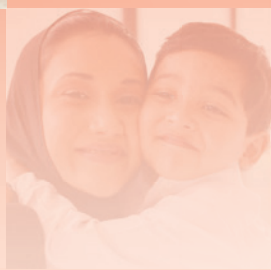




HUMAN

Global Player. Local Solutions.
Individual Support.



HUMAN

Diagnostics Worldwide

HUMAN Diagnostics

Product Catalog 2023 | 2024



Human

Diagnostics Worldwide

HUMAN Diagnostics

Global player. Local solutions. Individual support.

2



At HUMAN, our mission is to empower laboratories to fulfill their daily challenges and implement long-term IVD projects to improve patient care.

For more than 50 years, HUMAN has been offering a broad and comprehensive product portfolio with German quality standards, providing reliable solutions that meet the most diverse local requirements. This also includes autoimmune and molecular diagnostics.

Worldwide service and supply capabilities as well as close cooperation with our long-standing distribution partners enable us to individually support healthcare professionals in more than 160 countries. Regional offices around the globe ensure that HUMAN meets customer and market requirements.

Our Germany based offices include in addition to the headquarters in Wiesbaden further sites with production as well as research and development departments: The site in Magdeburg and our affiliated company LABiTec® based in Ahrensburg. All sites are certified with ISO 13485 and 9001, to meet highest German quality standards.

HUMAN is committed to the principles of sustainability as well as to improving global health care. All above has made us a recognized global player in the IVD industry over the past half century. Discover HUMAN and see how our solutions help you achieve your objectives.



Wir haben es uns zur Aufgabe gemacht, Labore weltweit bei der Bewältigung ihrer täglichen Herausforderungen zu unterstützen und mit langfristigen IVD-Lösungen zur Verbesserung der Patientenversorgung beizutragen.

Seit über 50 Jahren bietet HUMAN ein breites und umfassendes Produktportfolio mit deutschen Qualitätsstandards im Bereich der Labor-diagnostik an. Wir haben zuverlässige Lösungen und Dienstleistungen für die unterschiedlichsten lokalen Anforderungen; dazu zählen auch die Autoimmun- und Molekular-diagnostik.

Weltweite Service- und Lieferkapazitäten sowie die enge Zusammenarbeit mit unseren langjährigen Vertriebspartnern ermöglichen uns eine individuelle Betreuung von Gesundheitsexperten in mehr als 160 Ländern.

Durch regionale Niederlassungen rund um den Globus erfüllen wir die Kunden- und Marktanforderungen. Zu unseren deutschen Standorten gehören neben dem Hauptsitz in Wiesbaden weitere Standorte mit Produktion sowie Forschungs- und Entwicklungsabteilungen: Der Standort Magdeburg und unsere Tochtergesellschaft LABiTec® mit Sitz in Ahrensburg. Alle Standorte sind nach ISO 13485 und 9001 zertifiziert und entsprechen den höchsten deutschen Qualitätsstandards.

HUMAN hat sich neben der Verbesserung der globalen Gesundheitsversorgung ebenso den Prinzipien der Nachhaltigkeit verschrieben. All dies hat uns im letzten halben Jahrhundert zu einem anerkannten Global Player in der IVD-Industrie gemacht. Entdecken Sie HUMAN und erreichen Sie Ihre Ziele mit unseren Lösungen.

HUMAN



Notre mission, chez HUMAN, est de donner aux laboratoires les moyens de relever leurs défis quotidiens et de mener à bien des projets de DIV à long terme pour améliorer la prise en charge des patients.

Depuis plus de 50 ans, HUMAN propose un portefeuille large et complet de produits de qualité allemande et de solutions fiables, adaptées aux besoins locaux les plus divers. Cet éventail de produits comprend aussi des solutions de diagnostic des maladies auto-immunes et de diagnostic moléculaire.

Nos capacités de service technique et de fourniture dans le monde entier et notre coopération étroite avec nos distributeurs partenaires de longue date nous permettent d'accompagner individuellement les professionnels de la santé dans plus de 160 pays. Grâce à ses bureaux régionaux dans le monde entier, HUMAN répond aux besoins de ses clients et des marchés.

En Allemagne, nous possédons non seulement notre siège à Wiesbaden, mais aussi d'autres sites de production et de recherche et de développement : Le site de Magdeburg et notre filiale LABiTec® à Ahrensburg. Tous nos sites sont certifiés ISO 13485 et 9001 et conformes aux normes de qualité allemandes les plus rigoureuses.

HUMAN s'engage pour une économie durable et pour l'amélioration des soins de santé dans le monde. Et tout cela a fait de nous un acteur mondial reconnu dans l'industrie du diagnostic *in vitro* depuis un demi-siècle. Découvrez HUMAN et apprenez comment nos solutions vont vous aider à atteindre vos objectifs.



Nuestra misión en HUMAN es capacitar a los laboratorios para que cumplan sus retos diarios y pongan en marcha proyectos de diagnóstico *in vitro* de largo plazo, para mejorar la atención al paciente.

Desde hace más de 50 años, HUMAN ofrece una amplia y completa gama de productos con estándares de calidad alemanes, proporcionando soluciones fiables que satisfacen las más diversas exigencias locales. Esto incluye también los diagnósticos moleculares y de enfermedades autoinmunitarias.

La capacidad de servicio y suministro mundial, así como la estrecha colaboración, desde hace muchos años, con nuestros socios de distribución nos permiten apoyar individualmente a los profesionales de la salud en más de 160 países. Las oficinas regionales en todo el mundo garantizan que HUMAN cumple con los requisitos de los clientes y del mercado.

Nuestras oficinas en Alemania incluyen, además de la sede central en Wiesbaden, otros emplazamientos con departamentos de producción, investigación y desarrollo: el centro de Magdeburgo y nuestra empresa afiliada LABiTec® con sede en Ahrensburg. Todas las instalaciones están certificadas con la ISO 13485 y 9001, para cumplir con los más altos estándares de calidad alemanes.

HUMAN está comprometido con los principios de sostenibilidad, así como con la mejora de la atención sanitaria mundial. Todo lo anterior nos ha convertido en un reconocido actor mundial en el sector del diagnóstico *in vitro* durante el último medio siglo. Descubra HUMAN y vea cómo nuestras soluciones le ayudan a alcanzar sus objetivos.

HUMAN Group

4

Global player. Local solutions. Individual support.

With its worldwide network of subsidiaries and distributors, HUMAN guarantees being close to the users, providing service and support.

Distributing areas are dark grey.



Germany-based offices

1 Headquarters

**HUMAN Gesellschaft für
Biochemica und Diagnostica mbH**

Max-Planck-Ring 21
65205 Wiesbaden
Germany

Phone: +49 6122 99880
Email: info@human.de
www.human.de

2 Production Site

**HUMAN Gesellschaft für
Biochemica und Diagnostica mbH**

Stegelitzer Straße 3
39126 Magdeburg
Germany

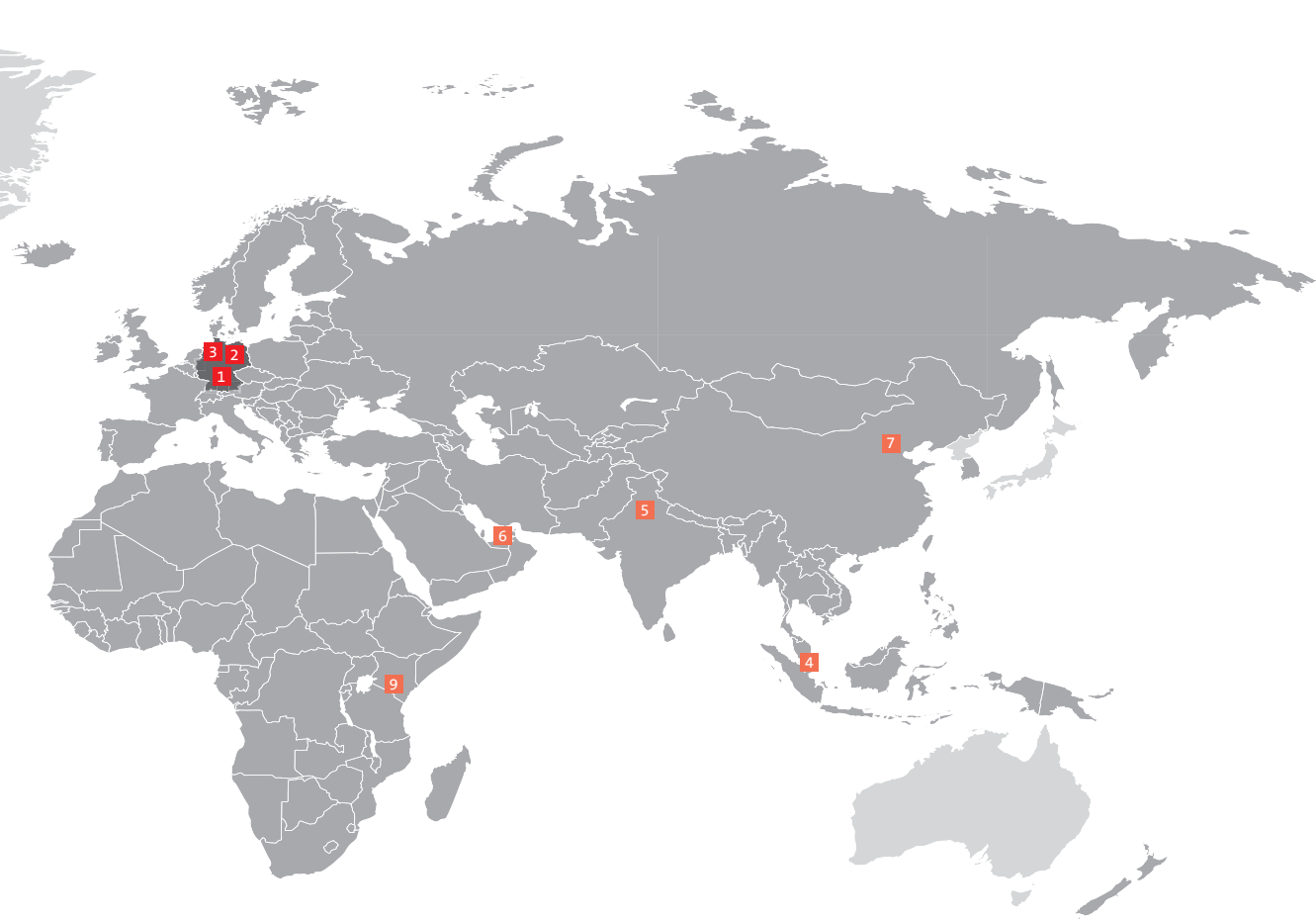
Phone: +49 391 244700
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3 LABiTec®

**Labor BioMedical Technologies
GmbH**

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Phone: +49 4102 47950
Email: service@labitec.de



Regional offices and training centre

4 Asia Pacific

**Human Diagnostics
Asia Pacific Pte. Ltd.**

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Email: asiapacific@human.de

5 India

**HUMAN Diagnostics
India**

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Gurgaon Pin: 122009
India

Phone: +91 1244 148139
Email: a.singh@human.de

6 Middle East

**HUMAN Diagnostics
Middle East FZE**

Office: Q3 - 198
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U. A. E.

Phone: +971 6 5578650
Email: middleeast@human.de

7 China

**HUMAN Diagnostics
(Beijing) Limited**

**HUMAN Biochemical and
Diagnostics GmbH
Beijing Representative Office**

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Beijing Development Area
100176 Beijing
P.R. China

Phone: +86 10 63579937
Email: china@human.de

8 Latin America

**Human Diagnostics
Latin America S.A.**

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International Business Park
Panama City
Panama

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Email: latinamerica@human.de

9 HUMAN Training Centre Africa

Chem-Labs Ltd.

Human House Ngara West Rd
00600 Nairobi
Kenya
Email: human@human.de

Committed to Quality

6



Quality is the essence

For HUMAN, quality is not simply a phrase, it is the essence of our philosophy. For 50 years, HUMAN has always acted in accordance with internationally recognized quality standards. HUMAN's facilities, processes and products are in full compliance with the highest quality standards as, e.g., proven by a certified quality management system or a CE-conformity assessment procedure in compliance with the European IVD Regulation. A certification of our quality management system in accordance with

the international standards EN ISO 9001:2015 and EN ISO 13485:2016, guarantees that all our products are designed, manufactured, controlled and delivered to match with the requirements and high expectations of our customers worldwide. HUMAN's quality management system has proven to be equivalent with GMP requirements as demonstrated by successfully passed inspections from foreign authorities.

