cortex, and neonatal rat cerebellum and dentate gyrus. The combination is also effective for the growth of tumor cell lines of neuronal origin.

NEURONS	SIZE	PRODUCT NO.
NEUROPAN	**500 ml**	**P04-00900**
NEUROPAN SUPPLEMENT	**VARIOUS**	**–**

/ ALLROUND MEDIA

PANSERIN 401
A protein-supplemented medium that provides essential proteins for hybridoma growth and antibody production. The protein components support cellular metabolism and can enhance antibody yields, particularly important for difficult-to-grow hybridoma clones.

PANSERIN 411
A fully defined serum-free medium tailored for insulin-dependent cell lines such as CHO. Built on Iscove's MEM, it includes recombinant human insulin, cholesterol, lipids, vitamins, and trace elements, but formulated without growth factors. With very low animal-protein content, it ensures lot-to-lot consistency and supports both adherent and suspension culture – adhesion can be optimized by vessel coating.

ALLROUND MEDIA	SIZE	PRODUCT NO.
PANSERIN 401	**500 ml**	**P04-710401**
PANSERIN 411	**500 ml**	**P04-710411**

INSECT CELLS

Insect cell culture systems, particularly using baculovirus expression vectors, provide a robust platform for producing recombinant proteins, virus like particles or vaccine development.

These systems offer advantages including high expression levels, the ability to perform post-translational modifications and safety.

LEPIDOPTERAN CELLS (SF9, SF21)

Lepidopteran cell lines derived from Spodoptera frugiperda, such as Sf9 and Sf21, are among the most established hosts for baculovirus-based expression. Their adaptability to serum-free media and compatibility with high-density culture make them ideal for research and production workflows.

GRACE'S INSECT MEDIUM
A classic formulation providing amino acids, vitamins and carbohydrates tailored to the metabolic needs of Sf9 and Sf21 cells. Suitable for routine culture and baculovirus infection.

TNM-FH MEDIUM
An advanced formulation based on Grace's Medium and enriched with additional nutrients, optimized for higher cell densities and efficient expression processes, particularly in baculovirus systems.

SPODOPAN
A specialized serum- and protein-free medium optimized for Spodoptera frugiperda cells (Sf9 and Sf21). It enhances cell growth rates and protein expression levels, especially for large-scale production. The composition is tailored to specific nutritional requirements with very low traces of animal-origin components and hydrolysates.

IPL-41 INSECT MEDIUM
A protein-free, chemically defined formulation for applications requiring high reproducibility. IPL-41 supports serum-free cultivation of Sf9, Sf21 and other insect cell lines, ensuring consistent conditions for expression and downstream processing.

TC-100 INSECT MEDIUM
A widely used basal medium for Spodoptera frugiperda cell lines such as Sf9 and Sf21. It contains a balanced mixture of amino acids, vitamins, inorganic salts, glucose and tryptose phosphate broth. TC-100 supports routine maintenance, expansion and baculovirus infection and is typically used with serum supplementation depending on culture adaptation.

SCHNEIDER'S DROSOPHILA S2 CELLS

Drosophila S2 cells, derived from Drosophila melanogaster embryos, are a versatile alternative for recombinant protein expression. They grow efficiently in suspension, adapt well to serum-free conditions and support both transient and stable expression systems.

SCHNEIDER'S DROSOPHILA MEDIUM
Specifically formulated for Drosophila cell lines, providing a balanced nutrient composition for S2 cell growth. The medium supports high cell densities and diverse expression strategies without the need for viral vectors.

INSECT CELLS	SIZE	PRODUCT NO.	
GRACE'S INSECT MEDIUM	500 ml	P04-81500	Minimum order quantity: 20 pieces
TNM-FH MEDIUM	500 ml	P04-80500	
SPODOPAN	500 ml	P04-850500	
IPL-41 INSECT MEDIUM	500 ml	P04-85600	Minimum order quantity: 20 pieces
TC-100 INSECT MEDIUM	500 ml	P04-92500	
SCHNEIDER'S DROSOPHILA S2 CELLS			
SCHNEIDER'S DROSOPHILA MEDIUM	500 ml	P04-90500	

CRYOPRESERVATION SOLUTION

Cryopreservation is essential for protecting cells during freezing and thawing – both in laboratory settings and industrial-scale processes. Either for maintaining cell banks, distributing cell therapy products or preserving valuable cell lines, successful cryopreservation requires careful control of freezing rates and specialized media that protect cells from ice crystal formation and osmotic stress.

SERUM-FREE

CRYOPAN I
Cryopan I is a defined, serum- and protein-free cryopreservation medium providing consistent preservation conditions for both human and animal cells, including adherent and suspension cultures. It is also suitable for sensitive primary cells. The formulation contains 10 % DMSO, salts, sugars, and advanced cryoprotectants and osmoprotectants that maintain cell viability during freeze-thaw cycles. The formulation reduces lot-to-lot variability while ensuring high post-thaw viability, making it ideal for serum-free cultured cells.

CHEMICALLY-DEFINED

These formulations provide complete definition of all components, crucial for clinical applications and regulatory compliance.

WITH DMSO, PROTEIN-FREE

CRYOPAN II
Cryopan II is a chemically defined cryopreservation solution containing 10 % DMSO as the primary cryoprotectant. It is suitable for freezing adherent and suspension cells across a wide range of cell types, culture conditions, and primary cells. The formulation includes salts, sugars, and additional antifreeze substances to support efficient post-thaw recovery. DMSO penetrates cell membranes to prevent intracellular ice crystal formation, while the optimized composition balances effective cryoprotection with reduced DMSO toxicity. The serum-free and animal-free formulation ensures high post-thaw viability, making Cryopan II particularly suitable for serum-free cultured cells.

WITHOUT DMSO

CRYOPAN III
Cryopan III is an innovative, DMSO-free cryopreservation solution for adherent and suspension cells. It is suitable for long-term storage of established cell lines, primary cells, and tissue samples, including umbilical cord tissue. The chemically defined formulation contains salts, sugars, and antifreeze substances, and is completely free of animal or human components. By replacing DMSO with alternative cryoprotectants, Cryopan III protects cells while avoiding DMSO-associated cytotoxicity and differentiation effects, making it especially suitable for primary cells and applications where DMSO removal prior to use is challenging.

CRYOPRESERVATION SOLUTION	SIZE	PRODUCT NO.
SERUM-FREE		
CRYOPAN I	100 ml	P07-92100
CHEMICALLY-DEFINED		
WITH DMSO, PROTEIN-FREE **CRYOPAN II**	100 ml	P07-93100
WITHOUT DMSO **CRYOPAN III**	100 ml	P07-96100

SERUM SUBSTITUTES

/ **REDEFINING CELL CULTURE:** THE SMART WAY TO REPLACE SERUM

Serum substitutes represent a major advancement in cell culture technology, offering defined or semi-defined solutions that overcome the limitations of animal-derived serum. Traditional fetal bovine serum (FBS) is poorly defined, variable in composition, and associated with contamination risks, ethical concerns, and supply-chain challenges. Serum replacements provide controlled formulations that improve reproducibility, enhance safety, and support consistent experimental and production outcomes.

PAN-Biotech's Panexin product line delivers ready-to-use serum substitutes that reduce or eliminate reliance on animal serum while meeting high regulatory and GMP standards.

These formulations support reliable cell growth across diverse applications, from research to industrial bioprocessing.

KEY ADVANTAGES

- **High batch-to-batch consistency**
- **Ready-to-use; no serum screening required**
- **Supports responsible and ethical science**
- **Reduced contamination risks**
- **Cost-efficient alternative**
- **Meets pharmaceutical and industry standards**
- **GMP-compliant**

SERUM FREE

Save our PLANET future-ready: solutions by PAN



WITH ANIMAL COMPONENTS

FOR ADHERENT CELLS

PANEXIN NTA
Panexin NTA is optimized for the cultivation of adherent cells and supports the growth of numerous cell lines, including L929, CHO, HAT-29, HEK 293, and MDCK. Its defined formulation contains purified proteins (<2 % w/v), lipids, salts, amino acids, trace elements, attachment factors, hormones, and traces of animal-derived components (<2 % w/v). It contains no growth factors, undefined hydrolysates, or peptones, ensuring consistent performance, reduced variability, and reliable growth conditions for adherent cell cultures.

