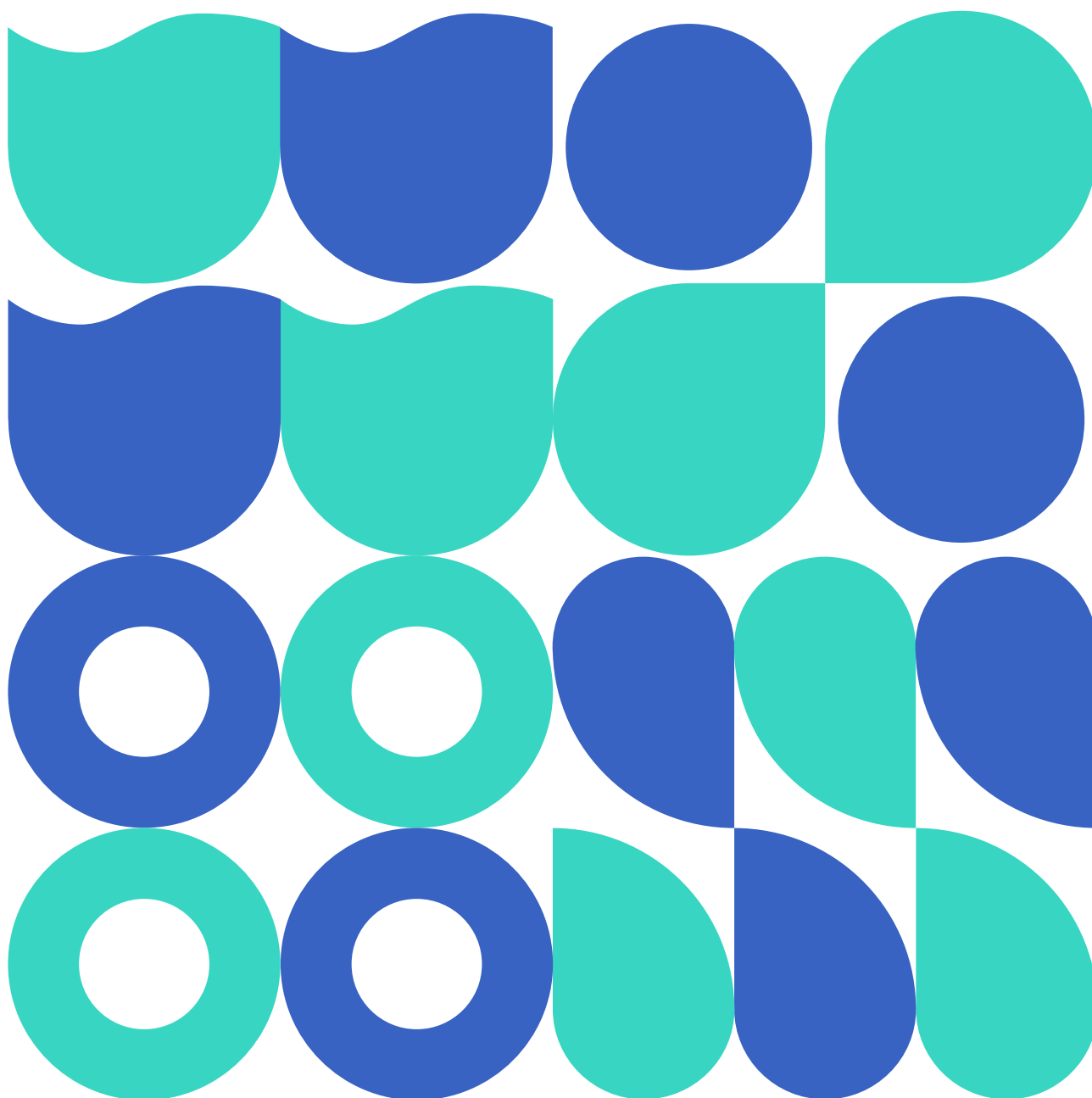


Bio Supplies Diagnostic Catalogue

BioSupplies
Biological material solutions
Diagnostic



GRIFOLS

A close-up photograph of a person wearing a white lab coat and purple nitrile gloves. They are holding a clear glass test tube with a yellow cap. The test tube contains a liquid that has separated into two distinct layers: a dark orange or black layer at the bottom and a lighter, translucent orange layer on top. The background is a soft, out-of-focus white, suggesting a laboratory setting.