Certificate

mdc medical device certification GmbH
certifies that

Human

Gesellschaft für Biochemica und Diagnostica mbH
Max-Planck-Ring 21
65205 Wiesbaden
Germany

with the location

Stegelitzer Straße 3
39126 Magdeburg

for the scope

development, manufacturing and distribution of reagents, reagent products, calibrators and control materials for clinical chemistry, haematology, haemostasis, immune chemistry as well as analyzers for in-vitro diagnosis.
distribution of test kits for molecular biology analyses as well as rapid tests for the diagnosis of infectious diseases.

has introduced and applies a

Quality Management System

The mdc audit has proven that this quality management system meets all requirements of the following standard

EN ISO 13485

Medical devices – Quality management systems – Requirements for regulatory purposes

EN ISO 13485:2016 + AC:2018 + A11:2021 - ISO 13485:2016

Valid from	2023-03-17
Valid until	2025-03-11
Registration no.	D1030000087
Report no.	P22-01653-251454
Stuttgart	2023-03-17

Head of Certification Body



mdc medical device certification GmbH
Kriegerstraße 5
D-70191 Stuttgart, Germany
Phone: +49-(0)711-253597-0
Fax: +49-(0)711-253597-10
Internet: <http://www.mdc-ce.de>



CERTIFICATE

ISO 14001:2015

for

Human

Gesellschaft für Biochemica und Diagnostica mbH

at the sites

Max-Planck-Ring 21, 65205 Wiesbaden und
Stegelitzer Straße 3, 39126 Magdeburg

The DAU-accredited environmental verifier hereby certifies that the named organization has implemented an Environmental Management System.

scope: development, manufacturing and distribution of in vitro diagnostic products and analyzers

With an audit it has been assessed that the requirements of ISO 14001:2015 are fulfilled.

Nürnberg, 30 August 2021

The follow-up certificate No. UG0835-2021 is valid until 26 August 2024.

Carsten Speidel
Environmental Verifier

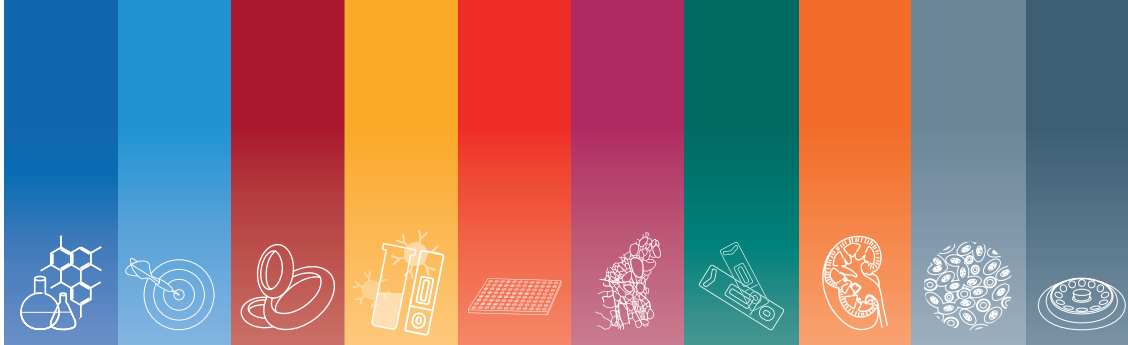
Dipl.-Phys. Reinhard Mirz
Environmental Verifier
Organisation: DEV 0279

Intechnica Cert GmbH Umweltgutachterorganisation, Ostendstraße 181, 90482 Nürnberg

Intechnica Cert GmbH Umweltgutachterorganisation, Ostendstraße 181, 90482 Nürnberg

Environmental protection is our concern

HUMAN sincerely commits to the use of renewable energies and to environmental protection. Hence, an environmental management system according to international standard DIN EN ISO 14001 and European standard EMAS (certificate on the website) has been implemented in 2015 and maintained since then.



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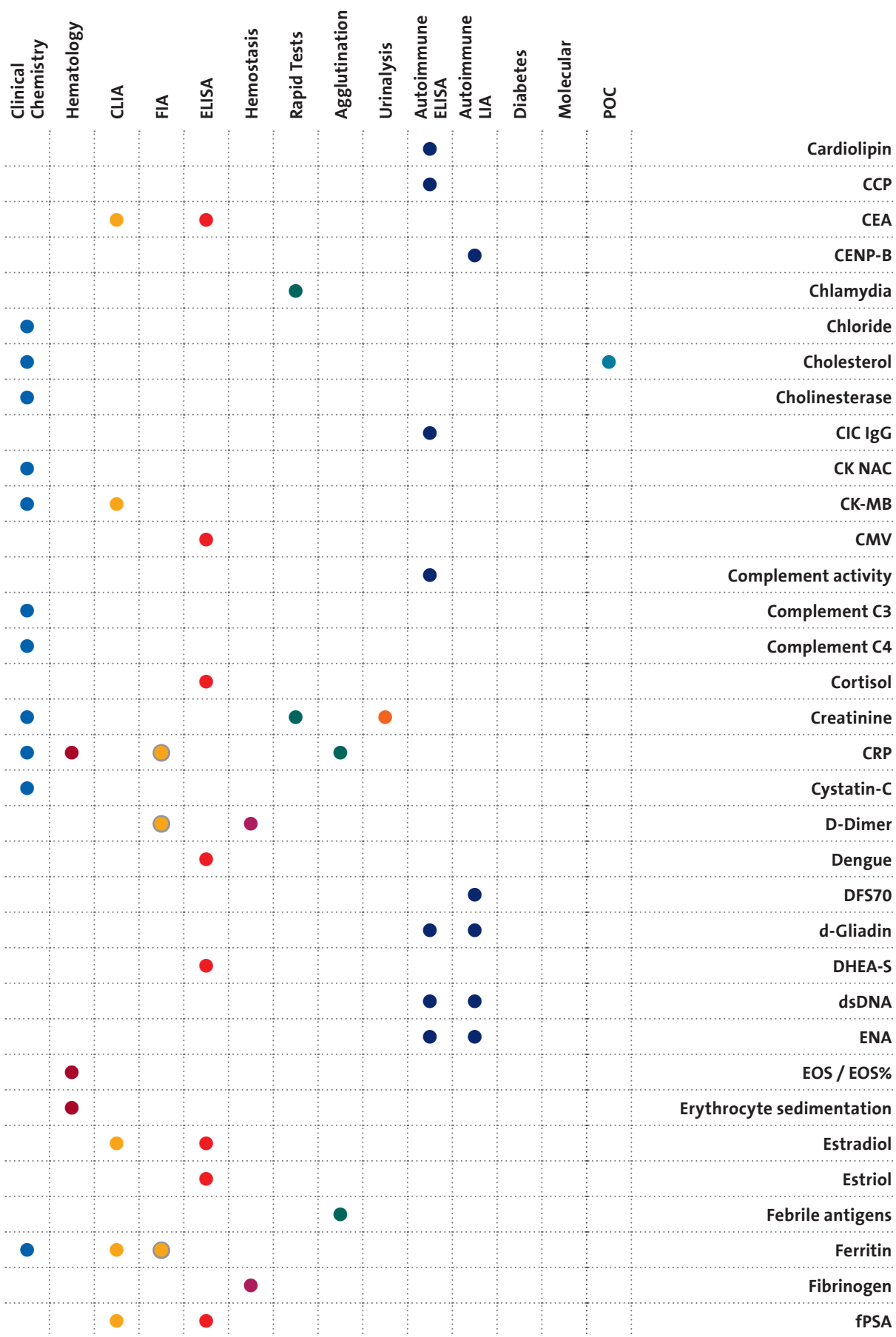
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Analyte Overview

Analyte Overview

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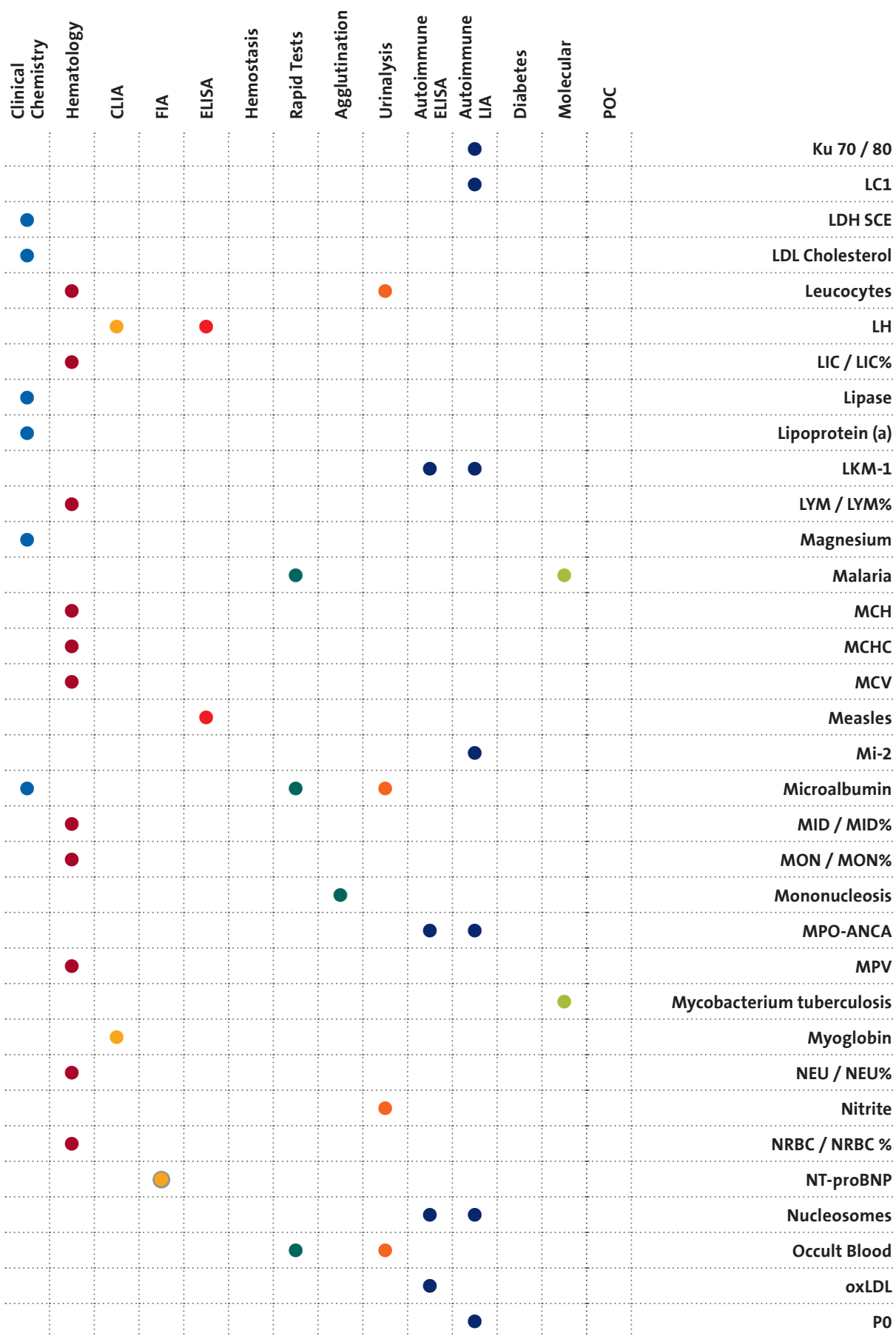
	Clinical Chemistry	Hematology	CLIA	FIA	ELISA	Hemostasis	Rapid Tests	Agglutination	Urinalysis	Autoimmune ELISA	Autoimmune LIA	Diabetes	Molecular	POC
ACPA											●			
AFP			●		●									
Albumin	●													
Alkaline phosphatase	●													
alpha-Amylase	●													
ALY / ALY%		●												
AMA M2										●	●			
AMH			●											
ANA								●		●	●			
Annexin V										●				
Anti-CCP				●						●				
anti-HBc					●									
anti-HBs					●									
anti-HCV					●									
anti-Streptolysin-O (ASO)	●			●				●						
anti-TG			●		●					●				
Antithrombin						●								
anti-TPO			●							●				
Anti-TSH Receptor					●					●				
Apolipoprotein A1	●													
Apolipoprotein B	●													
aPTT						●								
ASCA											●			
Ascorbic acid									●					
BAS / BAS%		●												
beta2-Glycoprotein 1										●				
Bilirubin	●								●					
Brucella abortus								●						
C1q										●				
C3d-C1C										●				
CA 125			●		●									
CA 15-3			●		●									
CA 19-9			●		●									
Calcium	●													