FOR ADHERENT AND NON-ADHERENT CELLS

PANEXIN BASIC
Panexin Basic is a cost-effective and versatile serum substitute suitable for the cultivation of both adherent and suspension cells, including HEK 293, MDCK, MCF-7, U-739, and MDBK. Its defined formulation contains purified proteins (<1 % w/v), lipids, salts, amino acids, trace elements, hormones, and only traces of animal-derived components (<1 % w/v). Panexin Basic contains no growth factors, undefined hydrolysates, or peptones, providing reliable and reproducible culture conditions across a broad range of cell lines.

FOR BONE-MARROW-DERIVED MACROPHAGES

PANEXIN BMM
A defined serum substitute developed for the generation of murine bone-marrow–derived macrophages under serum-free conditions. It contains purified proteins, lipids, amino acids, trace elements, attachment factors, and selected animal-derived components – without undefined hydrolysates, peptones, or added growth factors. PANEXIN BMM promotes standardized macrophage differentiation, ensures reproducible results, and supports strong adhesion properties in mature cells.

WITHOUT ANIMAL COMPONENTS

CHEMICALLY DEFINED

PANEXIN CD
Panexin CD is a fully chemically defined serum substitute free of animal or human components, suitable for both adherent and suspension cell cultures. It has been shown to support the growth of various cell lines, including HeLa, L929, HEK 293, Vero, and lymphocytes, making it ideal for sensitive and regulatory-driven applications. Its optimized formulation contains recombinant proteins (<0.1 % w/v), lipids, salts, amino acids, trace elements, hormones, and a 3-dimensional substrate release system, while excluding growth factors, undefined hydrolysates, and peptones. The high level of definition ensures maximum reproducibility, safety, and consistency across cell culture processes.

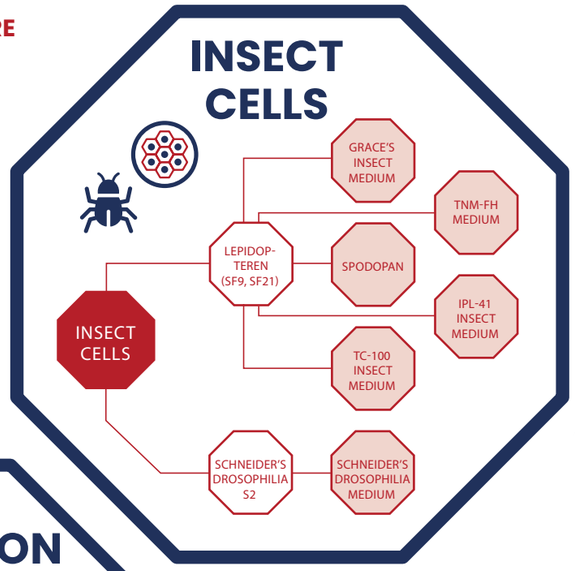
SERUM SUBSTITUTES	SIZE	PRODUCT NO.
WITH ANIMAL COMPONENTS		
FOR ADHERENT CELLS **PANEXIN NTA**	**100 ml**	**P04 -95700**
FOR ADHERENT AND NON-ADHERENT CELLS **PANEXIN BASIC**	**100 ml**	**P04 -96900**
FOR BONE-MARROW-DERIVED MACROPHAGES **PANEXIN BMM**	**100 ml**	**P04 -951SA2**
WITHOUT ANIMAL COMPONENTS		
CHEMICALLY DEFINED **PANEXIN CD**	**100 ml**	**P04 -93100**

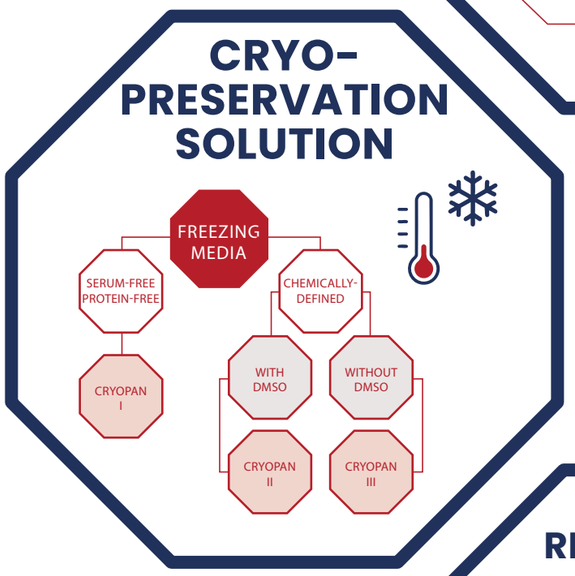
REDEFINING CELL GROWTH MEDIA

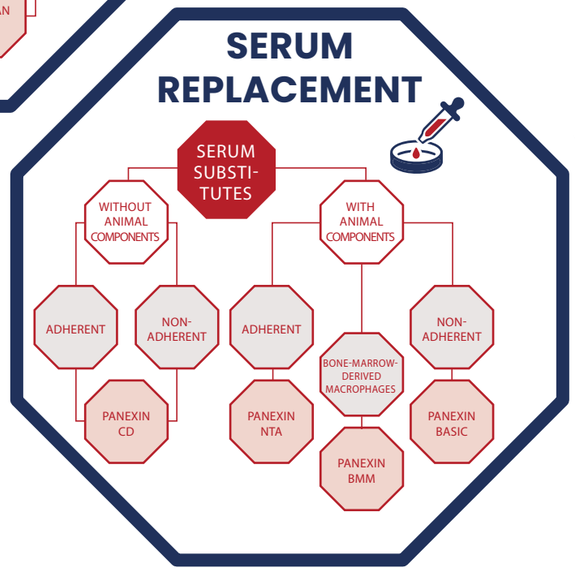
/ THE UNIVERSE OF CELL CULTURE

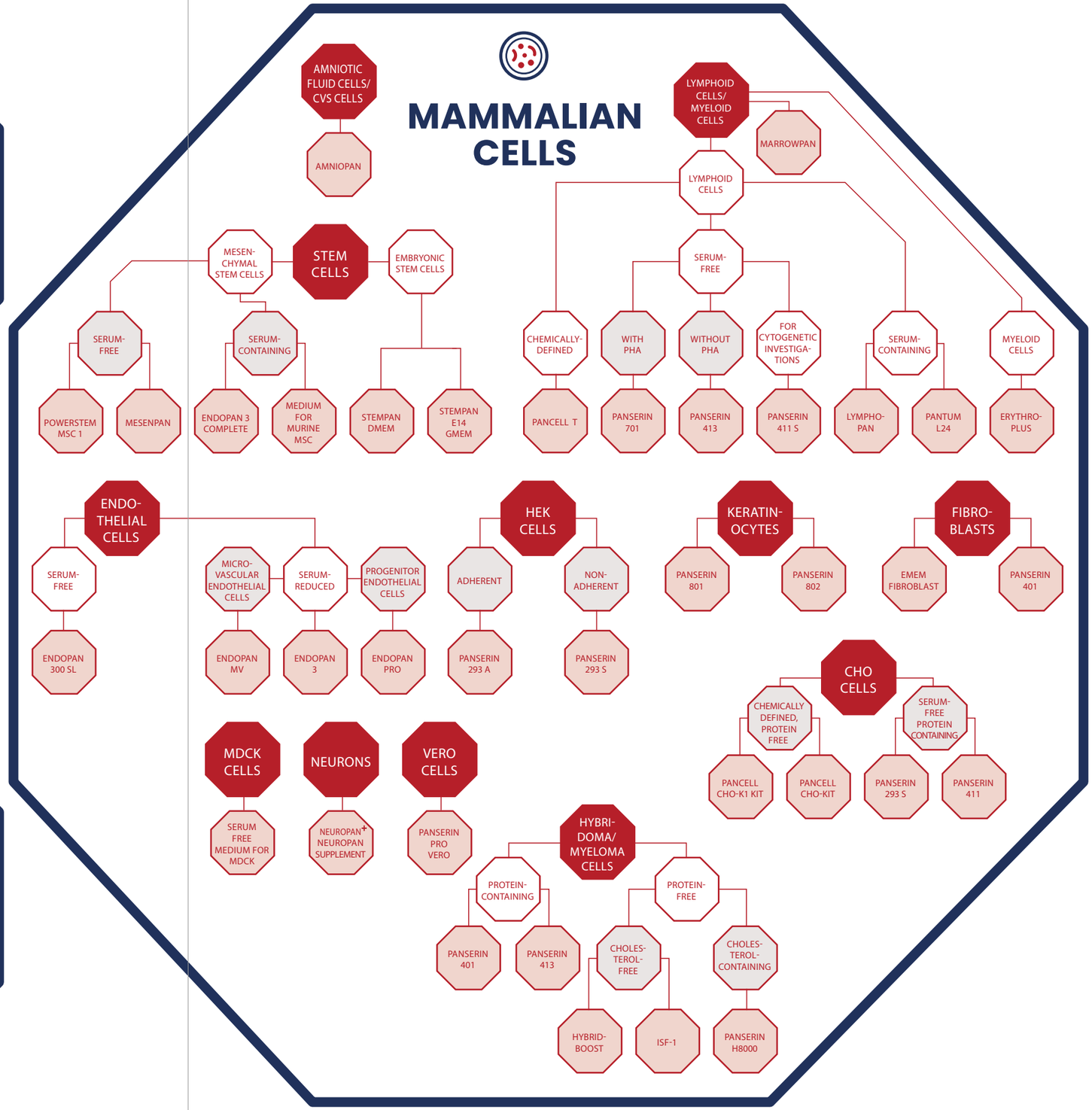
Designed as a practical selection guide, this overview helps navigate our comprehensive cell culture portfolio.