BioSupplies

Biological material solutions

Grifols Bio Supplies

Grifols is a global healthcare company that since 1909 has enhanced the health and well-being of people around the world. Our four divisions – Bioscience, Diagnostic, Hospital and Bio Supplies – develop, produce and market innovative solutions and services in more than 100 countries.

The Bio Supplies Diagnostic Product Line provides a portfolio of biological materials collected from our own network of blood and plasma centers to be used for life science research and in vitro diagnostic companies in research, development and manufacturing of reagents and controls.



SAFETY

Source control of all materials is directly linked to safety.



COMMITMENT

Our commitment to our customers inspires us to maintain the very high standards of quality in our products facilitating the development of diagnostics and therapeutics.



EXCELLENCE

Bio Supplies provides excellence and a reliable supply of human biological material collected ethically and with consent from the largest plasma collection network in the world and whole blood centers.



LEGACY OF INNOVATION

Our ongoing innovation has helped shape industry standards in the plasma sector.

Bio Supplies Solutions

Consistent attributes qualified Grifols Bio Supplies as your supplier of choice for the procurement of human-derived blood materials:

LARGE COLLECTION CAPABILITIES

- Grifols has the largest worldwide plasma donor center network worldwide with more than 350 plasma collection centers distributed across the US and Europe with more than 45,000 daily donations
- Multiple whole blood collection centers located in the US and Germany provide Grifols Bio Supplies with access to a large amount of qualified human raw material
- One dedicated donor collection center for non-injectable blood products
- Leading suppliers and collectors of blood components for the in vitro diagnostic (IVD) industry are now part of, or have a partnership with, Grifols Bio Supplies, growing the Grifols collection and supplier capabilities

IBBI

GRIFOLS

Haema.

Access Biologicals
A Grifols Company


1
**DISEASE
STATE PLASMA
COLLECTION
CENTER**



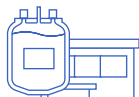
10
**WHOLE BLOOD
CENTERS IN USA**

> 300
**PLASMA CENTERS
IN USA**

MAP LEGEND



Plasma centre

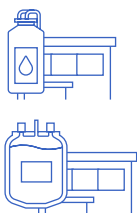
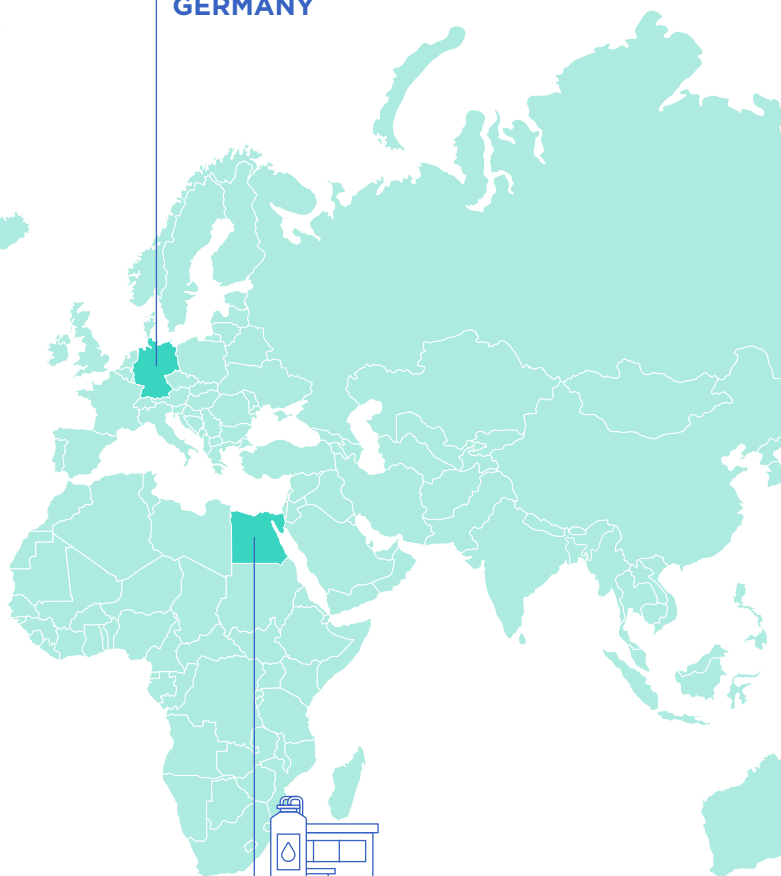