Analyte Overview

	Clinical Chemistry	Hematology	CLIA	FIA	ELISA	Hemostasis	Rapid Tests	Agglutination	Urinalysis	Autoimmune ELISA	Autoimmune LIA	Diabetes	Molecular	POC
free Protein S						●								
FSH			●		●									
ft3			●		●									
ft4			●		●									
Gamma-GT	●													
GBM										●	●			
Glucose	●								●			●		●
Glycohemoglobin HbA1	●													
Gp210											●			
GPT (ALAT)	●													
GRA / GRA%		●												
HbA1c	●											●		
HBsAg					●		●							
hCG			●		●		●		●					
HCT*		●												
HCV					●		●							
HDL Cholesterol	●													
Helicobacter pylori					●		●							
Hemoglobin	●													
HGB		●												
Histone											●			
HIV					●		●							
Homocysteine	●													
HSV					●									
IgA	●													
IgE					●									
IgG	●													
IgM	●													
IL-6				●										
Intrinsic factor											●			
Iron	●													
Jo-1										●	●			
Ketones									●					

* HCT can also be performed with the HuMax HCT centrifuge (see section laboratory equipment)



Analyte Overview

	Clinical Chemistry	Hematology	CLIA	FIA	ELISA	Hemostasis	Rapid Tests	Agglutination	Urinalysis	Autoimmune ELISA	Autoimmune LIA	Diabetes	Molecular	POC
Pancreas-Amylase	●													
PCA											●			
PCNA											●			
PCT		●	●	●										
PDWcvc		●												
PDWsd		●												
pH	●								●					
Phosphatidic acid										●				
Phosphatidylethanolamine										●				
Phosphatidylinositol										●				
Phosphatidylserine										●				
Phosphorus	●													
PL-12											●			
PL-7											●			
P-LCC		●												
P-LCR		●												
PLT		●												
PM-Scl100											●			
Potassium	●													
PR3-ANCA										●	●			
PRL			●		●									
Progesterone			●		●									
Prothrombin										●				
Prothrombin time (PT)						●								
PSA			●		●		●							
PTH			●											
RA33										●	●			
RBC		●												
RDWcvc		●												
RDWsd		●												
RF	●			●				●		●	●			
Rubella					●									
Salmonella								●		●				
Scl70										●	●			

Analyte	Clinical Chemistry	Hematology	CLIA	FIA	ELISA	Hemostasis	Rapid Tests	Agglutination	Urinalysis	Autoimmune ELISA	Autoimmune LIA	Diabetes	Molecular	POC
SLA										•	•			
SmD1										•	•			
Sodium	•													
Sp100											•			
Specific gravity									•					
SS-A / Ro										•	•			
SS-B / La										•	•			
Syphilis (anti-TP)					•		•	•						
T3			•		•									
T4			•		•									
Testosterone			•		•									
Thrombin Time						•								
TIBC	•													
Tissue transglutaminase	•									•	•			
Total Protein	•								•					
Toxo					•			•						
Transferrin	•													
Triglycerides	•													
Troponin I			•	•			•							
TSH			•		•									
U1-snRNP										•	•			
Urea	•													
Uric Acid	•												•	
Urinary Total Protein	•						•							
Urobilinogen									•					
Vitamin B12			•											
VZV					•									
WBC		•												
25-OH Vitamin D			•		•									



Clinical Chemistry

Reagents, Calibrators and Controls Photometers, Analyzers and Systems

HUMAN offers a broad range of routine and special tests in a variety of package concepts to serve the needs of state-of-the-art laboratories. In the same way, all HUMAN analyzers and systems emphasize functionality and modern workflow requirements to meet customer and market demand.





Multipurpose Reagents

HUMAN's multipurpose clinical chemistry assays for manual and automated testing use a variety of technologies for detection and quantification. The assay range comprises enzymes, substrates/metabolites, proteins, electrolytes and trace elements with high precision and long stability.

Calibrators and controls with defined values and ranges are available. **Complete kits** contain the reagents as well as the necessary calibrators/standards, whereas **reagent kits** contain just the reagents.

Autocal can be used for calibration of the enzymatic assays on clinical chemistry analyzers ranging from the semi-automatic Humalyzer to the automated HumaStar series.



Page 20



Bilirubin D+T liquicolor

Humalyzer Photometers

Compact semi-automatic clinical chemistry photometers are perfectly suited for small laboratories and as backup solutions. Each photometer offers different features for different requirements.



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Humalyzer 4000

Humalyte ISE-Systems

Direct ISE technology offers easy handling, economical testing of a variety of ISE parameters and requires only minimal maintenance. HUMAN's Humalyte Plus systems are suitable for many kinds of laboratories.



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Humalyte Plus³



HumaStar 100

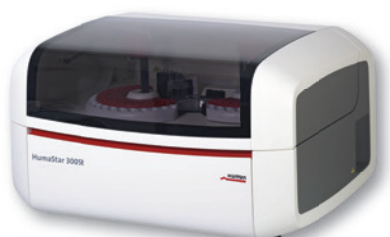
HumaStar Analyzers

HUMAN's automated analyzer range features instruments suitable for entry-level to medium throughput automation.

All automated analyzers are optimized for use with HUMAN reagents. Reagent refrigeration and continuous loading on the advanced analyzers ensure efficient operation.

Applications for HUMAN multipurpose and most immunoturbidimetric reagents are preprogrammed on the instruments.

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HumaStar 300SR

HumaStar Systems

Our system analyzers offer completely automated reagent management.

With the HumaStar 300SR, we provide a benchtop-sized automated system, designed for small to medium throughput laboratories which prominently feature cost-efficient solutions.

With the HumaStar 600, HUMAN offers another stand-alone system, equipped to serve the needs of medium to high throughput laboratories. Additionally it can be upgraded with an optional ISE module.

Both are equipped with reagent cooling, barcode readers and washable cuvettes and are offered with validated applications which enable to run high quality system reagents with long shelf lives and onboard stabilities, ensuring the highest cost efficiency and result reliability.

With these systems, HUMAN is proud to offer a unique range of solutions for laboratories of all sizes with matched versatility and economy.

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HumaStar System Reagents




Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
-----	--------	-----------	---------	--------


ALBUMIN liquicolor
BCG method, monoreagent

10560	Complete kit	R1 1 x 1000 ml, STD 1 x 3 ml	2...25 °C	
156004		R1 4 x 100 ml, STD 1 x 3 ml		

ALKALINE PHOSPHATASE liquicolor
AMP buffer, IFCC

12117	Reagent kit	R1 10 x 8 ml, R2 2 x 10 ml	2...8 °C	
12127		R1 8 x 40 ml, R2 8 x 10 ml		
12137		R1 4 x 200 ml, R2 4 x 50 ml		


ALKALINE PHOSPHATASE opt. liquicolor
DEA buffer, DGKC

12217	Reagent kit	R1 16 x 4 ml, R2 1 x 16 ml	2...8 °C	
12017		R1 10 x 8 ml, R2 2 x 10 ml		
12027		R1 8 x 40 ml, R2 8 x 10 ml		
12037		R1 4 x 200 ml, R2 4 x 50 ml		



alpha-AMYLASE liquicolor
Substrate CNPG3, monoreagent




anti-STREPTOLYSIN-O

12218	Reagent kit	R1 16 x 5 ml	2...8 °C	
12018		R1 12 x 10 ml		
12028		R1 6 x 50 ml		

anti-STREPTOLYSIN-O
Latex enhanced immunoturbidimetric test

11251P	Reagent kit	R1 2 x 40 ml, R2 2 x 10 ml	2...8 °C	
11351	Standard 	2 x 1 ml		

APOLIPOPROTEIN A1
Immunoturbidimetric test

11101	Reagent kit	R1 2 x 30 ml	2...8 °C	
11104	Standard 	2 x 1 ml		



REF	Format	Unit/Size	Storage	Sample
-----	--------	-----------	---------	--------

APOLIPOPROTEIN B

Immunoturbidimetric test

11102	Reagent kit	R1 2 x 30 ml	2...8 °C	SERUM
11104	Standard +	R1 2 x 1 ml		

auto-BILIRUBIN-D liquicolor

DPD method

10741	Reagent kit	R1 3 x 100 ml, R2 1 x 75 ml	2...8 °C	SERUM HEP
13160	Calibrator + (AUTOCAL)	4 x 5 ml		

auto-BILIRUBIN-T liquicolor

DPD method

10742	Reagent kit	R1 3 x 100 ml, R2 1 x 75 ml	2...8 °C	SERUM HEP
13160	Calibrator + (AUTOCAL)	4 x 5 ml		

BILIRUBIN liquicolor

(DCA) method

10012	Reagent kit	R1 1 x 100 ml, R2 1 x 100 ml, BLK 1 x 100 ml	2...25 °C	SERUM EDTA HEP
-------	-------------	---	-----------	----------------------

BILIRUBIN DIRECT/TOTAL liquicolor

Jendrassik/Gróf method

10740	Reagent kit	DBIL R1 1x 100 ml, R2 1 x 9 ml TBIL R1 1 x 100 ml, R2 1 x 9 ml	15...25 °C	SERUM HEP
-------	-------------	---	------------	--------------

CALCIUM liquicolor

O-cresolphthalein method

10011	Complete kit	R1 1x 100 ml, R2 1 x 100 ml, STD 1 x 3 ml	2...25 °C	SERUM HEP
-------	--------------	--	-----------	--------------

CHLORIDE liquicolor

TPTZ method, monoreagent

10115	Complete kit	R1 2 x 100 ml, STD 1 x 3 ml	2...25 °C	SERUM URINE CSF
-------	--------------	-----------------------------	-----------	-----------------------



BILIRUBIN DIRECT/
TOTAL liquicolor



Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
-----	--------	-----------	---------	--------

CHOLESTEROL liquicolor
CHOD-PAP method, monoreagent

10017	Complete kit	R1 4 x 30 ml, STD 1 x 3 ml	2...8 °C	
10019		R1 3 x 250 ml, STD 1 x 3 ml		
10028		R1 4 x 100 ml, STD 1 x 3 ml		

CHOLINESTERASE liquicolor
Substrate Butyrylthiocholine

12007	Reagent kit	R1 1 x 100 ml, R2 1 x 20 ml	2...8 °C	
-------	-------------	-----------------------------	----------	--

CK-MB liquiUV
Immuno-inhibition method

12118	Reagent kit	R1 10 x 8 ml, R2 2 x 10 ml	2...8 °C	
13612	Calibrator	2 x 1 ml		
13611	Control	2 x 2 x 2 ml		

CK NAC activated liquiUV
IFCC, 37°C

12015	Reagent kit	R1 10 x 8 ml, R2 2 x 10 ml	2...8 °C	
-------	-------------	----------------------------	----------	--

COMPLEMENT C3
Immunoturbidimetric test, monoreagent

11110	Reagent kit	R1 2 x 20 ml	2...8 °C	
11117	Standard	2 x 1 ml		

COMPLEMENT C4
Immunoturbidimetric test, monoreagent

11113	Reagent kit	R1 2 x 20 ml	2...8 °C	
11117	Standard	2 x 1 ml		

auto-CREATININE liquicolor
Jaffé method

10052	Complete kit	R1 2 x 100 ml, R2 1 x 50 ml, STD 1 x 5 ml	15...25 °C	
-------	--------------	---	------------	--



Serum



Plasma
EDTA



Plasma
HEP



Urine



not included
but required



REF	Format	Unit/Size	Storage	Sample
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CREATININE (enzym) liquicolor

Enzymatic method

10053	Complete kit	R1 2 x 30 ml, R2 2 x 10 ml, STD 1 x 5 ml	2...8 °C	
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CRP

Immunoturbidimetric test

11241	Reagent kit	R1 1 x 40 ml, R2 1 x 10 ml	2...8 °C	
11341	Standard	2 x 1 ml		
11141	Buffer	4 x 100 ml		

CYSTATIN-C liquidirect

Latex enhanced immunoturbidimetric test

11150	Reagent kit	R1 1 x 30 ml, R2 1 x 10 ml	2...8 °C	
11155	Calibrator set	5 x 1 ml		
11153	Control	3 x 1 ml		

FERRITIN

Latex enhanced immunoturbidimetric test

11610	Reagent kit	R1 1 x 25 ml, R2 1 x 12.5 ml	2...8 °C	
11614	Calibrator set	4 x 0.5 ml		

gamma-GT liquicolor

Substrate gamma-glutamyl-3 carboxy-4-nitroanilide method, 37°C, IFCC

12213	Reagent kit	R1 16 x 4 ml, R2 1 x 16 ml	2...8 °C	
12013		R1 10 x 8 ml, R2 2 x 10 ml		
12023		R1 8 x 40 ml, R2 8 x 10 ml		
12033		R1 4 x 200 ml, R2 4 x 50 ml		

GLUCOSE liquicolor

GOD method

10121	Complete kit	R1 1 x 1000 ml, STD 1 x 3 ml	2...8 °C	
10260		R1 4 x 100 ml, STD 1 x 3 ml		

GLUCOSE liquiUV^{mono}

Hexokinase method, monoreagent

10786	Complete kit	R1 1 x 1000 ml, STD 1 x 3 ml	2...8 °C	
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Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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GLYCOHEMOGLOBIN HbA1