It connects key application areas – from mammalian and insect cell culture to cryopreservation and serum-free strategies – with the appropriate product solutions for research and bioprocess environments.





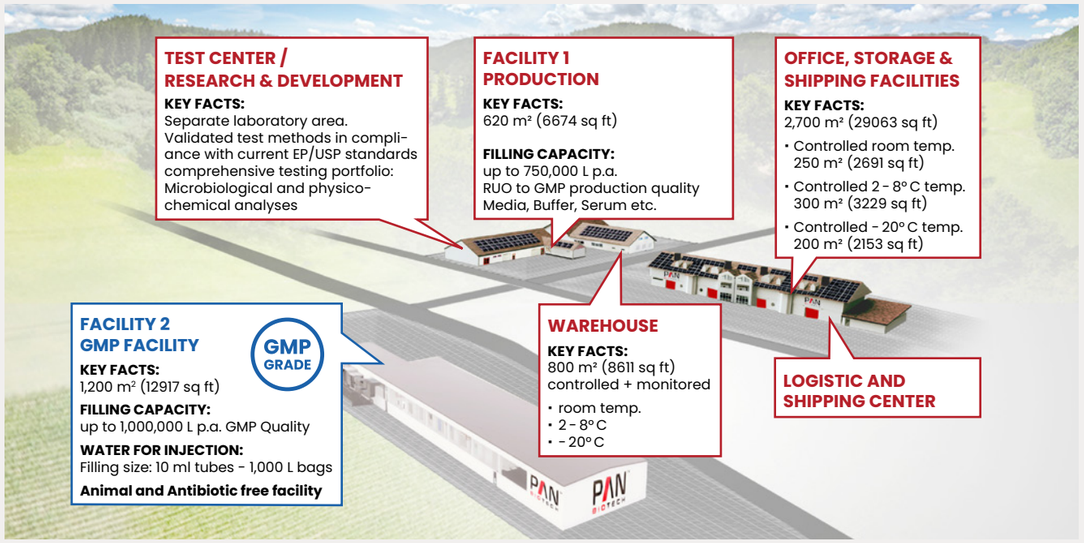




GMP MANUFACTURING

Our products play a crucial role in various life science applications, including Advanced Therapy Medicinal Products (ATMPs), Biopharmaceuticals, Cell and Gene Therapies, Vaccine Production, and more.

Whether you need media for cell therapy purposes, reagents or buffers for bioprocessing, we supply ready-to-use solutions for your GMP applications. These products are manufactured in our new GMP (EU Annex 1) – compliant production facility under strict quality controls.







GMP FACILITY

Our new production facility, open since 2022, is built and qualified in accordance with to GMP acc. EU Annex 1 for sterile products.

Its state-of-the-art design enables fast, flexible and scalable production of your products in GMP quality, carried out by our qualified and highly trained personnel.

KEY FACTS

- Exclusively production facility for antibiotics and animal derived components free products
- Class D to A cleanrooms
- 1,000,000 L filling capacity per year
- Lot sizes up to 1,000 L
- Sterile filling from 10 ml vials to 1,000 L Bags
- Single-use equipment
- Environmental monitoring according to GMP guidelines
- Established processes for customized productions GMP acc. EU Annex 1
- Audited by leading NASDAQ / DAX listed pharmaceutical and biotech companies

GMP GRADE

GMP GRADE

With our GMP grade product range, we are expanding our portfolio to meet the increasing regulatory requirements in pharmaceutical and biotechnological development and manufacturing. These products have been specifically designed for use in sensitive and quality-critical applications and meet the highest standards in terms of safety, consistency, and documentation.

All GMP grade products are manufactured in accordance with the requirements of GMP EU Annex 1 for the manufacture of sterile products. They are supplied ready-to-use and can be integrated directly into existing processes without the need for further adjustment – including preclinical and clinical applications.

GMP GRADE PRODUCTS

/ RELIABLE SOLUTIONS FOR QUALITY-CRITICAL AND REGULATED APPLICATIONS

KEY ADVANTAGES:

- **GMP-COMPLIANT MANUFACTURING**
  Produced in accordance with the requirements of GMP EU Annex 1 for the manufacture of sterile products
- **READY-TO-USE**
  Immediately applicable without additional preparation steps, supporting efficient and time-critical workflows.
- **SUITABLE FOR SENSITIVE APPLICATIONS**
  Designed for use in preclinical and clinical processes as well as other highly regulated environments.
- **HIGH PROCESS AND PRODUCT RELIABILITY**
  Validated manufacturing processes, defined specifications, and comprehensive quality controls ensure consistent product performance.
- **FULL DOCUMENTATION AND TRACEABILITY**
  Complete batch documentation and traceability to support regulatory compliance and audit readiness.

PRODUCT	SIZE	PRODUCT NO.
CMRL-1066 w/o: L-Glutamine, w/o: Phenol red, w: 2.2 g/L $NaHCO_3$	500 ml	CT-84600
M199 W: EBSS w: L-Glutamine, w: 2.2 g/L $NaHCO_3$	500 ml	CT-07050
PANEXIN CD Serum Replacement with Defined Components	100 ml	CT-93100
PANEXIN BASIC Serum Replacement with Defined Components	100 ml	CT-96900
TRYPSIN 0.05 %/EDTA 0.02 % IN DPBS w/o: Ca and Mg	100 ml	CT-023100
ISF-1 MEDIUM FOR HYBRIDOMA w: stable Glutamine, w: Insulin human, w: 2.438 g/L $NaHCO_3$	1,000 ml	CT-995968
HybridBoost w: stable Glutamine, w: Insulin hum. rec., w/o: Phenol red, w: 2.438 g/L $NaHCO_3$	500 ml	CT-995905
HEPES Buffer 1 M	100 ml	CT-01100
L-Glutamine 200 mM	100 ml	CT-80100
Penicillin-Streptomycin 10.000 U/ml Penicillin, 10 mg/ml Streptomycin	100 ml	CT-07110
Accutase Cell Detachment Solution w: 0.5 mM EDTA, w: Phenol red	100 ml	CT-21100
DPBS w/o: Ca and Mg	500 ml	CT-36500
DMEM w: 4.5 g/L Glucose, w: L-Glutamine, w/o: Sodium pyruvate, w: 3.7 g/L $NaHCO_3$	500 ml	CT-03550



PRODUCT	SIZE	PRODUCT NO.
DMEM w: 4.5 g/L Glucose, w/o: L-Glutamine, w: Sodium pyruvate, w: 3.7 g/L $NaHCO_3$	500 ml	CT-03600
DMEM w: 4.5 g/L Glucose, w: stable Glutamine, w/o: Sodium pyruvate, w: 3.7 g/L $NaHCO_3$	500 ml	CT-04500
RPMI 1640 w: stable Glutamine, w: 2.0 g/L $NaHCO_3$	500 ml	CT-18500
RPMI 1640 w: 2 mM L-Glutamine, w: 1 mM Sodium pyruvate, w: 4.5 g/L Glucose, w: 10 mM HEPES, w: 1.5 g/L $NaHCO_3$	500 ml	CT-18047
RPMI 1640, w: L-Glutamine, w: 2.0 g/L $NaHCO_3$	500 ml	CT-16500
MEM Eagle w: EBSS, w: L-Glutamine, w: 2.2 g/L $NaHCO_3$	500 ml	CT-08500
MEM Eagle w: EBSS, w: 2 mM L-Glutamine, w: 1 mM Sodium pyruvate, w: NEAA, w: 1.5 g/L $NaHCO_3$	500 ml	CT-08056
MEM Eagle w: EBSS, w/o: L-Glutamine, w: 2.2 g/L $NaHCO_3$	500 ml	CT-08050

COMING SOON

COMING SOON	SIZE	PRODUCT NO.
POWERSTEM MSC 1 KIT	500 ml	CT-77355K
CRYOPAN II	100 ml	CT-94100
CRYOPAN III	100 ml	CT-96100



WATER SOLUTIONS

Water is a critical raw material in life science workflows, directly influencing process reliability, reproducibility, and regulatory compliance.