Whole blood center

400 +

PLASMA CENTERS
WORLDWIDE

10 M

PLASMA DONATIONS
ANNUALLY
32
 PLASMA AND
 WHOLE BLOOD
 CENTERS IN
 GERMANY

1
 PLASMA CENTER
 IN EGYPT


HIGH QUALITY

- All of our collection centers located in the USA are FDA-licensed facilities
- All of our collection centers located in Germany are all under full GMP compliance facilities



DONOR DATA

- Age
- Race
- Gender
- Blood group
- (Non)smoker



PRODUCT CUSTOMIZATION

Customizable product capabilities to align with the customer needs and specifications:

- Anticoagulants
- Processing
- Packaging
- Storage Temperature



VIRAL DONOR TESTING

All units are tested according to local regulations to ensure they are negative for infectious diseases.

Additional tests can be provided by customer demand.

Your Partner in Biological Material Supply

With our extensive product range, we can supply you with everything you need for your biological research. From reagents and consumables to specialized equipment, we have you covered.

Our experienced team of experts is dedicated to providing you with the highest quality products and personalized service. Contact us today to learn more about our offerings.

At [Company Name], we are committed to being your reliable partner in biological material supply. Let us help you achieve your research goals.

Visit our website at [www.biologicalsupply.com](#) or call us at 1-800-123-4567 for more information.

Thank you for considering [Company Name] as your partner in biological material supply.

Best regards,
[Name]
[Title]
[Company Name]

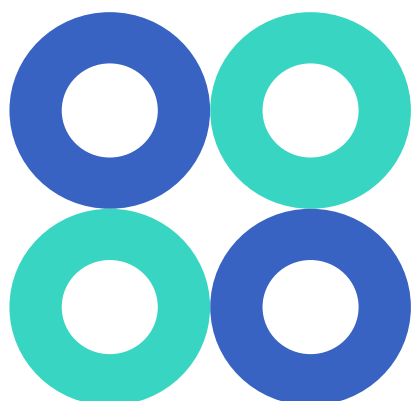
For more information, please visit our website at [www.biologicalsupply.com](#).

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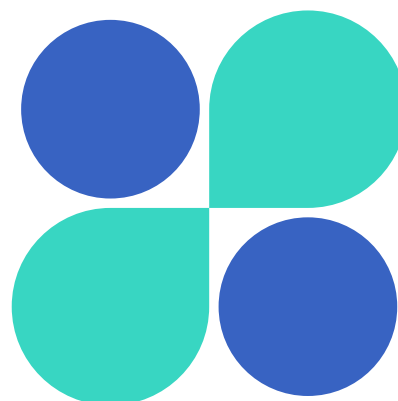
Our products are sold as is. No warranty is made by us for the use of our products in any particular application.

For more information, please visit our website at [www.biologicalsupply.com](#).