Fast ion exchange resin separation method

10657	Complete kit	20 tests	2...8 °C	WB
10658		100 tests		
10259	Control +	2 x 1 ml		

GOT (ASAT) IFCC mod. liquiUV

Modified IFCC method, 37°C

12211	Reagent kit	R1 16 x 4 ml, R2 1 x 16 ml	2...8 °C	SERUM EDTA HEP
12011		R1 10 x 8 ml, R2 2 x 10 ml		
12021		R1 8 x 40 ml, R2 8 x 10 ml		
12031		R1 4 x 200 ml, R2 4 x 50 ml		

GPT (ALAT) IFCC mod. liquiUV

Modified IFCC method, 37°C

12212	Reagent kit	R1 16 x 4 ml, R2 1 x 16 ml	2...8 °C	SERUM EDTA HEP
12012		R1 10 x 8 ml, R2 2 x 10 ml		
12022		R1 8 x 40 ml, R2 8 x 10 ml		
12032		R1 4 x 200 ml, R2 4 x 50 ml		

HbA1c liquidirect

Latex enhanced immunoturbidimetric test



HbA1c liquidirect

10770	Reagent kit	R1 1 x 30 ml, R2 1 x 10 ml, LYS 2 x 100 ml	2...8 °C	WB
10776	Calibrator set +	4 x 0.5 ml		
10775	Control blood + normal/ abnormal	2 x 2 x 0.5 ml		

HDL CHOLESTEROL liquicolor

Homogeneous enzymatic method

10084	Complete kit	R1 1 x 60 ml, R2 1 x 20 ml, CAL 1 x 5 ml	2...8 °C	SERUM EDTA HEP
10284		R1 1 x 150 ml, R2 1 x 50 ml, CAL 1 x 5 ml		



Whole Blood



Capillary Blood



Serum



Plasma EDTA



Plasma HEP




not included but required






REF	Format	Unit/Size	Storage	Sample
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HEMOGLOBIN liquicolor
Cyanmethemoglobin method

10751	Reagent kit	for 10 x 500 ml	15...25 °C	 
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HOMOCYSTEINE liquiUV
Enzymatic UV test

11140	Complete kit	R1 1 x 30 ml, R2 1 x 4 ml, CAL 2 x 3 ml	2...8 °C	  
11145	Calibrator set	2 x 3 ml		
11143	Control	3 x 1.5 ml		



IMMUNOGLOBULINS direct IgA
Immunoturbidimetric test

11501	Reagent kit	R1 2 x 40 ml, R2 2 x 10 ml	2...8 °C	
11504	Calibrator set 	5 x 2 ml		
11505	Direct buffer	R1 4 x 40 ml		



IMMUNOGLOBULINS direct IgG
Immunoturbidimetric test

11502	Reagent kit	R1 2 x 40 ml, R2 2 x 10 ml	2...8 °C	
11504	Calibrator set 	5 x 2 ml		
11505	Direct buffer	R1 4 x 40 ml		

IMMUNOGLOBULINS direct IgM
Immunoturbidimetric test

11503	Reagent kit	R1 2 x 40 ml, R2 2 x 10 ml	2...8 °C	
11504	Calibrator set 	5 x 2 ml		
11505	Direct buffer	R1 4 x 40 ml		

IRON liquicolor
CAB method, monoreagent

10229	Complete kit	R1 2 x 30 ml, STD 1 x 5 ml	2...25 °C	 
10230		R1 2 x 100 ml, STD 1 x 5 ml		




Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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IRON TPTZ liquicolor

TPTZ method

12290	Complete kit	R1 2 x 20 ml, R2 2 x 5 ml, STD 1 x 5 ml	2...8 °C	
12291		R2 2 x 80 ml, R2 2 x 20 ml, STD 1 x 5 ml		

LDH SCE mod. liquiUV

Substrate Pyruvate, 37°C


12214	Reagent kit	R1 16 x 4 ml, R2 1 x 16 ml	2...8 °C	
12014		R1 10 x 8 ml, R2 2 x 10 ml		
12024		R1 8 x 40 ml, R2 8 x 10 ml		



LDL CHOLESTEROL liquicolor



LDL CHOLESTEROL liquicolor

Homogeneous enzymatic method

10094	Complete kit	R1 1 x 60 ml, R2 1 x 20 ml, CAL 1 x 5 ml	2...8 °C	
10294		R1 1 x 150 ml, R2 1 x 50 ml, CAL 1 x 5 ml		



LIPASE liquicolor

Substrate Methylresorufin, 37°C

12006	Reagent kit	R1 4 x 10 ml, R2 2 x 5 ml	2...8 °C	
12026		R1 6 x 20 ml, R2 6 x 5 ml		
13160	Calibrator  (AUTOCAL)	4 x 5 ml		


LIPOPROTEIN (a)

Latex enhanced immunoturbidimetric test

11105	Reagent kit	R1 2 x 25 ml, R2 1 x 3 ml	2...8 °C	
11107	Standard 	2 x 0.5 ml		

MAGNESIUM liquicolor

Xylidyl blue method, monoreagent

10010	Complete kit	R1 2 x 100 ml, STD 1 x 3 ml	2...25 °C	
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Serum



Plasma
EDTA



Plasma
HEP



Urine





not included
but required



REF	Format	Unit/Size	Storage	Sample
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MICROALBUMIN

Immunoturbidimetric test

11120	Reagent kit	R1 2 x 25 ml, R2 1 x 5 ml	2...8 °C	
11124	Standard 	2 x 1 ml		

PANCREAS-AMYLASE liquicolor

Substrate EPS-G7, 37°C


12009	Reagent kit	R1 4 x 10 ml, R2 2 x 5 ml	2...8 °C	
12029		R1 6 x 20 ml, R2 6 x 5 ml		
13160	Calibrator  (AUTOCAL)	4 x 5 ml		



MICROALBUMIN


PHOSPHORUS liquirapid

Molybdate (UV) method

10027	Complete kit	R1 2 x 100 ml, STD 1 x 3 ml	2...25 °C	
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POTASSIUM liquirapid

Tetraphenylboron method

10118	Complete kit	R1 1 x 50 ml, R2 1 x 50 ml, PREC 1 x 50 ml, STD 1 x 5 ml	2...25 °C	
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POTASSIUM liquiUV

Enzymatic UV test

10120	Complete kit	R1 1 x 30 ml, R2 1 x 10 ml, STD 2 x 3 ml	2...8 °C	
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RHEUMATOID FACTORS

Latex enhanced immunoturbidimetric test

11261PA	Reagent kit	R1 2 x 40 ml, R2 2 x 10 ml	2...8 °C	
11361	Standard 	2 x 3 ml		



Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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SODIUM liquicolor
Enzymatic colorimetric test

10113	Complete kit	R1 1 x 30 ml, R2 1 x 10 ml, STD 2 x 3 ml	2...8 °C	SERUM HEP
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SODIUM RAPID
Magnesium-Uranylacetate method

573351	Complete kit	R1 1 x 60 ml, PREC 1 x 60 ml, STD 1 x 2 ml	15...25 °C	SERUM HEP
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TIBC
Iron saturation and aluminum oxide absorption method, for use with **Iron** liquicolor (10229/10230) or **Iron TPTZ** (12290/12291/12290300/12290600)

10670	Reagent kit	100 tests	15...25 °C	SERUM HEP
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TOTAL PROTEIN liquicolor
Biuret method, monoreagent

157004	Complete kit	R1 4 x 100 ml, STD 1 x 3 ml	2...25 °C	SERUM EDTA HEP
10570		R1 1000 ml, STD 1 x 3 ml		

TRANSFERRIN
Immunoturbidimetric test

11115	Reagent kit	R1 2 x 30 ml	2...8 °C	SERUM
11117	Standard +	2 x 1 ml		



SODIUM liquicolor

TRIGLYCERIDES liquicolor^{mono}
GPO POD method, monoreagent

10720P	Complete kit	R1 9 x 15 ml	2...8 °C	SERUM EDTA HEP
10724		R1 4 x 100 ml		
10725		R1 3 x 250 ml		



Serum



Plasma
EDTA



Plasma
HEP



Cerebrospinal
fluid



Urine




not included
but required



REF	Format	Unit/Size	Storage	Sample
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URINARY TOTAL PROTEIN liquicolor

Pyrogallol red method

10590	Complete kit	R1 3 x 30 ml, STD 1 x 3 ml	2...8 °C	
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UREA liquicolor

Modified Berthelot method

10505	Complete kit	R1a 1 x 100 ml, R1b 1 x 1 ml, R2 1 x 100 ml, STD 1 x 3 ml	2...8 °C	
10506	Reagent kit	R1a 1 x 1000 ml, R1b 1 x 10 ml, STD 1 x 3 ml		
10507	Reagent 2	R2 1 x 1000 ml		


UREA liquiUV

Urease method

10521	Complete kit	R1 8 x 40 ml, R2 8 x 10 ml, STD 1 x 3 ml	2...8 °C	
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URIC ACID liquicolor^{plus}

Uricase method with ascorbate oxidase

10694	Complete kit	R1 3 x 80 ml, R2 1 x 60 ml, STD 1 x 3 ml	2...8 °C	
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URIC ACID liquicolor

Uricase method, monoreagent

10690	Complete kit	R1 4 x 30 ml, STD 1 x 3 ml	2...8 °C	
10691		R1 4 x 100 ml, STD 1 x 3 ml		



Calibrator and Control Sera

REF	Unit/Size	Storage	Stability
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AUTOCAL

Lyophilized multi-parameter calibrator based on human serum for clinical chemistry

13160	4 x 5 ml	2...8 °C	Up to 7 days at 2...8 °C (reconst.)
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HumaTrol N

Lyophilized bovine serum, target values mainly in the normal range, assayed

13511	6 x 5 ml	2...8 °C	Up to 7 days at 2...8 °C (reconst.)
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HumaTrol P

Lyophilized bovine serum, target values mainly in the abnormal range, assayed

13512	6 x 5 ml	2...8 °C	Up to 7 days at 2...8 °C (reconst.)
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HumaTrol N

SERODOS®

Lyophilized human serum, target values mainly in the normal range, assayed

13951	6 x 5 ml	2...8 °C	Up to 7 days at 2...8 °C (reconst.)
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SERODOS® plus

Lyophilized human serum, target values mainly in the abnormal range, assayed

13151	6 x 5 ml	2...8 °C	Up to 7 days at 2...8 °C (reconst.)
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TURBIDOS

Two level, liquid, ready-to-use human control serum for turbidimetric tests, assayed

13010	4 x 3 ml	2...8 °C	30 days at 2...8 °C after opening
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Assayed Calibrator and Control Sera

HUMAN Clinical Chemistry Parameters	AUTOCAL	HumaTrol N HumaTrol P	SERODOS® SERODOS®plus	TURBIDOS
ACID PHOSPHATASE	x	x	x	
ALBUMIN liquicolor	x	x	x	x
ALKALINE PHOSPHATASE liquicolor	x	x	x	
ALKALINE PHOSPHATASE opt. liquicolor	x	x	x	
alpha-AMYLASE liquicolor	x	x	x	
anti-STREPTOLYSIN-O (ASO)				x
APOLIPOPROTEIN A1 (APO A1)			x	
APOLIPOPROTEIN B (APO B)			x	
auto-BILIRUBIN-D liquicolor	x	x	x	
auto-BILIRUBIN-T liquicolor	x	x	x	
BILIRUBIN liquicolor	x	x	x	
BILIRUBIN DIRECT/TOTAL liquicolor		x	x	
CALCIUM liquicolor	x	x	x	
CHLORIDE liquicolor	x	x	x	
CHOLESTEROL liquicolor	x	x	x	
CHOLINESTERASE liquicolor	x		x	
CK NAC activated		x	x	
CK NAC activated liquiUV	x	x	x	
COMPLEMENT C3				x
COMPLEMENT C4				x
auto-CREATININE liquicolor	x	x	x	
CREATININE liquicolor		x	x	
CREATININE (enzym) liquicolor	x	x	x	
CRP				x
FERRITIN				x
gamma-GT liquicolor	x	x	x	
GLUCOSE liquicolor	x	x	x	
GLUCOSE liquiUV ^{mono}	x	x	x	
GOT (ASAT) IFCC mod. liquiUV	x	x	x	
GPT (ALAT) IFCC mod. liquiUV	x	x	x	
HDL CHOLESTEROL liquicolor	x		x	
HDL CHOLESTEROL		x	x	
IRON liquicolor	x	x	x	
IRON TPTZ liquicolor	x	x	x	



Assayed Calibrator and Control Sera

HUMAN Clinical Chemistry Parameters	AUTOCAL	HumaTrol N HumaTrol P	SERODOS® SERODOS®plus	TURBIDOS
IMMUNOGLOBULINS direct IgA			x	x
IMMUNOGLOBULINS direct IgG			x	x
IMMUNOGLOBULINS direct IgM			x	x
LDH SCE mod. liquiUV	x	x	x	
LDL CHOLESTEROL liquicolor	x		x	
LIPASE liquicolor	x		x	
LIPOPROTEIN (a), Lp(a)			x	
MAGNESIUM liquicolor	x	x	x	
PANCREAS-AMYLASE liquicolor	x	x	x	
PHOSPHORUS liquirapid	x	x	x	
POTASSIUM liquirapid		x	x	
POTASSIUM liquiUV		x	x	
RHEUMATOID FACTOR				x
SODIUM liquicolor		x	x	
SODIUM RAPID		x	x	
TIBC		x	x	
TOTAL PROTEIN liquicolor	x	x	x	x
TRANSFERRIN				x
TRIGLYCERIDES liquicolor ^{rmono}	x	x	x	
UREA liquicolor	x	x	x	
UREA liquiUV	x	x	x	
URIC ACID liquicolor ^{plus}	x	x	x	
URIC ACID liquicolor	x	x	x	



Humalyzer Photometers

With the Humalyzer instruments, HUMAN provides flexible, robust and smart solutions to small laboratories all around the world.