PAN-Biotech offers high-quality water solutions tailored to the specific demands of research laboratories, upstream and downstream bioprocessing, and controlled manufacturing environments.

WATER SOLUTIONS

/ HIGH-PURITY WATER FOR RESEARCH, BIOPROCESSING AND GMP APPLICATIONS

Manufactured using validated purification technologies and released under stringent quality controls, PAN-Biotech water products provide a reliable foundation for media preparation, buffer formulation, reagent reconstitution, and general laboratory use across scales.

WATER FOR INJECTION (WFI) QUALITY WATER, ACCORDING TO WFI SPECIFICATIONS (EP, USP)

GMP-Compliant Pure Water for Upstream & Downstream Applications



PAN-Biotech Water for Injection (WFI) Quality Water is produced in a GMP-compliant facility using a validated multi-step purification process including reverse osmosis, ultrafiltration, electrodeionization, and final sterile filtration.

Each batch is released in full compliance with the requirements of the European Pharmacopoeia (EP) and United States Pharmacopeia (USP), ensuring exceptional chemical and microbiological purity, batch-to-batch consistency, and regulatory security.

WFI Quality Water is designed for demanding applications throughout upstream and downstream workflows, including cell culture media preparation, buffer and solution manufacturing, reagent reconstitution, and other processes where the highest water quality is essential.

To support flexible laboratory and production requirements, PAN-Biotech supplies WFI Quality Water in a broad range of packaging options, from small laboratory bottles to large-volume flexible bags suitable for high-throughput environments and scaled bioprocessing operations. This scalability enables seamless transition from research to production while maintaining identical water quality standards.

PRODUCT	SIZE	PRODUCT NO.
WFI QUALITY WATER	500 ml bottle	CT-991500
WFI QUALITY WATER	1 L bottle	CT-991000
WFI QUALITY WATER	10 L bag	CT-99010B
WFI QUALITY WATER	20 L bag	CT-99020B
WFI QUALITY WATER	200 L bag	CT-99200B
WFI QUALITY WATER	500 L bag	CT-99500B

STERILE WATER FOR CELL CULTURE – Ultrapure Water for Research and Routine Cell Culture Workflows

Sterile Water for Cell Culture from PAN-Biotech is an ultrapure, ready-to-use water solution specifically developed for research and cell culture applications. It is produced using advanced purification steps-reverse osmosis, ultrafiltration, and electrodeionization-followed by sterile filtration to 0.2 µm.

Each batch undergoes comprehensive quality control, including sterility testing as well as verification of key physicochemical parameters.

This water grade provides a contamination-free aqueous base for routine laboratory use, including media preparation, reagent dilution, buffer formulation, and analytical procedures where low endotoxin levels and consistent quality are required, but full pharmacopoeial WFI compliance is not mandatory. Sterile Water for Cell Culture is available in multiple container sizes ranging from small laboratory bottles to larger flexible bags, supporting both daily bench work and higher-volume preparation tasks while ensuring consistent performance and long-term stability.

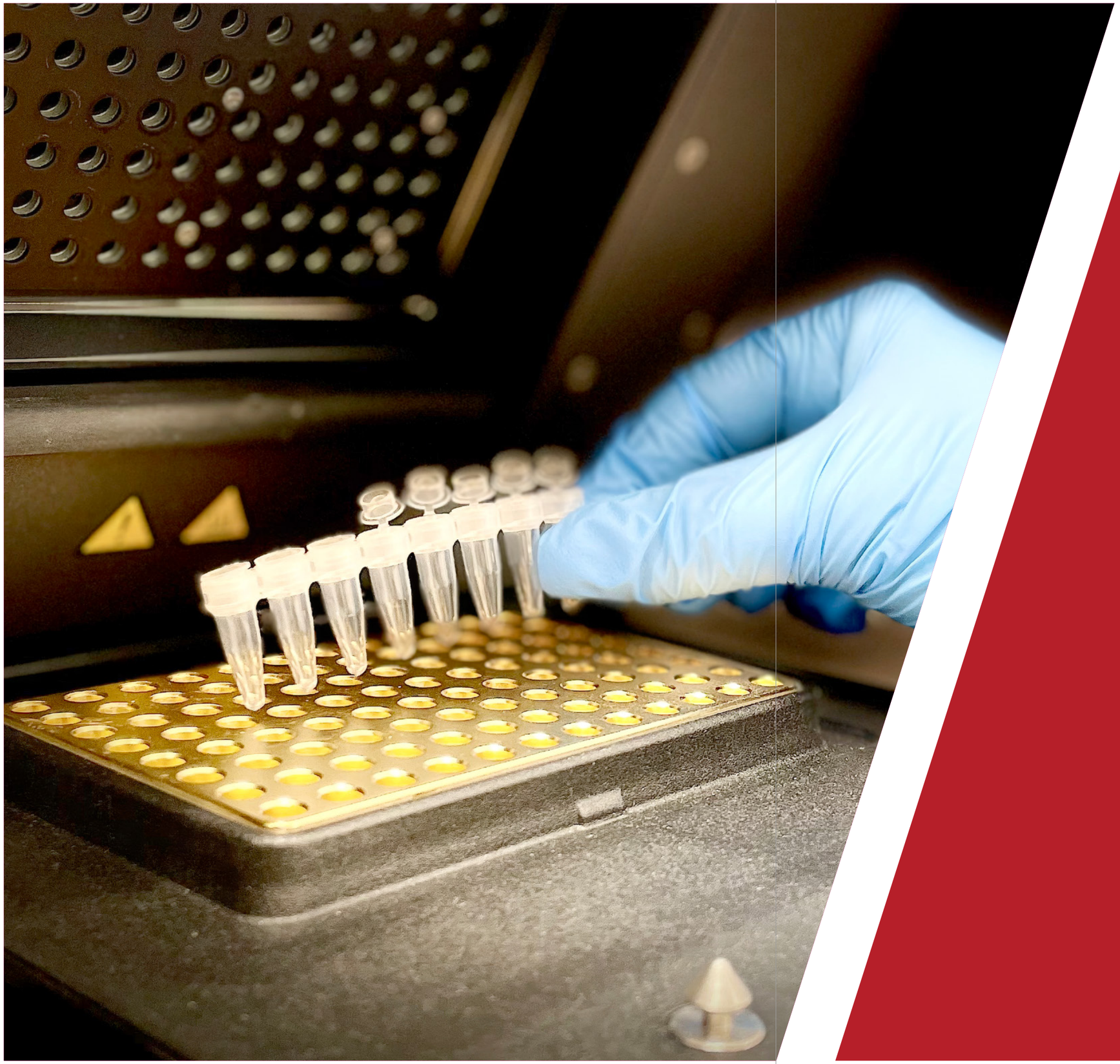
PRODUCT	SIZE	PRODUCT NO.
STERILE WATER FOR CELL CULTURE	500 ml bottle	P04-991500
STERILE WATER FOR CELL CULTURE	1 L bottle	P04-991000
STERILE WATER FOR CELL CULTURE	20 L bag	P04-992000

CHOOSING THE RIGHT WATER QUALITY

PAN-Biotech water solutions are designed to match the specific quality and regulatory needs of different applications. WFI Quality Water represents the highest purity level, fully aligned with EP and USP requirements and ideally suited for GMP-regulated environments and sensitive upstream and downstream processes.

Sterile Water for Cell Culture offers ultrapure, sterile water optimized for research and routine cell culture use, providing excellent reliability and performance for non-GMP laboratory workflows. Together, these complementary water grades ensure that every process - from exploratory research to bioprocessing at scale - is supported by the appropriate level of water quality.





REAGENTS

PAN-Biotech's portfolio of reagents and media supplements supports reliable and reproducible cell culture, buffer preparation, and experimental workflows across research, industrial and clinical applications. Each product is manufactured and tested under strict quality controls to ensure performance, sterility and consistency.