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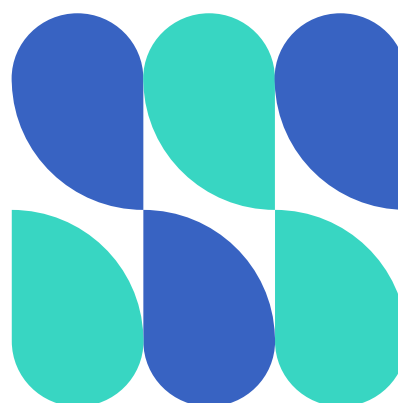
Blood Cells
Products
08



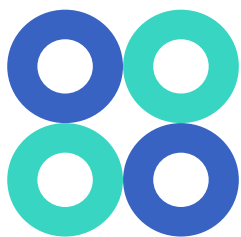
Plasma and Serum
Products
12



Human Biospecimen
Samples
14



Bioproducts
16



Blood Cells Products

Grifols Bio Supplies has an extensive collection of human blood products for research and development needs.

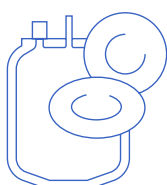
All of products are collected from donors who have an approved consent for donating blood. All donors are screened to ensure that each of them is in good health and that products are not collected from a high-risk population for blood-borne infections.

The donor data provided are age, gender, race and blood group. Moreover, for Red Blood Cells, an RBC extended phenotype is available.



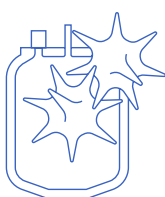
WHOLE BLOOD

Whole blood is human blood from a standard blood donation. It contains red blood, white blood and platelets suspended in plasma.



RED BLOOD CELLS

Red blood cells are the most common type of blood cell and are prepared from whole blood by removing plasma.



PLATELETS

Platelets, or thrombocytes, are small, colorless cell fragments in human blood that form clots and stop or prevent bleeding. They are prepared through blood donations or apheresis methods.



BUFFY COATS

The buffy coat is the fraction of uncoagulated blood that contains most of the white blood cells and platelets after a density gradient centrifugation process.

SPECIFICATIONS

PRODUCT	WHOLE BLOOD		RED BLOOD CELLS		PLATELETS		BUFFY COATS	
Source region	USA	EU	USA	EU	USA	EU	USA	EU
Collection method	Blood donation	Blood donation	Blood donation	Blood donation	Blood donation	Apheresis	Blood donation	Blood donation

FORMAT

>60 mL - Bag					•	•	•	•
>250 mL - Bag	•	•	•	•				
Bulk - Bottle	•	•	•	•	•	•	•	•

DONOR VIRAL TESTING

HIV-1-NAT	•	•	•	•	•	•	•	•
HCV-NAT	•	•	•	•	•	•	•	•
HBV-NAT	•	•	•	•	•	•	•	•
HEV-NAT		•		•		•		•
HAV-NAT		•		•		•		•
WNV-NAT	•	•	•	•	•	•	•	•
PVB19-NAT		•		•		•		•
anti-HIV I/2	•	•	•	•	•	•	•	•
anti-HCV	•	•	•	•	•	•	•	•
HBsAg	•	•	•	•	•	•	•	•
anti-HBc		•		•		•		•
Syphilis	•	•	•	•	•	•	•	•
Chagas	•		•		•		•	
Babesia	•		•		•		•	

ANTICOAGULANT

ACD	•	•	•	•	•	•	•	•
AS-1 (additive solution)			•	•				
CPD	•	•	•	•				
CPDA-1	•	•	•	•			•	•
K2 EDTA	•	•						
K3 EDTA	•	•					•	•
Sodium citrate	•	•						
Sodium heparin	•	•						

STORAGE TEMPERATURE

Refrigerated 2-8 °C	•	•	•	•	•	•	•	•
Room temperature 15-30 °C	•	•	•		•	•	•	•
Frozen <20 °C	•	•	•	•	•	•	•	•