Smart solutions

- > Reference channel - reduced signal noise and increased precision
- > Independence from main power with battery pack & solar panel
- > Smooth start with a new instrument thanks to tutorial videos

REF

18250

Humalyzer 4000

Top-class semi-automatic photometer

- Wavelengths: 340, 405, 505, 546, 578, 620, 700, 750 nm
- Total of 144 programmable settings
- Settings for high quality HUMAN multipurpose reagents preinstalled
- Software: English, Spanish, French, German, Russian, Ukrainian
- 8 GB memory for results, QC, calibration (SD-Card, expandable)
- Color touchscreen 640 x 480 pixel
- Remote access for support
- Low energy consumption
- Extremely quiet
- LIS (ethernet, unidirectional)
- Integrated incubator with 10 round and 2 square positions



Humalyzer 4000



Video Tutorial

Accessories

REF	Description
18250/74	Battery pack with USB fan (12/24 VDC, 73Wh for 4h operation of Humalyzer 4000)
18250/73	Solar panel (up to 36 W, for charging of battery pack)
18250/76	Barcode scanner
17050	HumaCube 230 VAC (page 129)
17070	HumaCube 110 VAC (page 129)

Consumables

REF	Description
18052*	Disposable macro cuvettes (1,000 pcs)
18222	Flow cell cleaner 100 ml
16890/30	Sample tubes 12 x 85 mm, 5 ml (1,000 pcs)
18144/5	Thermal printer paper (5 pcs)



Humalyzer Photometers

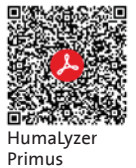
REF

18200

Humalyzer Primus

Semi-automatic photometer

- Wavelengths: 340, 405, 500, 546, 620 nm and free positions
- Total of 60 programmable settings
- Software: English
optional: Spanish, French, Russian
- Memory for 2,200 results, QC, calibration
- LCD display 240 x 64 pixels
- Comprehensive QC statistics module
- Incubation at 25°C, 30°C or 37°C
- HumaCube incubator available (optional)



Accessories

REF	Description
17050	HumaCube 230 VAC (page 129)
17070	HumaCube 110 VAC (page 129)
18200/59	Filter 410 nm
18200/55	Filter 450 nm
18200/56	Filter 492 nm
18200/57	Filter 510 nm
18200/60	Filter 536 nm
18200/61	Filter 550 nm
18200/62	Filter 595 nm
18200/58	Filter 630 nm
18200/74	Power cable USA standard

Consumables

REF	Description
18052*	Disposable macro cuvettes (1,000 pcs)
18222	Flow cell cleaner 100 ml
18144/5	Thermal printer paper (5 pcs)

* Distributed by HUMAN as non-HUMAN label



Humalyzer Photometers at a glance



	Humalyzer PRIMUS	Humalyzer 4000
Flow cell	Yes	Yes
Pump	Peristaltic	Peristaltic
Single cuvette use	(Yes) Please refer to user manual	Yes
Reference channel	No	Yes
Wavelengths	5 installed, 2 optional	8 installed
Linearity	2.5 OD	2.5 OD
Incubation	External incubator required optional HumaCube	Integrated incubator with 10 round and 2 square positions
Reaction temperature	25, 30, 37 °C	25, 30, 37°C
Display	240 x 64 pixels	640 x 480 pixels
User interface	20 foil keys	Touchscreen
Languages	English, optional Russian, French, Spanish	English, Spanish, French, German, Russian, Ukrainian
No. of methods	60	144
Memory results	2,200 results	8 GB (expandable)
Quality control program	QC statistics	QC statistics, Levey-Jennings
Remote access	No	Yes
Searchable results database	No	Yes
Reaction curve	No	Yes, displayed and saved
Backup	No	USB, LAN (automatic)
Update	Service Engineer	User (USB)
Battery pack	No	Optional (REF 18250/74)
Solar panel	No	Optional (REF 18250/73)



HumaStar Analyzers

HUMAN's automated analyzer range features entry-level to medium throughput automation. All automated analyzers are optimized for use with HUMAN reagents.



REF

16890

HumaStar 100

Random access benchtop analyzer for low throughput

Constant throughput: 100 tests per hour



REF

16895

HumaStar 200

Random access benchtop analyzer for medium throughput

Maximum throughput: 200 tests per hour
Typical throughput: 127 tests per hour



Organize your lab workflow with perfect quality and efficiency

- Random access and STAT
- 80 reusable Bionex® cuvettes
- Multi-step cuvette wash station
- 60 sample positions for primary tubes 12 x 75 mm – 12.5 x 100 mm and sample cups
- Optional up to 16 x 100 mm
- Reagent cooling independent from main power switch
- 30 reagent positions for 20 ml and 50 ml bottles
- Internal sample barcode reader
- Capacitive liquid level detector
- Needle shock detector
- Liquid containers with level monitoring
- Windows® 10, USB compatible
- LIS via ethernet, ASTM protocol, bidirectional
- Software optimized for touchscreen monitor
- UPS included



HumaStar
100|200



Movie



Accessories

REF	Description
16890/10	Sample tray 60 positions of 12 x 75 mm – 12.5 x 100 mm or 1 ml (10 mm) cups with adapter, included in standard delivery
16890/11	Sample tray 20 positions of 12 x 75–16 x 100 mm + 20 of 2 ml cups
16890/26	Sample tray 60 positions of 12–12.65 x 75 mm or 1 ml (10 mm) cups with adapter. For barcode reading of 75 mm tubes and with slightly larger diameter
16890/12	Sample cups 1 ml adapter for 12 mm (for sample tray 16890/10) (10 pcs), included in standard delivery
16890/13	Reagent bottles tray 30 positions, included in standard delivery
16890/14	20 ml bottle adapter (15 pcs), included in standard delivery
16890/15	Reagent adapter for cup or tube (1 pc), included in standard delivery
16890/41	Closing lid for reagent positions (15 pcs), included in standard delivery
18992PC	PC with Windows®
18991M	LCD monitor 21.5 inch
18995MT	Touchscreen monitor 24 inch
16890/19	Desktop barcode reader
18993L	Laser printer

Consumables

REF	Description
16890/30	Sample tubes 12 x 85 mm, 5 ml (1,000 pcs)
16890/31	Sample cups 1 ml (for sample tray 16890/10 with 16890/12 , 1,000 pcs)
17470/59	Sample cups 2 ml (for sample tray 16890/11 , 500 pcs)
16890/33	Reaction cuvettes (200 pcs, up to 75,000 tests)
16890/34	Reagent bottle 20 ml (30 pcs)
16890/35	Reagent bottle 50 ml (30 pcs)
16890/36	Cap for reagent bottles (30 pcs)
18971	Wash additive 4 x 25 ml
18974	Special wash solution 12 x 30 ml
18973	Cuvette clean 4 x 100 ml (turbidimetry)



HumaStar Analyzers at a glance

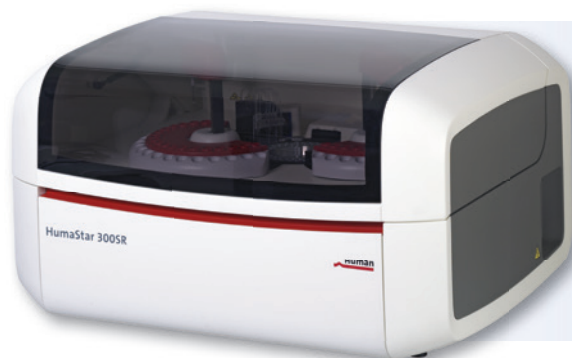


	HumaStar 100	HumaStar 200
Throughput, max. tests/hour	100	200
Throughput, typical mix	100	127
Random access/ batch	Random access	Random access
Pipetting system	1 needle, int. + ext. wash	1 needle, int. + ext. wash
Photometer	Direct, cuvette	Direct, cuvette
Wash station	Yes	Yes
Water consumption	< 1 l/h	< 2 l/h
Reaction cuvettes	Reusable, Bionex®	Reusable, Bionex®
Sample positions	60	60
Primary tubes	Yes	Yes
Barcode reader	Sample	Sample
Reagent tray positions	30 (for reagents + solutions)	30 (for reagents + solutions)
Reagent cooling	Yes	Yes
Needle shock detector	Yes	Yes
LIS	Ethernet, bidirectional, ASTM	Ethernet, bidirectional, ASTM
Languages	English, French, Spanish optionally expandable	English, French, Spanish optionally expandable
Computer, Windows® compatibility	External (USB), Windows® 10	External (USB), Windows® 10



HumaStar Systems

The HumaStar system concept comprises analyzers and corresponding reagents. Dedicated reagents guarantee outstanding performance combined with excellent onboard and calibration stability. The success of our products is the payoff for the time and care we invest in development and validation.



**Eco-friendly
ProClean 2.0
Technology**

- > Minimal carry-over – dual solution wash station
- > Low water consumption (< 3 l/h)
- > Separation and reduction of biohazard waste

REF 16930

HumaStar 300SR

Medium throughput random access system including UPS

- Merges the hardware and software of HumaStar 100/200
- Up to 300 chemistry tests per hour
- System reagents for HumaStar 300SR|600
- 40 cooled positions for reagents and solutions
- Continuous programming and sample loading
- 60 positions for samples and low volume solutions
- Primary tubes 12 x 75 mm – 12.5 x 100 mm and cups optional up to 16 x 100 mm
- Multi-step cuvette wash station
- Barcode reader for samples and reagents
- Software optimized for touchscreen monitor
- LIS via ethernet, ASTM protocol, bidirectional



HumaStar 300SR



Movie

Accessories

REF	Description
16890/10	Sample tray 60 positions of 12 x 75 mm – 12.5 x 100 mm or 1 ml (10 mm) cups with adapter, included in standard delivery
16890/11	Sample tray 20 positions of 12 x 75 – 16 x 100 mm + 20 positions of 2 ml cups
16890/26	Sample tray 60 positions of 12 – 12.65 x 75 mm or 1 ml (10 mm) cups with adapter). For barcode reading of 75 mm tubes and with slightly larger diameter
16890/12	Sample cups 1 ml adapter for 12 mm (for sample tray 16890/10) (10 pcs)
16930/131	Reagent bottles tray (20 pos) + lid (included in standard delivery)
16930/14	Reagent bottles tray lid
18992PC	PC with Windows®
18991M	LCD monitor 21.5 inch
18995MT	Touchscreen monitor 24 inch
18993L	Laser printer
16890/19	Desktop barcode reader

Consumables

REF	Description
16890/30	Sample tubes 12 x 85 mm, 5 ml (1,000 pcs)
16890/31	Sample cups 1 ml (for sample tray 16890/10 with 16890/12 , 1,000 pcs)
17470/59	Sample cups 2 ml (for sample tray 16890/11 , 500 pcs)
16890/33	Reaction cuvettes (200 pcs, up to 75,000 tests)
16770/25	Barcoded reagent containers 25 ml (10 pcs, 1,500 tests)
16770/70	Barcoded reagent containers 70 ml (10 pcs, 3,500 tests)
18971	Wash additive 4 x 25 ml
18974	Special wash solution 12 x 30 ml
18974/2	Special wash solution-2 6 x 50 ml
16663/20	Cuvette clean 6 x 55 ml
16663/10	Diluent 4 x 20 ml
16663/11	Diluent-2 4 x 20 ml
16661/01	Chimney (16 pcs)



HumaStar Systems

REF

16660

HumaStar 600

High throughput random access system including UPS

- Up to 600 chemistry tests per hour (w/o ISE)
- Up to 780 tests per hour with optional ISE module
- 48 cooled reagents on board - reagent cooling
- Continuous programming and sample loading
- Barcode reader for samples and reagents
- Water consumption < 5 l/h