REAGENTS / AMINO ACIDS CELL CULTURE ADDITIVES

/ ESSENTIAL TOOLS FOR CELL CULTURE WORKFLOWS

HAT SUPPLEMENT (50×)
HAT Supplement is a sterile, concentrated solution containing hypoxanthine, aminopterin and thymidine. It is used for selective cell culture applications, particularly in hybridoma technology, where it supports the selection of cells utilizing the salvage pathway for nucleotide synthesis when supplemented to basal media.

HT SUPPLEMENT (50×)
HT Supplement is a defined, sterile concentrate of hypoxanthine and thymidine without aminopterin. It is commonly used to support the maintenance and recovery of cells following HAT selection or in non-selective culture conditions requiring nucleotide precursors.

PRODUCT	SIZE	PRODUCT NO.
HAT SUPPLEMENT (50×)	100 ml	P07-02100
HT SUPPLEMENT (50×)	100 ml	P07-01100

HEPES BUFFER 1 M
HEPES Buffer is a high-capacity buffering solution used to stabilize pH in cell culture media independently of CO_2 concentration. It is particularly useful for handling steps outside controlled incubator conditions and for applications requiring stable pH during transport or manipulation.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
HEPES BUFFER 1 M	100 ml	P05-01100	500 ml	P05-01500

SODIUM BICARBONATE 7.5 % SOLUTION
Sodium bicarbonate solution is a sterile buffer component used to adjust bicarbonate levels in cell culture media. It supports physiological pH regulation in CO_2-based incubation systems and is commonly applied during media preparation and customization.

PRODUCT	SIZE	PRODUCT NO.
SODIUM BICARBONATE 7.5 % SOLUTION	100 ml	P04-44100

SODIUM PYRUVATE 100 mM
Sodium pyruvate is a ready-to-use supplement providing an additional carbon and energy source for cultured cells. When added to basal media, it supports cellular metabolism and is frequently used for cell lines with increased energy demands.

PRODUCT	SIZE	PRODUCT NO.
SODIUM PYRUVATE 100 mM	100 ml	P04-43100

ITS SOLUTION I (100×)
ITS Solution I is a sterile, defined supplement containing insulin, transferrin and selenium. It is designed for use in serum-reduced or serum-free culture systems to support cell growth, metabolism and viability when added to basal media.

ITS SOLUTION II (100×)
ITS Solution II provides insulin, transferrin and selenium in an alternative formulation suitable for a broad range of cell culture applications. It is used to enrich basal media under defined conditions and supports consistent cell performance in reduced-serum environments.

ITS SOLUTION IV (100×)
ITS Solution IV is a defined ITS supplement formulated for use in serum-free or low-serum culture systems where controlled micronutrient supplementation is required.



PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
ITS SOLUTION I (100×)	5 ml	P07-03100	10 ml	P07-03110
ITS SOLUTION II (100×)	5 ml	P07-03200	10 ml	P07-03210
ITS SOLUTION IV (100×)	5 ml	P07-03400	10 ml	P07-03410

INSULIN, HUMAN RECOMBINANT 10 mg/ml
Human recombinant insulin is supplied as a sterile solution and is used as a defined growth and metabolic supplement in cell culture. It supports glucose uptake and anabolic processes in insulin-responsive cell types and is commonly applied in serum-free formulations.

PRODUCT	SIZE	PRODUCT NO.
INSULIN, HUMAN RECOMBINANT 10 mg/ml	10 ml	P07-04300

PLURONIC® F-68 10 %
Pluronic® F-68 is a non-ionic surfactant used in cell culture to protect cells from shear stress. It is particularly applied in suspension cultures and bioreactor systems to improve cell viability under dynamic conditions.

PRODUCT	SIZE	PRODUCT NO.
PLURONIC® F-68 10 %	100 ml	P08-02100

REAGENTS / AMINO ACIDS
CELL CULTURE ADDITIVES



SODIUM CHLORIDE SOLUTION 0.9 %
Sodium chloride 0.9 % is a sterile isotonic saline solution used for general laboratory and cell handling applications. It supports osmotic balance during dilution, washing and preparation steps in cell culture workflows.

PRODUCT	SIZE	PRODUCT NO.
SODIUM CHLORIDE SOLUTION 0.9 %	500 ml	P05-39500

L-GLUTAMINE 200 mM
L-Glutamine is a sterile, ready-to-use 200 mM stock solution of an essential amino acid widely required in mammalian and insect cell culture. It provides a key source of carbon and energy and plays a crucial role in nucleic acid synthesis and overall cell metabolism. Supplementation with L-Glutamine supports optimal cell performance in a wide range of culture systems.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
L-GLUTAMINE 200 mM	50 ml	P04-80050	100 ml	P04-80100

STABLE GLUTAMINE 200 mM (100×)
Stable Glutamine is a 100× concentrated dipeptide (L-alanyl-L-glutamine) solution designed to overcome the instability of standard glutamine in culture media. This enhanced formulation provides cells with a sustained glutamine source, reducing degradation and supporting consistent viability and growth across adherent and suspension cultures.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
STABLE GLUTAMINE 200 mM (100×)	50 ml	P04-82050	100 ml	P04-82100

GELATINE SOLUTION 0.1 % IN DPBS
Gelatine Solution 0.1 % in DPBS is a sterile attachment factor supplied in a buffered DPBS base and intended for coating cell culture vessels to improve adhesion of adherent cells. It is commonly used as a surface coating to support attachment of adherent cells in cell culture applications.

GELATINE SOLUTION 2 % IN DPBS, w/o Ca & Mg
Gelatine Solution 2 % in DPBS without calcium and magnesium is a sterile coating reagent designed to enhance attachment of adherent cells in culture. The higher concentration of gelatine supports robust cell adhesion for workflows involving endothelial cells, stem cells or other cell types requiring enhanced surface support.

PRODUCT	SIZE	PRODUCT NO.
GELATINE SOLUTION 0.1 % IN DPBS	500 ml	P06-20410
GELATINE SOLUTION 2 % IN DPBS, w/o Ca & Mg	100 ml	P06-25200

MEM AMINO ACIDS SOLUTION (50×)
W/O L-GLUTAMINE
A concentrated non-glutamine amino acid solution formulated to supply essential amino acids for cell culture. It supports basic metabolic functions when added to basal media, particularly when glutamine is managed separately.

MEM AMINO ACIDS SOLUTION (50×)
WITH L-GLUTAMINE
This concentrated MEM amino acid supplement includes L-Glutamine to provide a comprehensive mix of essential amino acids in one supplement, simplifying media preparation for routine cell culture.

MEM NEAA (100×)
The MEM Non-Essential Amino Acid (NEAA) solution supplies non-essential amino acids to support cell metabolism and relieve intracellular synthesis demands, contributing to improved growth performance.



PRODUCT	SIZE	PRODUCT NO.
MEM AMINO ACIDS SOLUTION (50×) w/o L-GLUTAMINE	100 ml	P08-30100
MEM AMINO ACIDS SOLUTION (50×) WITH L-GLUTAMINE	100 ml	P08-31100
MEM NEAA (100×)	100 ml	P08-32100

BALANCED SALT / BUFFERED SOLUTIONS

/ ESSENTIAL INORGANIC ION SOURCE



Balanced salt solutions are fundamental reagents in cell culture for maintaining physiological pH and osmolarity during washing, dilution and handling steps. These sterile solutions provide essential inorganic ions and support consistent, reproducible performance in laboratory workflows.

DULBECCO'S PHOSPHATE BUFFERED SALINE (DPBS)
DPBS is a sterile buffered salt solution widely used in cell culture for washing, dilution, and handling of cells and tissues while maintaining physiological pH and osmolarity. PAN-Biotech offers DPBS in multiple variants with or without calcium and magnesium to support different application requirements, including gentle cell handling or workflows where divalent cations must be excluded.

The portfolio further includes 10× concentrated formulations for flexible dilution as well as non-sterile variants for applications where sterility is controlled during processing. These DPBS solutions provide consistent ionic conditions and reliable performance across routine and specialized cell culture workflows.