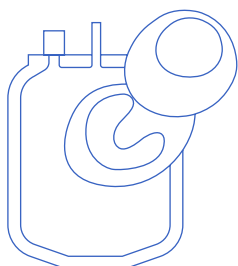
OTHER CUSTOMIZATIONS

Dating specific	•	•	•	•	•	•	•	•
Leukoreduced			•	•		•		
Concentrated					•	•		
Pooled			•		•	•		

For more information on product availability or customization, please contact us: biosuppliesdx@grifols.com

Fresh Leukopak

High concentration of leukocytes,
collected from European donors under
GMP procedures



A leukopak is a blood-derived product rich in mononuclear leukocytes (i.e., lymphocytes and monocytes)¹. Leukopaks are useful for researchers looking for a large number of leukocytes to cover large scale needs.

Our leukopaks are obtained through leukapheresis following GMP procedures.



SPECIFICATIONS

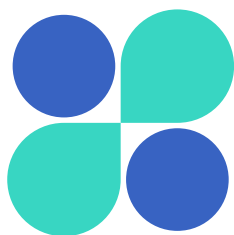
PARAMETER	SPECIFICATION
Origin of leukopaks	Europe (Germany)
Package volume	170 to 240 mL/Bag
Obtention method	Leukapheresis (Spectra Optia system)
Leukocyte concentration	$\geq 40 \times 10^9$ cells/L
Virus testing	HBsAg, Anti-HBc, HIV-1/2-Ab, HCV-Ab, HIV-1-NAT, HCV-NAT, HBV-NAT, HAV-NAT, PVB19-NAT, HEV-NAT, WNV-NAT* and syphilis
Platelet concentration	1600 to 5200×10^9 /L
Hemoglobin concentration	≤ 0.5 mmol/L
Hematocrit	≤ 0.07 L/L
Monocyte concentration	$\geq 5 \times 10^9$ cells/L
Lymphocyte concentration	$\geq 28 \times 10^9$ cells/L

*WNV-NAT: Seasonal testing from June 1 to November 30.

1. Garcia A, Keinonen S, Sanchez AM, et al. Leukopak PBMC sample processing for preparing quality control material to support proficiency testing programs. J Immunol Methods. 2014;409:99-106. doi:10.1016/j.jim.2014.05.01

Leukapheresis is a specific apheresis process in which white blood cells are separated from the blood sample and the remainder is returned to the circulation.





Plasma and Serum Products

Grifols Bio Supplies offers high-quality human reagent grade plasma collected from healthy donors for use in manufacturing of controls and calibrators for the in vitro diagnostic industry.

All of healthy state products are collected from donors who have an approved consent for donating blood. All donors are screened to ensure that each of them is in good health and that products are not collected from a high-risk population for blood-borne infections.

The donor data provided are age, gender, race and blood group.



RECOVERED PLASMA

Plasma produced by separating donated whole blood into cellular components and plasma.



SOURCE PLASMA

Plasma collected through apheresis, a process that takes only plasma from the donor while the cellular components are returned.



OTC SERUM

Off-the-clot serum collected from whole blood and allowed to coagulate naturally without anticoagulants.

SPECIFICATIONS

PRODUCT	RECOVERED PLASMA		SOURCE PLASMA		OTC SERUM
Source region	USA	EU	USA	EU	USA
Collection method	Blood donation	Blood donation	Plasmapheresis	Plasmapheresis	Blood donation

FORMAT

>250 mL - Bag	•	•			•
300 mL - Bottle					•
500 mL - Bottle					•
650 mL - Bottle					•
0,8 L - Bottle			•	•	
1 L - Bottle					•
3,5 L - Bottle					•

DONOR VIRAL TESTING

HIV-1-NAT	•	•	•	•	•
HCV-NAT	•	•	•	•	•
HBV-NAT	•	•	•	•	•
HEV-NAT		•		•	
HAV-NAT		•		•	
WNV-NAT	•	•	•	•	•
PVB19-NAT		•		•	
anti-HIV I/2	•	•	•	•	•
anti-HCV	•	•	•	•	•
HBsAg	•	•	•	•	•
anti-HBc		•		•	
Syphilis	•	•	•	•	•
Chagas	•		•		•
Babesia	•		•		•