HumaStar 600



Movie



ISE Reagents

REF	Description
16660/14-01	ISE reagent pack
16663/40	ISE tri-level QC kit
16660/11-01	ISE cleaning solution kit 6 x 12 ml
16660/13-01	ISE urine diluent 500 ml
16660/4-01	Na electrode
16660/5-01	K electrode
16660/6-01	Cl electrode
16660/7-01	Ref. electrode

Accessories

REF	Description
16663-04	ISE module field installation kit for Na, K, Cl
16660/251	USB-RS232-adaptor
18993L	Laser printer
18992PC	PC with Windows®
18991M	LCD monitor 21.5 inch
18995MT	Touchscreen monitor 24 inch
16661/15	Sample segment diameter max. 13 - 16 mm
16661/15W	SP-Tube adaptor white 11-13mm (20pcs)
16661/15B	SP-Tube adaptor black 13-16mm (20pcs)

Consumables

REF	Description
16663/10	Diluent 4 x 20 ml
16663/11	Diluent-2 4 x 20 ml
16661/01	Chimney (16 pcs)
16663/20	Cuvette clean 6 x 55 ml
16663/25	Tip cleaning kit 4 x 20 ml Tip clean + tip rinse 4 x 20 ml
16661/1	Reaction cuvettes (1,200 pcs)
18971	Wash additive 4 x 25 ml
18974/2	Special wash solution-2 6 x 50 ml
17470/59	Sample cups 2 ml (500 pcs)



HumaStar Systems at a Glance




	HumaStar 300SR	HumaStar 600
Throughput, max. tests/hour	300	600
Throughput, typical mix	185	450
Pipetting system	2 arms with needle for sample + reagent	2 arms with needle for sample + reagent
Work mode	Random access	Random access, Optimized batch
Open channels	3	5
Reaction cuvettes	Reusable, Bionex®	Reusable, polymer
Water consumption	< 3 l/h	< 5 l/h
Reference Channels	No	Yes
Barcode reader	Internal for samples, External for reagents	Internal for samples + reagents
Sample tray positions/ STAT	60/all (for samples + solutions)	95/all
Reagent tray positions	40 (for reagents + solutions)	48 (for reagents + solutions)
Clot detector	No	Yes
Shock detector	Yes	Yes
LIS	Ethernet, bidirectional, ASTM	RS-232, bidirectional, ASTM, host query
Languages	English, French, Spanish, optionally expandable	English, Spanish, Russian, Chinese, optionally expandable
Computer, Windows® compatibility	External (USB), Windows® 10	External (USB), Windows® 10
ISE	No	Optional




System Reagents HumaStar 300SR | HumaStar 600

REF	Format	Unit/Size	Storage	Sample
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ALBUMIN liquicolor
BCG method, monoreagent

10560300	Reagent kit	4 x 60 tests	2...25 °C	
10560600		6 x 150 tests		


ALKALINE PHOSPHATASE liquicolor
AMP buffer, IFCC

12117300	Reagent kit	2 x 150 tests	2...8 °C	
12117600		3 x 250 tests		

ALKALINE PHOSPHATASE opt. liquicolor
DEA buffer, DGKC

12027600	Reagent kit	3 x 250 tests	2...8 °C	
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alpha-AMYLASE liquicolor
Substrate CNPG3, monoreagent

12028300	Reagent kit	2 x 100 tests	2...8 °C	
12028600		3 x 260 tests		


anti-STREPTOLYSIN-O
Latex enhanced immunoturbidimetric test



ALKALINE PHOSPHATASE liquicolor

11251300	Reagent kit	1 x 100 tests	2...8 °C	
11251600		1 x 210 tests		
11351	Standard +	2 x 1 ml		

APOLIPOPROTEIN A1
Immunoturbidimetric test

11101600	Reagent kit	1 x 70 tests	2...8 °C	
11104	Standard +	2 x 1 ml		



REF	Format	Unit/Size	Storage	Sample
APOLIPOPROTEIN B				
Immunoturbidimetric test				
11102600	Reagent kit	1 x 70 tests	2...8 °C	
11104	Standard	2 x 1 ml		
auto-BILIRUBIN-D liquicolor				
DPD method				
10741300	Reagent kit	2 x 100 tests	2...8 °C	
10741600		5 x 210 tests		
auto-BILIRUBIN-T liquicolor				
DPD method				
10742300	Reagent kit	2 x 150 tests	2...8 °C	
10742600		5 x 210 tests		
CALCIUM liquicolor				
O-cresolphthalein method				
10011300	Reagent kit	3 x 100 tests	2...25 °C	
10011600		3 x 430 tests		
CHOLESTEROL liquicolor				
CHOD-PAP method, monoreagent				
10028300	Reagent kit	2 x 100 tests	2...8 °C	
10028600		3 x 150 tests		
CHOLINESTERASE liquicolor				
Substrate Butyrylthiocholine				
12007300	Reagent kit	2 x 100 tests	2...8 °C	
CHLORIDE liquicolor				
TPTZ method, monoreagent				
10115300	Reagent kit	2 x 50 tests	2...25 °C	






System Reagents HumaStar 300SR | HumaStar 600

REF	Format	Unit/Size	Storage	Sample
-----	--------	-----------	---------	--------



CK-MB liquiUV

Immunoinhibition method

12118600	Reagent kit	2 x 100 tests	2...8 °C	
13612	Calibrator 	2 x 1 ml		
13611	Control 	2 x 2 x 2 ml		



CK NAC activated liquiUV

IFCC, 37°C

12015600	Reagent kit	2 x 180 tests	2...8 °C	 
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COMPLEMENT C3

Immunoturbidimetric test, monoreagent

11110600	Reagent kit	1 x 70 tests	2...8 °C	
11117	Standard 	2 x 1 ml		

COMPLEMENT C4

Immunoturbidimetric test, monoreagent



11113600	Reagent kit	1 x 70 tests	2...8 °C	
11117	Standard 	2 x 1 ml		



CRP


auto-CREATININE liquicolor

Jaffé method

10052300	Reagent kit	2 x 150 tests	15...25 °C	 
10052600		5 x 250 tests		





CREATININE (enzym) liquicolor

Enzymatic method

10053300	Reagent kit	1 x 95 tests	2...8 °C	
10053600		1 x 275 tests		

CRP

Immunoturbidimetric test

11241300	Reagent kit	1 x 100 tests	2...8 °C	  
11241600		1 x 250 tests		
11341	Standard 	2 x 1 ml		



Serum



Plasma
EDTA



Plasma
HEP



not included
but required

REF	Format	Unit/Size	Storage	Sample
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FERRITIN

Latex enhanced immunoturbidimetric test

11610600	Reagent kit	1 x 90 tests	2...8 °C	
13020600	Calibrator	4 x 0.5 ml		

gamma-GT liquicolor

Substrate gamma-glutamyl-3 carboxy-4-nitroanilide, 37°C, IFCC

12023300	Reagent kit	2 x 100 tests	2...8 °C	
12023600		3 x 250 tests		

GLUCOSE liquicolor

GOD method

10260300	Reagent kit	2 x 150 tests	2...8 °C	
10260600		6 x 210 tests		

GOT (ASAT) IFCC mod. liquiUV

Modified IFCC method, 37°C

12021300	Reagent kit	2 x 200 tests	2...8 °C	
12021600		5 x 310 tests		

GPT (ALAT) IFCC mod. liquiUV

Modified IFCC method, 37°C

12022300	Reagent kit	2 x 200 tests	2...8 °C	
12022600		5 x 310 tests		

HDL CHOLESTEROL liquicolor

Homogeneous enzymatic method

10084300	Reagent kit	2 x 100 tests	2...8 °C	
10084600		2 x 180 tests		



GPT (ALAT) IFCC mod. liquiUV



System Reagents HumaStar 300SR | HumaStar 600

REF	Format	Unit/Size	Storage	Sample
-----	--------	-----------	---------	--------

HbA1c liquidirect

Latex enhanced immunoturbidimetric test

10770600	Reagent kit	1 x 135 tests, LYS 2 x 100 ml	2...8 °C	WB
10776	Calibrator set +	4 x 0.5 ml		
10775	Control blood + normal	2 x 0.5 ml		
	Control blood + abnormal	2 x 0.5 ml		

IMMUNOGLOBULINS direct IgA

Immunoturbidimetric test

11501300	Reagent kit	1 x 100 tests	2...8 °C	SERUM
11501600		1 x 250 tests		
11504	Calibrator set +	5 x 2 ml		

IMMUNOGLOBULINS direct IgG

Immunoturbidimetric test

11502300	Reagent kit	1 x 100 tests	2...8 °C	SERUM
11502600		1 x 250 tests		
11504	Calibrator set +	5 x 2 ml		

IMMUNOGLOBULINS direct IgM

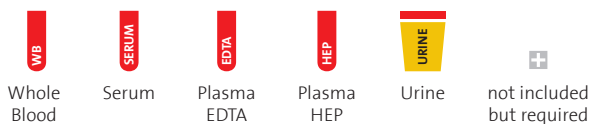
Immunoturbidimetric test

11503300	Reagent kit	1 x 100 tests	2...8 °C	SERUM
11503600		1 x 250 tests		
11504	Calibrator set +	5 x 2 ml		

IRON TPTZ liquicolor

TPTZ method

12290300	Reagent kit	2 x 100 tests	2...8 °C	SERUM HEP
12290600		2 x 180 tests		






REF	Format	Unit/Size	Storage	Sample
LDH SCE mod. liquiUV Substrate Pyruvate, 37°C				
12014600	Reagent kit	2 x 180 tests	2...8 °C	
LDL CHOLESTEROL liquicolor Homogeneous enzymatic method				
10094600	Reagent kit	2 x 90 tests	2...8 °C	
LIPASE liquicolor Substrate Methylresorufin, 37°C				
12006600	Reagent kit	2 x 100 tests	2...8 °C	
LIPOPROTEIN (a) Latex enhanced immunoturbidimetric test				
11105600	Reagent kit	1 x 90 tests	2...8 °C	
11107	Lp(a) Standard	2 x 0.5 ml		
MAGNESIUM liquicolor Xylidyl blue method, monoreagent				
10010300	Reagent kit	4 x 30 tests	2...25 °C	
10010600		4 x 60 tests		
MICROALBUMIN Immunoturbidimetric test				
11120600	Reagent kit	1 x 90 tests	2...8 °C	
11124	Standard	2 x 1 ml		
PANCREAS-AMYLASE liquicolor Substrate EPS-G7, 37°C				
12009600	Reagent kit	2 x 100 tests	2...8 °C	






System Reagents HumaStar 300SR | HumaStar 600

REF	Format	Unit/Size	Storage	Sample
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PHOSPHORUS liquirapid
Molybdate (UV) method

10027300	Reagent kit	4 x 30 tests	2...25 °C	
10027600		4 x 60 tests		




POTASSIUM liquiUV
Enzymatic UV test

10120300	Reagent kit	1 x 120 tests	2...8 °C	 
10120600		1 x 250 tests		
10126	Standard 	2 x 3 ml		



RHEUMATOID FACTORS
Latex enhanced immunoturbidimetric test

11261300	Reagent kit	1 x 100 tests	2...8 °C	
11261600		1 x 210 tests		
11361	Standard 	2 x 3 ml		




SODIUM liquicolor
Enzymatic colorimetric test

10113300	Reagent kit	1 x 120 tests	2...8 °C	 
10113600		1 x 250 tests		
10114	Standard 	2 x 3 ml		

TOTAL PROTEIN liquicolor
Biuret method, monoreagent

10570300	Reagent kit	2 x 150 tests	2...25 °C	 
10570600		6 x 210 tests		

TRIGLYCERIDES liquicolor^{mono}
GPO POD method, monoreagent

10724300	Reagent kit	3 x 60 tests	2...8 °C	  
10724600		3 x 210 tests		





REF	Format	Unit/Size	Storage	Sample
TRANSFERRIN Immunoturbidimetric test				
11115600	Reagent kit	1 x 70 tests	2...8 °C	
11117	Standard \oplus	2 x 1 ml		
UREA liquiUV Urease method				
10521300	Reagent kit	2 x 150 tests	2...8 °C	
10521600		5 x 250 tests		
URINARY TOTAL PROTEIN liquicolor Pyrogallol red method				
10590300	Reagent kit	3 x 50 tests	2...8 °C	
10595	Standard \oplus	2 x 3 ml		
URIC ACID liquicolor^{plus} Uricase method with ascorbate oxidase				
10694300	Reagent kit	2 x 100 tests	2...8 °C	
10694600		5 x 250 tests		



Humalyte Plus ISE Systems



REF 17470/10

Humalyte Plus³

Na⁺, K⁺, Cl⁻

REF 17470/20

Humalyte Plus⁵

Na⁺, K⁺, Cl⁻, pH*, iCa⁺⁺

System Reagents

REF	Description
17470/82	Reagent Pack Humalyte Plus ³
17470/83	Reagent Pack Humalyte Plus ⁵
17470/70	QC solution 100 ml
17470/110	QC solution 10 x 2 ml

Reagent consumption – Reagent capacity

The consumption of reagent depends on the way the instrument is used. There are several factors that influence the reagent consumption. The following table is a rough estimation of the reagent consumption in relation to the number of samples per day measured.