PRODUCT	SIZE	PRODUCT NO.
DPBS, w/o: Ca & Mg	500 ml	P04-36500
DPBS, w/o: Ca & Mg	1,000 ml	P04-361000
DPBS (10×) w/o: Ca & Mg	500 ml	P04-53500
DPBS, w/o: Ca & Mg	2.5 L canister	P04-362500
DPBS, w/o: Ca & Mg, NON-STERILE	10 L canister	P04-360000
DPBS, w: Ca & Mg	500 ml	P04-35500
DPBS (10×) w: Ca & Mg	500 ml	P04-37500

EARLE'S BALANCED SALT SOLUTION (EBSS)
EBSS provides a physiologically balanced ionic environment for mammalian cell culture, supporting gentle washing, dilution, and handling of cells. PAN-Biotech offers EBSS variants with or without calcium and magnesium, and with customized sodium bicarbonate concentrations, enabling flexible adaptation to different cell culture conditions and experimental needs.

PRODUCT	SIZE	PRODUCT NO.
EBSS, w: Ca and Mg, w/o: $NaHCO_3$	500 ml	P04-30500
EBSS, w/o: Ca and Mg, w: 2.2 g/L $NaHCO_3$	500 ml	P04-31500

HANKS' BALANCED SALT SOLUTION (HBSS)
HBSS is a sterile, buffered salt solution designed to maintain osmotic balance and physiological pH in cell culture workflows. PAN-Biotech provides multiple HBSS variants tailored to diverse applications, including options with or without calcium and magnesium, with or without phenol red for visual pH monitoring, and in concentrated 10× format for flexible preparation.

PRODUCT	SIZE	PRODUCT NO.
HBSS, w: Ca and Mg, w: 0.35 g/L $NaHCO_3$	500 ml	P04-32500
HBSS, w/o: Phenol red, w: Ca and Mg, w: 0.35 g/L $NaHCO_3$	500 ml	P04-32505
HBSS, w/o: Ca and Mg, w: 0.35 g/L $NaHCO_3$ w: Phenol red	500 ml	P04-33500
HBSS, w/o: Ca and Mg, w/o: Phenol red, w: 0.35 g/L $NaHCO_3$	500 ml	P04-34500
HBSS, (10×) w/o: Ca and Mg, w/o: Phenol red, w/o: $NaHCO_3$	500 ml	P04-50505

GEY'S BALANCED SALT SOLUTION (GBSS), w: 2.27 g/L $NaHCO_3$
GBSS with sodium bicarbonate adds essential buffering capacity and inorganic ions, supporting pH and osmotic balance during cell washing and handling steps in culture workflows.

PRODUCT	SIZE	PRODUCT NO.
GBSS W: 2.27 g/L $NaHCO_3$	500 ml	P04-48500

ERYTHROCYTE LYSIS BUFFER
Erythrocyte Lysis Buffer is a ready-to-use solution designed for the selective lysis of red blood cells while preserving leukocytes and other nucleated cells. It is commonly used for the preparation of blood-derived samples prior to downstream applications such as cell isolation, flow cytometry or cell culture. The controlled formulation enables efficient erythrocyte removal without compromising the integrity of target cells.

PRODUCT	SIZE	PRODUCT NO.
ERYTHROCYTE LYSIS BUFFER	100 ml	P10-90100

ANTIBIOTICS / ANTIFUNGAL SOLUTIONS

/ SUPPORTIVE REAGENTS FOR CELL CULTURE APPLICATIONS

PAN-Biotech offers a comprehensive portfolio of sterile antibiotic and antifungal solutions designed to support contamination control in cell culture workflows. These ready-to-use liquid reagents are intended for research use and are applied when additional microbial protection is required alongside aseptic handling. Depending on the application, products are available in different concentrations and container sizes to support both routine laboratory work and larger-scale culture processes.

AMPHOTERICIN B

Amphotericin B is supplied as a sterile liquid solution at a concentration of 250 µg/ml and is used as an antifungal agent in cell culture. It supports the prevention and control of fungal contamination when added to culture media at recommended working concentrations and is compatible with a wide range of mammalian cell lines. Amphotericin B is available in different volumes to accommodate varying laboratory needs.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
AMPHOTERICIN B, 250 µg/ml	50 ml	P06-01050	100 ml	P06-01100

GENTAMICIN SULFATE

Gentamicin is provided as a sterile antibiotic solution in standard and high-concentration formulations. Gentamicin sulfate at 10 mg/ml is commonly used for routine bacterial contamination control in cell culture, while the 50 mg/ml formulation supports applications requiring higher antibiotic strength or larger culture volumes. Both concentrations are supplied in different container sizes for flexible use.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
GENTAMICIN SULFATE, 10 mg/ml	50 ml	P06-03050	100 ml	P06-03100
GENTAMICIN, 50 mg/ml			100 ml	P06-13100

KANAMYCIN SULFATE

Kanamycin sulfate is available as a sterile solution in multiple concentrations, including 5 mg/ml and 50 mg/ml. It is used to inhibit bacterial growth in cell culture systems and is often applied as an alternative or complement to other antibiotics, particularly during extended incubation or manipulation steps. Various package sizes support both small-scale and higher-volume workflows.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
KANAMYCIN SULFATE, 5 mg/ml	50 ml	P06-04050	100 ml	P06-04100
KANAMYCIN SULFATE, 50 mg/ml			100 ml	P06-15100

PENICILLIN / STREPTOMYCIN
10,000 U/ml PENICILLIN & 10 mg/ml STREPTOMYCIN

Penicillin–streptomycin is supplied as a combined sterile solution containing 10,000 U/ml penicillin and 10 mg/ml streptomycin. This widely used formulation provides broad antibacterial coverage and is commonly added to cell culture media in routine research applications. It is available in multiple bottle sizes as well as multi-aliquot formats to support frequent use and reduce contamination risk.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
PENICILLIN / STREPTOMYCIN, 10,000 U/ml + 10 mg/ml	50 ml	P06-07050	100 ml	P06-07100
PENICILLIN / STREPTOMYCIN, 10,000 U/ml + 10 mg/ml			25 x 5 ml	P06-07025

PENICILLIN / STREPTOMYCIN / AMPHOTERICIN B MIX

Penicillin–streptomycin–amphotericin B mixtures combine antibacterial and antifungal activity in a single sterile reagent. These ready-to-use solutions provide broad-spectrum microbial protection and are suitable for routine cell culture handling where comprehensive contamination control is required. Different volumes are available to match laboratory throughput.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
PEN/STREP/AMPHOTERICIN B MIX	50 ml	P06-07350	100 ml	P06-07300

MYCORASE 50× SOLUTION FOR MYCOPLASMA REMOVAL

Mycorase 50× is a sterile solution developed for the targeted removal of mycoplasma contamination from cell cultures. It is used as part of mycoplasma management strategies and supports targeted mycoplasma reduction in contaminated cultures when used according to instructions.

PRODUCT	SIZE	PRODUCT NO.
MYCORASE 50× SOLUTION FOR MYCOPLASMA REMOVAL	100 ml	P06-02100

PANETICIN G 418, 50 mg/ml

Paneticin G 418 is supplied as a sterile, ready-to-use solution at 50 mg/ml and is commonly used for the selection and maintenance of genetically modified cells carrying resistance markers. The defined concentration ensures reproducible selection conditions, with packaging formats designed for controlled laboratory use.

PRODUCT	SIZE	PRODUCT NO.
PANETICIN G 418, 50 mg/ml	20 ml	P06-16220

CELL DETACHMENT / DISSOCIATION REAGENTS

/ ENZYMATIC AND NON-ENZYMATIC SOLUTIONS FOR CELL CULTURE

PAN-Biotech offers a comprehensive portfolio of cell detachment and dissociation reagents designed to support routine passaging, gentle cell harvesting and specialized downstream applications. The range includes enzymatic, chelation-based and combined solutions, supplied as sterile, ready-to-use liquids or concentrates. Multiple formulations, buffer systems, indicator options and package sizes are available to meet the diverse requirements of adherent cell culture workflows.

ACCUTASE CELL DETACHMENT SOLUTION

Accutase is a ready-to-use, non-mammalian detachment reagent combining proteolytic enzyme activity with EDTA chelation in DPBS without calcium and magnesium. It is commonly used as a gentle alternative to trypsin, enabling efficient dissociation of adherent cells without the need for enzymatic neutralization.

Accutase supports high cell viability and helps preserve surface epitopes, making it suitable for downstream applications such as flow cytometry, receptor analysis or proliferation assays. Accutase is available with or without phenol red and in different container sizes to accommodate routine and higher-volume use.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
ACCUTASE CELL DETACHMENT SOLUTION, 0.5 mM EDTA	100 ml	P10-21100	500 ml	P10-21500

EDTA SOLUTIONS

EDTA solutions are supplied as sterile chelating agents in DPBS without calcium and magnesium and are used to disrupt divalent cation-dependent cell adhesion. EDTA can be applied alone for mild, non-enzymatic cell detachment or in combination with proteolytic enzymes to enhance dissociation efficiency.