ANTICOAGULANT

ACD	•	•			
CPD	•	•			
CPDA-1	•	•			
K2 EDTA	•	•			
K3 EDTA	•	•			
Lithium heparin	•	•			
Sodium citrate	•	•	•	•	
Sodium EDTA	•	•			
Sodium heparin	•	•			

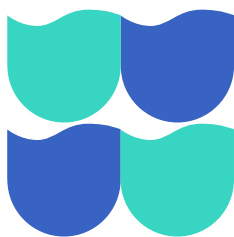
STORAGE TEMPERATURE

Refrigerated 2-8 °C	•	•	•	•	•
Room temperature 15-30 °C	•	•			•
Frozen <20 °C	•	•	•	•	•

OTHER CUSTOMIZATIONS

Dating specific	•	•	•	•	•
-----------------	---	---	---	---	---

For more information on product availability or customization, please contact us: biosuppliesdx@grifols.com



Human Biospecimen Samples

Grifols collects human biospecimen (samples) from healthy donors to be used in the research, development and testing of in vitro diagnostic (IVD) assays and life science.

Grifols offering includes the option to select samples based on donor characteristics.



BLOOD SAMPLES

Institutional Review Board (IRB) approved biospecimens/samples collected from healthy donors.

PRODUCTS

Oral specimens (Saliva)	Samples collected with oral collection device
Oropharyngeal specimens (OP)	Samples collected with oropharyngeal (throat) swab
Nasopharyngeal specimens (NP)	Samples collected with nasopharyngeal swab
Serum	Off-the-clot serum
Plasma	Variety of different anticoagulants including ACD, CPD, CPDA-1, heparin and EDTA. Additional anticoagulants on request.
Whole blood	Variety of different anticoagulants including ACD, CPD, CPDA-1, heparin and EDTA. Additional anticoagulants on request.
Matched sets	Matched saliva, NP, OP, serum, plasma (with different anticoagulants) and whole blood samples sets for being used in equivalency matrix studies

SPECIFICATIONS

Human specimens can be used in existing or future diagnostic studies that evaluate the performance and clinical utility of IVD assays.

All materials are single donation tested according to methods cleared in compliance with the US Food and Drug Administration (FDA) regulations, collected under an IRB-approved protocol.

CRITERIA FOR DONORS

01

All samples will come from routine blood donors.

02

Donors are consented with an FDA-approved consent for blood donation.

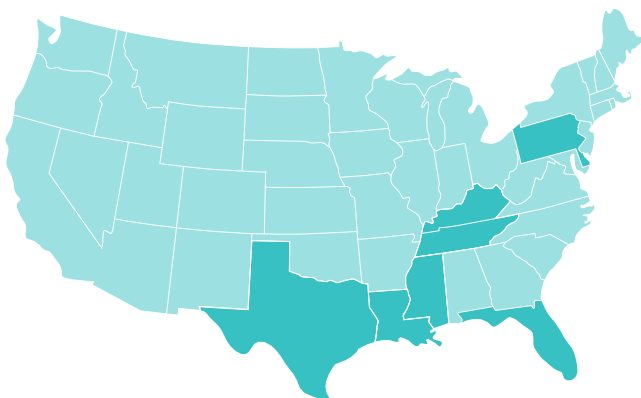
03

All donors are screened to ensure that each of them is under good health conditions and that samples are not collected from a high-risk population for blood-borne infections.

04

All donors are tested negative for infectious diseases according to FDA regulations.

DATA PROVIDED



Donor data provided

Age, race, gender and blood type

Geographical location

Donor centers located in different regions in USA (Memphis, Miami, Philadelphia, Baltimore, Jackson, Temple, Louisville and Indianapolis).

We can also provide samples collected at one of our more than 30 blood collection centers located in Germany.