No. of samples per day	No. of samples per reagent pack
5	100 – 190
10	200 – 350
20	350 – 550
50	600 – 850
100	850 – 1,050

Benchtop ISE electrolyte systems

- Analysis time < 60 sec per sample
- Direct ISE
- System reagent pack
- Optional autosampler for 20 samples and STAT
- For testing serum, whole blood (heparin), plasma (heparin) or diluted urine
- LCD touchscreen
- Internal thermal printer
- Memory for 200 samples, QC
- Automatic calibration
- Standby mode
- Quality control database



Humalyte



Movie

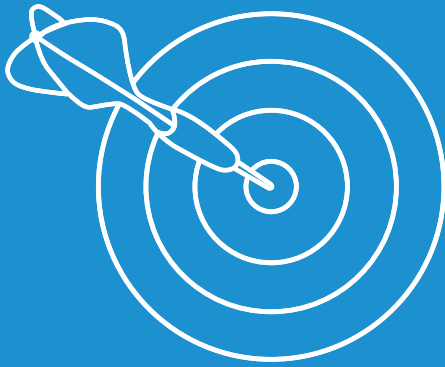
Consumables

REF	Description
17470/72	Weekly cleaning solution 100 ml
17470/71	Daily cleaning solution 100 ml
17470/11	K electrode (K ⁺)
17470/12	Na electrode (Na ⁺)
17470/13	Cl electrode (Cl ⁻)
17470/14	Ca electrode (iCa ⁺⁺) (Humalyte Plus ⁵)
17470/15	pH electrode (pH) (Humalyte Plus ⁵)
17470/17	Reference electrode
17470/18	Internal electrode
17470/19	Reference membrane (10 pcs)
17470/76	Ca filling solution 100 ml (Humalyte Plus ⁵)
17470/74	K filling solution 100 ml
17470/75	pH/Na/Cl filling solution 100 ml
17470/78	Ref. filling solution 100 ml
17470/79	Na conditioner 100 ml
17470/86	Urine diluent 100 ml
18144/5	Thermal printer paper (5 pcs)

Accessories

REF	Description
17470/30	Autosampler for 20 sample cups
17470/59	Sample cups 2 ml (500 pcs)
17470/7	Barcode reader (RS232)

* Used for correction of iCa results only!



External Quality Assessment

In laboratory medicine, external quality assessment (EQA) plays a critical role in ensuring reliable analytical results. EQA is important for improving the laboratory's quality management system as it is a measure of laboratory performance. The international standard ISO 15189:2012 requires participation in proficiency testing for all tests offered by a laboratory.

We recommend two partners because their programs provide peer-groups for HUMAN systems.

The two partners are:

ESfEQA is a German company based in Heidelberg and accredited according to DIN EN ISO/IEC 17043:2010 by the German Accreditation Body DAkkS. ESfEQA offers more than 70 external quality assessment programs in the fields of biochemistry, hematology, immunology, microbiology and molecular diagnostics.

ESfEQA is one of two HUMAN recommendations for a web-based, international external quality assessment (EQA) program. It helps laboratories ensure accurate, reliable and comparable results, regardless of where in the world they are obtained. ESfEQA is powerful because of its wide range of HUMAN peer groups. It is an accredited proficiency testing program that supports the HUMAN peer-group to guarantee and increase the statistical confidence of results with HUMAN products. ESfEQA offers more than 70 programs in five different segments.

HuQAS (Human Quality Assessment Services) is a non-governmental organization (NGO) that has been providing proficiency testing (PT) services and related technical training to diagnostic and research laboratories since 2000.

ISO/IEC 17043:2010 accreditation has enabled the organization to establish a robust quality management system, build a culture of excellence, develop error-proofing mechanisms, and put the customer at the center of its activities. With EQA services in various African countries and collaborations in North America and Europe.



ESfEQA



HuQAS



ESfEQA and HuQAS

Web-based, simple and user-friendly EQA

ESfEQA and HuQAS are HUMAN 's recommendations for a web-based, international external quality assessment (EQA) program. It helps laboratories to ensure precise, reliable, and comparable results, irrespective of where in the world they are obtained. ESfEQA and HuQAS are unique due to their powerful HUMAN peer groups. Both are our accredited EQA program which support the HUMAN peer groups in order to guarantee and increase the statistical security of results with HUMAN products.

Microbiology/Virology (ESfEQA)

Adenovirus
Aspergillus fumigatus
Bacteriology
Borrelia
Brucella
Chagas
Chikungunya Virus
Chlamydia Pneumoniae
Chlamydia Trachomatis
Coxsackievirus
Dengue Virus
ECHO-Virus
Enterovirus
Epstein-Barr-Virus
Hepatitis A Virus
Hepatitis B Virus
Hepatitis E Virus
HTLV I/II
Infectious Diseases
Influenza A Virus
Influenza B Virus
Leptospira
Malaria Microscopy
Measles
Mosquito transmitted Diseases
Parainfluenza Virus
Parvovirus B19
Respiratory Syncytial Virus
SARS-CoV-2 antibodies
Syphilis
ToRCH
Varicella Zoster Virus
West Nile Virus
Zika Virus

Biochemistry (ESfEQA)

Blood Gas & Electrolytes
Cardiac Marker
Cerebrospinal Fluid
Clinical Chemistry
Coagulation
Drugs of Abuse
Ethanol, Ammonia and Bicarbonate
Fecal Occult Blood
Glycated Hemoglobin (HbA1c)
Qualitative Urine Analysis (Urine Stick)
Therapeutic Drugs
Urine Chemistry
Urine Sediments

Immunology (ESfEQA)

hCG
Hormones
Procalcitonin
Specific Proteins
Tumor Markers
Tumor Markers and Hormones

Hematology, Coagulation (ESfEQA)

Blood Grouping
Immunochemistry
ESR
ESR Alcor
ESR Alifax
Hemogram
Hemogram incl. 3-part Diff.
Hemogram incl. 5-part Diff.

Molecular Diagnostics (ESfEQA)

SARS-CoV-2 Molecular



General Program (HuQAS)
Basic Chemistry
Special Chemistry
Urinalysis
Urin HcG
Tumor Markers
Hematology 3-part Differential
Hematology 5-part Differential
Basic Glycated Hemoglobin
Lymphocyte Immunophenotyping
Sickle Cell Screening
Coagulation
Peripheral Blood Film Slides
Basic Transfusion Medicine
Syphilis Serology
Hepatitis Serology
SARS-CoV-2 Molecular
SARS-CoV-2 Serology
HIV Screening
HIV Serology
HBV DNA Viral Load
HCV RNA Viral Load
Rifampicin-Resistant Mycobacterium Tuberculosis
Mycobacterium Acid Fast Stain
Cryptococcus Antigen
KOH Slides
Malaria

General Program (HuQAS)
Bacterial Identification
Gram Stain
Throat Culture
Urine Culture
Blood Parasites
Helicobacter pylori Antigen
General Parasitology
Affirm VP Test
Wet Prep

Visit the websites of our partners and get in contact

ESfEQA: www.esfeqa.eu/en or contact ESfEQA at info@esfeqa.eu

HuQAS: www.huqas.org or contact HuQAS at info@huqas.org

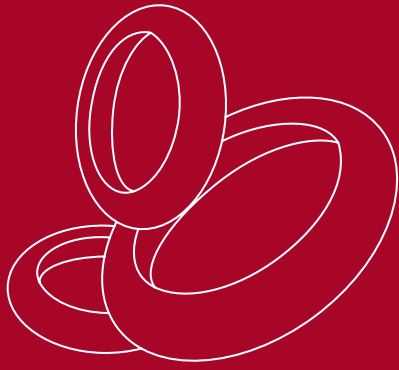


ESfEQA



HuQAS





Hematology

HUMAN's automated hematology products are designed for small to large laboratories and range from 30 to 80 samples throughput per hour.

HUMAN offers both 3-part and 5-part differential systems with specially developed and dedicated reagents suitable for human and veterinary applications. Controls and calibrators for all systems are available on a standing order scheme. A 5-part differential system including optional C-reactive protein detection and an erythrocyte sedimentation (ESR) instrument with 24 samples per hour throughput complete the line.



HumaCount 3-part Systems

The 3-part systems based on electrical impedance enable counting of 3 types of white blood cells together with an analysis of red blood cells and platelets – HumaCount 80^{TS}|30^{TS}, with 80 or 30 full blood counts per hour. HUMAN offers extremely stable reagents which can be stored at temperatures up to 42 °C. A feature which is unique for 3-part analyzers.

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3-part HumaCount Reagents



HumaCount 80^{TS}



HumaCount 30^{TS}

HumaCount 5-part Systems

The advanced 5-part systems are based on proven impedance detectors and 3D laser technology that allow the differentiation of 5 types of white blood cells, atypical lymphocytes (ALY), large immature cells (LIC), further analyses red blood cells and platelets.

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5-part HumaCount Reagents



HumaCount 5D



HumaCount 5L



HumaCount 5D^{CRP}

The HumaCount 5D^{CRP} is based on the proven technology of the HumaCount 5D. In addition, it offers the possibility of simultaneous measurement of CRP and 5-part diff parameters out of one and the same sample.

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HumaSRate 24^{PT} ESR-System



HumaSRate 24^{PT}

HUMAN's ESR (erythrocyte sedimentation rate) system is suitable for small to medium sized labs. The use of primary EDTA tubes for ESR reading is cost effective because no ESR tube is required. It also offers more flexibility to perform ESR tests at any time and without additional blood sampling.

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HumaCount 3-part and 5-part Systems

The automated 3- and 5-part differential hematology systems with up to 32 parameters are reliable and easy to operate. Our hematology systems have been on the market for many years with excellent references regarding robustness and reliability and meet all requirements of a hematological laboratory.

HumaCount 80^{TS}|30^{TS} Automated hematology system

Successful 22 parameter HumaCount system

- Heat stable reagents (2-42°C storage temp.)
- Large color touchscreen for intuitive operation
- Auto-clean and auto-maintenance cycles
- Auto-control and calibrator requests
- Sample rotor for comfortable use
- Extended QC procedures
- Built-in thermal printer
- Veterinary mode*
- Optional rechargeable battery and solar panel
- Optional 2D barcode scanner for error-free upload of target values

Accessories

REF	Description
16350/300	Tube adapter I
16350/301	Tube adapter II
16350/302	Tube adapter III
18961	UPS1 KVA / 230 V
18965/220	Portable battery system
18965/100	Solar panel
16430/11	2D barcode scanner

Consumables

REF	Description
18144/5	Thermal printer paper (5 pcs)
16420/324	Reagent tubing kit

System reagents for HumaCount 80^{TS}|30^{TS}|(60^{TS})

REF	Description	Unit/Size	Storage
17400/11**	HC-Diluent	20 l	2...42 °C
17400/22**	HC-Lyse CF (cyanide-free reagent)	2 x 1 l	2...42 °C
17400/31**	HC-Cleaner (high quality cleaning)	1 l	2...42 °C
17400/40**	HC-Control (3 levels, multi-parameter)	3 x 2.5 l	2...8 °C
17400/50**	HC-Calibrator	1 x 2 ml	2...8 °C
17400/55	HC-Regular (enzymatic cleaner)	1 x 50 ml	2...25 °C
17400/56	HC-Acute (hypochlorite cleaner)	1 x 50 ml	2...25 °C



REF 16420/80

HumaCount 80^{TS}
80 samples/hour



REF 16420/30

HumaCount 30^{TS}
30 samples/hour

* Usage of the veterinary mode is the user's own responsibility!