PRODUCT	SIZE	PRODUCT NO.
EDTA 1 % IN DPBS, w/o Ca & Mg	100 ml	P10-026100

DISPASE II, NEUTRAL PROTEASE (GRADE II)

Dispase II, Neutral Protease (Grade II) is a mild proteolytic enzyme solution used for the dissociation of tissues and cell aggregates through selective cleavage of extracellular matrix proteins. It facilitates gentle separation of cells while preserving cell surface structures and viability, making it suitable for applications where harsher enzymatic conditions are undesirable.

PRODUCT	SIZE	PRODUCT NO.
DISPASE II NEUTRAL PROTEASE, GRADE II	100 ml	P10-032100

TRYPSIN / EDTA VARIANTS

Trypsin / EDTA solutions represent the standard choice for enzymatic detachment of anchorage-dependent cells and tissues.

PAN-Biotech provides a broad selection of sterile trypsin-based formulations in DPBS or HBSS, without calcium and magnesium, supporting efficient disruption of cell–substrate interactions during routine passaging and subculturing. Standard concentrations such as 0.25 % trypsin combined with EDTA are available with or without phenol red, allowing visual pH monitoring where required. Variants without EDTA are also offered for applications where chelation is not desired.

To support greater flexibility, lower-concentration trypsin/EDTA formulations are available for gentle dissociation of sensitive cell lines, while modified trypsin/EDTA variants adjust EDTA concentration, EDTA salt form (e.g. EDTA 4 Na) or buffer composition to fine-tune detachment efficiency for specific cell types. In addition, a 10× concentrated trypsin/EDTA formulation is provided for dilution prior to use, enabling customized preparation of working solutions for more robust detachment requirements.

PRODUCT	SIZE	PRODUCT NO.
TRYPSIN 0.25 % / EDTA 0.02 % in DPBS w/o Ca & Mg, with Phenol red	100 ml	P10-019100
TRYPSIN 0.25 % / EDTA 0.02 % IN DPBS, W/O CA & MG	100 ml	P10-020100
TRYPSIN 0.25 % in DPBS, w/o Ca & Mg	100 ml	P10-021100
(10×) TRYPSIN 0.5 % / EDTA 0.2 % in DPBS, w/o Ca & Mg	100 ml	P10-024100
TRYPSIN 0.05 % / EDTA 0,1 % in DPBS, w/o: Ca and Mg	100 ml	P10-027100
TRYPSIN 0.25 % / 1 mM EDTA 4 Na in DPBS, w/o: Ca and Mg	100 ml	P10-028100
TRYPSIN 0.25 % / 1 mM EDTA 4 Na in HBSS, w/o: Ca and Mg, with Phenol red	100 ml	P10-029100
TRYPSIN / EDTA 0.05 % / 0.02 % in DPBS, with Phenol red	100 ml	P10-0231SP
TRYPSIN 0.05 % / EDTA 4 Na 0.02 % in HBSS, with Phenol red	100 ml	P10-040100

PANCOLL SEPARATING SOLUTIONS

/ CELL SEPARATION MEDIA

PAN-Biotech's Pancoll series of separating solutions are ready-to-use, sterile media formulated for the isolation of blood cells and subcellular particles based on density gradient centrifugation. These aqueous media are composed of a hydrophilic polysaccharide matrix that enables the formation of defined density gradients, facilitating efficient and gentle separation of blood components without penetrating biological membranes.

The sterile, ready to use formulations reduce hands-on-time and variability, supporting applications in immunology, hematology and translational research where high-quality cell fractions are required.

PANCOLL HUMAN, DENSITY 1.077 g/ml
Pancoll Human is a sterile separating solution with a density of 1.077 g/ml designed for the isolation of human blood cells using density gradient centrifugation. It is suitable for workflows in immunology, hematology and related research where enrichment of specific cell fractions is required. The formulation meets key criteria for physical separation media, including adjustable pH and osmolality and low viscosity at high density. Available in multiple pack sizes to match laboratory throughput.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
PANCOLL HUMAN, DENSITY 1.077 g/ml	100 ml	P04-60100	500 ml	P04-60500
PANCOLL HUMAN, DENSITY 1.077 g/ml			1,000 ml	P04-601000

PANCOLL HUMAN FOR GRANULOCYTES, DENSITY 1.119 g/ml
This Pancoll variant with a density of 1.119 g/ml is optimized for the separation of granulocytes from human whole blood and supports targeted isolation of these higher-density blood cells during centrifugation. The sterile separating solution facilitates reproducible granulocyte enrichment in immunological and cell biology workflows.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
PANCOLL HUMAN FOR GRANULOCYTES, DENSITY 1.119 g/ml	100 ml	P04-60110	500 ml	P04-60150

PANCOLL MOUSE, DENSITY 1.086 g/ml
Pancoll Mouse is a sterile separating solution with a density of 1.086 g/ml tailored for the isolation of murine blood cells. It supports physical separation methods that exploit differences in cell size and density, enabling efficient recovery of target cell populations from mouse blood samples.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL MOUSE, DENSITY 1.086 g/ml	500 ml	P04-64500



PANCOLL ANIMAL, DENSITY 1.077 g/ml
Pancoll Animal is a general separating solution with a density of 1.077 g/ml suitable for blood cell separation in various nonhuman species. The sterile formulation provides a reliable medium for density gradient centrifugation in comparative animal studies and preclinical research.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL ANIMAL, DENSITY 1.077 g/ml	500 ml	P04-63500

PANCOLL RAT, DENSITY 1.091 g/ml
Pancoll Rat is a sterile separating solution with a density of 1.091 g/ml developed for the isolation of rat blood cells. This ready-to-use medium supports density based separation techniques in toxicology and pharmacology research involving rat models.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL RAT, DENSITY 1.091 g/ml	500 ml	P04-65500

PANCOLL PLATELETS, DENSITY 1.063 g/ml
Pancoll Platelets is a sterile separating solution with a density of 1.063 g/ml optimized for platelet enrichment and collection. By exploiting the characteristic density of platelets, this medium supports efficient isolation in studies of hemostasis, thrombosis and platelet function.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL PLATELETS, DENSITY 1.063 g/ml	500 ml	P04-67500

PANCOLL MONOCYTES, DENSITY 1.068 g/ml
Pancoll Monocytes is a sterile separating solution with a density of 1.068 g/ml intended for the enrichment of monocytes from whole blood. Its defined density aids selective separation of monocyte fractions in immunological and cell biology research.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL MONOCYTES, DENSITY 1.068 g/ml	500 ml	P04-68500

PANCOLL SEPARATING SOLUTIONS

PANCOLL HUMAN (HIGH DENSITY)
Pancoll Human with higher density is a sterile separating solution designed to support specialized density gradient separations in human blood cell workflows. This variant enables the recovery of cells with higher densities and complements the broader Pancoll range.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL HUMAN (HIGH DENSITY)	500 ml	P04-69600



PANCOLL HUMAN, MULTIPACK
Pancoll Human in multipack format provides multiple aliquots of the sterile separating solution (density 1.077 g/ml) for high-throughput or repeated separation workflows. It supports reproducible cell fractionation across multiple samples without compromising performance.

PRODUCT	SIZE	PRODUCT NO.
PANCOLL HUMAN MULTI PACK	25 x 50 ml	P04-60125

HIGH-PURITY ALBUMIN SOLUTIONS

/ FOR CELL CULTURE AND BIOCHEMICAL APPLICATIONS

PAN-Biotech provides a range of sterile, ready-to-use albumin solutions designed to support cell culture, protein stabilization, and biochemical workflows. Albumin, the most abundant protein in serum, plays a crucial role in maintaining osmotic balance, stabilizing proteins, and binding trace elements, fatty acids, and small molecules.

These solutions are suitable for routine culture, analytical assays, and preclinical research, with formulations tailored for human or bovine sources and available in multiple packaging sizes. These albumin solutions are supplied in ready-to-use sterile formulations, ensuring reproducibility, high quality, and compatibility with both research and industrial workflows.