For more information on product availability or customization, please contact us: biosuppliesdx@grifols.com

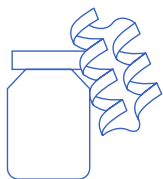


Bio Products

Diagnostic grade plasma proteins obtained from human source plasma as part of the fractionation process for further protein purification.

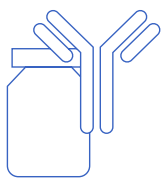
Our plasma proteins are manufactured from plasma originating from our own US and EU plasmapheresis centers, conforming to Good Manufacturing Practices (GMP), International Quality Plasma Program (IQPP) of the Plasma Protein Therapeutic Association (PPTA) and fulfilling additional requirements set by Grifols.

- Production processes and facilities are certified according to the US FDA and EU regulations.
- Our Proteins are offered in liquid format at different concentrations and volumes.
- Our donors have an approved consent for donating blood and are screened to ensure that each of them is in good health and that products are not collected from a high-risk population for blood-borne infections.



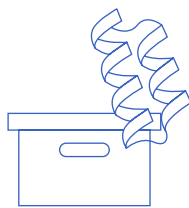
HUMAN SERUM ALBUMIN

Diagnostic grade human serum albumin (HSA) obtained from human source plasma



IMMUNOGLOBULINS

Diagnostic grade immunoglobulins obtained from human source plasma



PLASMA PRODUCTS FOR FURTHER MANUFACTURING

Several fractions from the plasma fractionation process containing a range of different proteins available for R&D purposes and/or for being utilized to purify specific proteins contained within them

Human serum albumin is the most abundant protein in human blood plasma, constituting about half of all serum proteins.



SPECIFICATIONS

PRODUCT

Source region

SOURCE PLASMA

USA and EU

Collection method

Plasmapheresis

FORMAT

Liquid format at different concentrations and volumes

DONOR VIRAL TESTING

HIV-1-NAT	•
HCV-NAT	•
HBV-NAT	•
WNV-NAT	•
anti-HIV I/2	•
anti-HCV	•
HBsAg	•
Syphilis	•
Chagas	•
Babesia	•

HIGH MANUFACTURING STANDARDS

01

Product obtained from plasma collected at FDA-approved collection centers

02

Fully tested according to FDA regulations to ensure that the products are found negative for required tests

03

Manufactured in GMP grade facilities

Contact and Order Information

General Contact Information

+34 93 571 05 00

biosuppliesdx@grifols.com

US Order Information

+1 901 384 6250

ibbicustserv@grifols.com

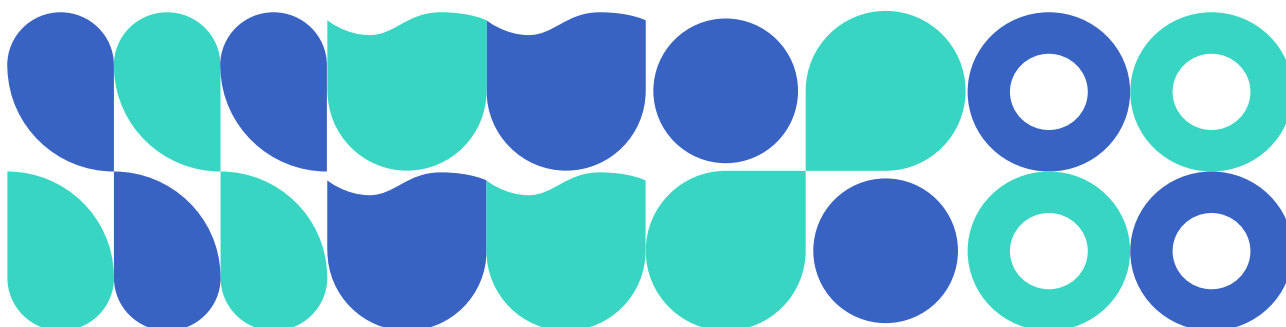
EU Order Information

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HAGbiosupplies@haema.de

For further product information, you can also visit our website:

www.biosuppliesproducts.com





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