BOVINE SERUM ALBUMIN (BSA), 30 % LOW SALT, WITH AZIDE
This high-purity BSA solution serves as a stabilizing additive for cell culture media and biochemical reagents. The azide-containing format allows extended shelf life and safe handling, supporting the stabilization of proteins and biochemical reagents.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
BOVINE SERUM ALBUMIN (BSA), 30 % LOW SALT, WITH AZIDE	500 ml	P06-138150	100 ml	P06-138110

BOVINE SERUM ALBUMIN (BSA), 30 % LOW SALT, PRESERVATIVE- AND PROTEASE-FREE
This BSA solution provides >99 % purity and is free of preservatives and proteases, making it ideal for sensitive applications where protein integrity and low background are critical. It supports cell culture supplementation, enzyme stabilization, and analytical workflows requiring minimal interference.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
BOVINE SERUM ALBUMIN (BSA), 30 % LOW SALT, PRESERVATIVE- AND PROTEASE-FREE	500 ml	P06-138450	100 ml	P06-138410

HUMAN SERUM ALBUMIN (HSA), 20 % PREMIUM GRADE
Human serum albumin is a sterile, premium-grade protein additive for mammalian cell culture and biochemical assays. It contributes to osmotic regulation, protein stabilization, and the transport of small molecules, and is suitable for media supplementation, protein solubilization, and preclinical research applications.

PRODUCT	SIZE	PRODUCT NO.	SIZE	PRODUCT NO.
HUMAN SERUM ALBUMIN (HSA), 20 % PREMIUM GRADE	100 ml	P06-27100	500 ml	P06-27500



SERVICES

At PAN-Biotech, we offer expert contract laboratory services designed to meet the highest standards of quality and precision. Our advanced testing capabilities cover a broad range of analyses, from biochemical analyses to sterility and performance tests. In our state-of-the-art quality testing and research center we provide validated, reliable methods and comprehensive solutions tailored to your specific needs. Whether for pharmaceutical, biotechnological, or cell culture applications, trust us to deliver accurate, timely, and regulatory-compliant results to support your processes.

PAN-BIOTECH QUALITY TEST & RESEARCH CENTER



/ WHY PARTNER WITH US?

REGULATORY COMPLIANCE
We conduct analyses according to the European Pharmacopoeia (Ph. Eur.) and United States Pharmacopeia (USP).

CERTIFIED QUALITY MANAGEMENT
Our facilities operate under rigorous quality management systems – certified for ISO 9001 and ISO 13485.

EXPERT TEAM & STATE-OF-THE-ART LAB
Highly skilled scientists using modern instrumentation to ensure accuracy, efficiency, and fast turnaround.

/ CORE TESTING CAPABILITIES

With 37 years of expertise, our cutting-edge laboratory offers high-quality microbiological and physico-chemical analyses.

We ensure the highest standards for testing various products in life sciences, industrial manufacturing, and research applications.

/ KEY OFFERINGS

PH TESTING
Performed with three-point calibration, following Ph. Eur. 2.2.3 and USP <791> guidelines.

OSMOLALITY
Measured using freezing-point depression, in compliance with Ph. Eur. 2.2.35 and USP <785>.

CONDUCTIVITY
Determined according to Ph. Eur. 2.2.38 and USP <644> standards.

ENDOTOXIN (LAL) TESTING
Using turbidimetric kinetic LAL assay, based on Ph. Eur. 2.6.14 (C) and USP <85>.

MYCOPLASMA DETECTION
Sensitive PCR-based testing in line with Ph. Eur. 2.6.7.

RNASE / DNASE SCREENING
Using validated fluorometric assays to ensure nucleic acid-related products are free of enzymatic contamination.

STERILITY TESTING
Inoculation-based sterility assays conducted according to Ph. Eur. 2.6.1.

RAMAN SPECTROSCOPY FOR IDENTITY TESTING
Non-destructive analysis for raw materials, media, and final products, providing a molecular fingerprint.

DENSITY ANALYSIS
Using an oscillating U-tube method to precisely measure the density of liquid samples.

/ SPECIALIZED SERVICES

SERUM QUALITY ANALYSIS
Comprehensive testing of serum samples, including total protein, cholesterol, triglycerides, albumin and immunoglobulins using colorimetric assays, capillary electrophoresis, and ELISA.

CELL PERFORMANCE TESTS
Assessment of cell growth parameters such as plating efficiency, cloning efficiency, and generation time for various cell lines.

/ STABILITY STUDIES

Stability and quality are crucial for consistent product performance – whether for R&D validation, regulatory approval, or quality assurance. PAN-Biotech offers comprehensive stability studies for culture media, buffers, and customized solutions across life sciences and pharmaceutical industries.

KEY FACTS:

- **ICH-COMPLIANT STUDIES:**
  Assess effects of time, temperature, and light on physicochemical and biological properties.
- **Critical quality attributes:**
  Evaluation of pH, osmolality, conductivity, microbial stability and more, tailored to your product.
- **STATE-OF-THE-ART FACILITIES:**
  Innovative laboratory and temperature-controlled storage solutions from -20 °C to +40 °C.
- **FULL STUDY MANAGEMENT:**
  From protocol development to data analysis and reporting.

Our stability study services are designed to validate consistent quality of your culture media and buffer solutions, supporting the long-term success of your products by maintaining product integrity, performance, and safety under various storage conditions.

/ WHY THIS MATTERS

By outsourcing your quality analytics to PAN-Biotech, you benefit from:

FAST TURNAROUND TIMES
Keep your development or production on schedule.

REGULATORY-GRADE DATA
All tests align with pharmacopeial standards and manufacturing requirements.

TRANSPARENT PRICING
Flexible and clear pricing plans without hidden costs.

TAILORED SOLUTIONS
Customized testing programs to match your specific sample matrix, application, and regulatory needs.



SAVE OUR PLANET
THE THREE “R”:
RECYCLE / REDUCE / REPLACE

WITH THIS CONCEPT PAN-BIOTECH TAKES A UNIQUE WAY TOWARDS MORE SUSTAINABILITY IN CELL CULTURE.

RECYCLE

RETURN SERVICE FROM PET-CELL CULTURE BOTTLES

SUSTAINABILITY BY **RECYCLING**

REDUCE

SAVING OF PET-CELL CULTURE BOTTLES BY USING LIQID MEDIA IN BAGS

SUSTAINABILITY BY SAVINGS OF PET-CELL CULTURE BOTTLES

REPLACE

USE OF SERUM-FREE PRODUCTS

SUSTAINABLE STARTING POINTS IN RESEARCH





/ SUSTAINABLE RECYCLING FOR PET CELL CULTURE BOTTLES – WITH PAN-BIOTECH

Sustainability begins where responsibility is taken – even in the laboratory. With **PAN Recycling**, PAN-Biotech is sending a clear signal for environmental protection and offering a simple yet effective solution for reducing plastic waste.

We collect empty PET cell culture bottles of all manufacturers and sizes free of charge directly from your laboratory and send them for sustainable recycling.
The effort for you is minimal – the impact on our environment is maximum.

/ REDUCING PLASTIC WASTE TOGETHER

Modern laboratories generate large amounts of plastic waste every day. With PAN recycling, we turn this challenge into an opportunity: used PET cell culture bottles are collected, inspected, compressed, and then recycled.

This turns used bottles into valuable new resources – a closed cycle that protects the environment and the future.

/ THE PAN COLLECTION BOX – SUSTAINABILITY THAT THINKS AHEAD

The **PAN collection box** makes recycling in everyday laboratory work easier than ever before. The collection box allows larger quantities to be bundled efficiently and ensures smooth, free collection by our logistics partner GLS – **100% climate-neutral**, of course.
Even small steps make a big difference. Every bottle returned counts.

/ YOUR ADVANTAGES AT A GLANCE

- Free return service for PET cell culture bottles
- Returns accepted from all manufacturers and for all container sizes
- 100% climate-neutral transport
- Efficient collection with the PAN collection box
- Active contribution to reducing plastic waste in the laboratory available in Germany, Austria, the Netherlands, France, and Switzerland

/ GREEN YOUR LAB – FOR THE CELL CULTURE OF TOMORROW

For decades, PAN-Biotech has stood for quality, innovation, and responsibility. With PAN Recycling, we are extending our commitment beyond products and taking responsibility for the environment that makes our research of tomorrow possible.

Join us. Recycle with PAN-Biotech. For your laboratory. For our environment. For the future.

YOUR PARTNER FOR SUSTAINABLE RECYCLING OF PET CELL CULTURE BOTTLES

Scan the QR code and order your Pan collection box!

SPACE FOR NOTES



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