** Reagents are suitable for previous HumaCount and HumaCount^{plus}



Auto-sampler

REF 16430

HumaCount 5L
Automated hematology system

- Patented laser technology for 5-part differentiation
- With a throughput of 60 samples/hour and an auto-sampler, this system meets the requirements of medium to large sized laboratories
 - Integration into Hospital Management System
 - Unidirectional LIS connection (HL7 standard)
 - Continuous workflow through internal reagent reservoirs
 - Only 3 reagents required
 - Optional auto-sampler with built-in barcode reader
 - STAT operation with closed or open tube
 - Large color touchscreen
 - Optional 2D barcode scanner for error-free upload of target values



- > Reduced clogging rates due to the burning of proteins through a high energy boost at each measuring cycle
- > Low detergent consumption
- > Continuous workflow with reliable cell counting

Consumables

REF	Description
16430/14	Reagent tubing kit

Accessories

REF	Description
16430/10	Auto-sampler
16430/12	Small sample module (25 µl sample vol.)
18965/220	Portable battery system
18965/100	Solar panel
16430/11	2D barcode scanner
16430/9	Case Study Book

System reagents for HumaCount 5L

REF	Description	Unit/Size	Storage
16430/20	HC5L-Diluent	20 l	15...30 °C
16430/30	HC5L-Lyse CF (cyanide-free reagent)	5 l	15...30 °C
16430/40	HC5L-Diff	1 l	15...30 °C
16430/50	HC5L-Control (3 levels, multi-parameter)	2 x 3 x 3 ml	2...8 °C
17400/50**	HC-Calibrator	1 x 2 ml	2...8 °C
17400/55	HC-Regular (enzymatic cleaner)	1 x 50 ml	2...25 °C
17400/56	HC-Acute (hypochlorite cleaner)	1 x 50 ml	2...25 °C



Case Study Book



HumaCount 5L



Movie



HumaCount 5-part System with optional CRP detection

The advanced 5-part systems are based on proven impedance detectors and 3D laser technology that allow the differentiation of 5 types of white blood cells, atypical lymphocytes (ALY), large immature cells (LIC), further the analysis of red blood cells and platelets. In addition, the HumaCount 5D^{CRP} offers the possibility of simultaneous measurement of CRP and 5-part diff parameters out of one and the same sample.

HUMAN's latest hematology technology

- 3D laser detection for improved 5-part differentiation
- Up to 60 samples/hour
- Up to 32 parameters
- Definite immature cell count (LIC, ALY)
- Direct capillary process by OptimalCount Technology
- 20 µl venous or capillary blood
- Software switch between 5-part and CBC or CRP mode (HumaCount 5D^{CRP}) to save costs
- LIS connection (HL7 standard)
- STAT operation with any tube type
- Integrated PC with a storage capacity of 50,000 samples
- Large color touchscreen
- Optional 2D barcode scanner for error-free upload of target values

OptimalCount Technology



REF

16450

HumaCount 5D

Automated 5-part hematology system

3D laser detection for improved 5-part differentiation

- Distinct 5-part diff
- Up to 29 parameter



HumaCount 5D

OptimalCount Technology



REF

16451

HumaCount 5D^{CRP}

Automated 5-part hematology system including CRP detection

3D laser detection for improved 5-part differentiation including immunoturbidimetric CRP detection

- Distinct 5-part diff
- Immunoturbidimetric CRP detection
- Up to 32 parameter



HumaCount 5D^{CRP}



Movie



Whole Blood



Capillary Blood

**OptimalCount Technology for capillary samples****OptimalCount
Technology**

- > Accuracy as high as on venous samples
- > Defined blood volume by capillary tube
- > Total sample volume 20 µl and almost no dead volume
- > Dilution defined by auto-diluent dispense
- > No manual steps required

**Accessories - HumaCount 5D and HumaCount 5D^{CRP}**

REF	Description
16430/11	2D barcode scanner
18965/220	Portable battery system
18965/100	Solar panel

Consumables - HumaCount 5D and HumaCount 5D^{CRP}

REF	Description
16070/30*	End-to-end capillaries 20 µl (100 pcs)

*distributed by HUMAN

**System reagents for HumaCount 5D and HumaCount 5D^{CRP}**

REF	Description	Unit/Size	Storage	Sample
16450/10	HC5D-Diluent	20 l	2...30 °C	
16450/20	HC5D-CBC-Lyse	200 ml	2...30 °C	
16450/30	HC5D-Diff-Lyse	500 ml	2...30 °C	
16450/60	HC5D-Clean	50 ml	2...30 °C	
16450/40	HC5D-Control (3 levels, multi-parameter)	2 x 3 x 3 ml	2...8 °C	
17400/50	HC-Calibrator	1 x 2 ml	2...8 °C	

System reagents for HumaCount 5D^{CRP}, for CRP detection

REF	Description	Unit/Size	Storage	Sample
16451/70	CRP-Reagent HumaCount 5D ^{CRP}	CRP-Reagent 1, 1 x 75 ml CRP-Reagent 2, 1 x 25 ml	2...8 °C	
16451/40	CRP-Control HumaCount 5D ^{CRP}	3 x 1.0 ml	2...8 °C	
16451/50	CRP-Calibrator HumaCount 5D ^{CRP}	6 x 0.5 ml	2...8 °C	



HumaCount Systems at a Glance



	HumaCount 80 ^{TS} 30 ^{TS}	HumaCount 5D	HumaCount 5D ^{CRP}	HumaCount 5L
Leucocyte differentiation	3-part	5-part	5-part	5-part
Throughput	80 samples/hour 30 samples/hour	60 samples/hour	60 samples/hour	60 samples/hour
No. of parameters	22	29	32	26
Sample volume	25 µl	20 µl venous or capillary blood	20 µl venous or capillary blood	110 µl whole blood; 25 µl optional with small sample module
Display	800 x 480 pixels	800 x 600 pixels	800 x 600 pixels	800 x 600 pixels
LIS / HL7	X	X	X	X
Veterinary mode	X			

Parameters

WBC	X	X	X	X
LYM / LYM%	X	X	X	X
MID / MID%	X			
MON / MON%		X	X	X
NEU / NEU%		X	X	X
EOS / EOS%		X	X	X
BAS / BAS%		X	X	X
ALY / ALY%		X*	X*	
LIC / LIC%		X*	X*	
NRBC / NRBC %			X*	
GRA / GRA%	X			
RBC	X	X	X	X
HCT	X	X	X	X
MCV	X	X	X	X
RDW_{cv}	X	X	X	X
RDW_{sd}	X	X	X	X
HGB	X	X	X	X
MCH	X	X	X	X
MCHC	X	X	X	X
PLT	X	X	X	X
PCT	X	X	X	X
MPV	X	X	X	X
PDW_{cv}	X			X
PDW_{sd}	X	X	X	X
P-LCC	X*	X	X	X*
P-LCR	X*	X	X	X*
CRP			X	

* Research parameter only



Erythrocyte Sedimentation Rate (ESR) System

HUMAN offers an ESR (erythrocyte sedimentation rate) system for small to medium sized labs. The use of primary EDTA tubes for ESR reading is cost-efficient because no ESR tube is necessary. HumaSRate 24^{PT} offers the flexibility to run ERS tests at any time without additional blood collection.



REF	15024
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HumaSRate 24^{PT}

Unique ESR analyzer without consumables

- Real erythrocyte sedimentation rate analyzer
- Use of primary EDTA tubes - no consumables required
- Throughput: up to 24 samples/h
- Channels: 8 with integrated mixer
- Unique sedimentation curve (outstanding accuracy, measurement every 10 sec)
- Excellent correlation to Westergren
- Integrated barcode reader to identify the sample ID
- QC module with Levey-Jennings-diagram
- Data storage of up to 5,000 patient results
- Touchscreen with intuitive user interface
- LIS connectivity



HumaSRate 24^{PT}



Consumables

REF	Description
15024/40	HSRate-Control (2 x 2 ml)

Test Credits - HumaSRate 24^{PT}

REF	Description
15024/12	Smart Card for HumaSRate 24 ^{PT} (1,200 tests)



CLIA | FIA

Chemiluminescence and fluorescence-immunoassay systems are two platforms complementing each other perfectly.

HumaCLIA 150 is the ideal immunoassay system for testing in central and remote labs. With the innovative HumaCLIA 150, HUMAN offers a state-of-the-art random-access system based on CLIA detection technology capable of running a wide range of different immunoassays.

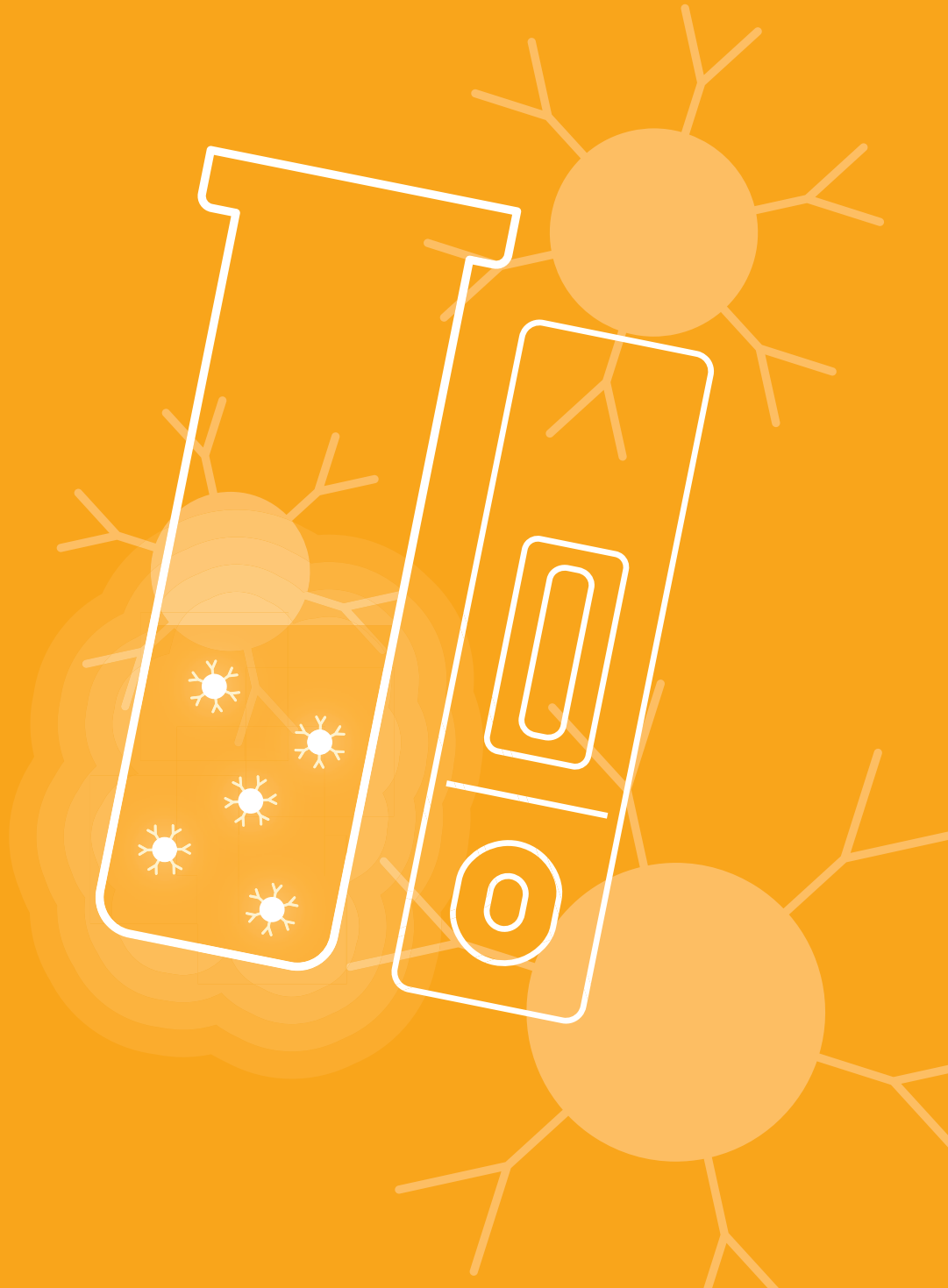
HumaFIA on the other hand is perfectly matching for small and medium labs or low throughput parameters. It uses time-resolved detection technology, the most advanced method supporting sensitive parameters comparable to CLIA technology.



HumaCLIA 150



HumaFIA





HumaCLIA 150 System

The random-access HumaCLIA 150 system is the ideal fit for every low- to mid-volume diagnostic laboratory for testing in central and more remote laboratories. The system is capable of running assays for thyroid, fertility hormones, tumor and cardiac markers, and bone metabolism; among many others to choose from.

The system requires little training thanks to its intuitive layout and user-friendly operator interface. Its large loading capacity for consumables, samples and reagents translates into an excellent walk-away time.



REF 15910

HumaCLIA 150

Random-access chemiluminescence immunoassay system

- Random-access chemiluminescence immunoassay system
- Up to 150 tests/hour
- Cooled reagent positions: 20
- Sample/STAT positions: 50
- Reaction tube capacity: 1000
- Assay kit size: 2 x 50 tests including calibrators



HumaCLIA 150



Assay Sheet



Video



Medlab

Accessories

REF	Description
18992PC	Computer with Windows®
18995MT	Touch screen monitor (22 inch, 16:9)
15910/809	Wash container 10 l (1 pc)
15910/15	Waste Box (10 pcs)

Consumables

REF	Description
15910/11	Reaction vessels (2 x 1.000 pcs)
80050	Pre-Trigger solution (4 x 220 ml)
80055	Trigger solution (4 x 220 ml)
80060	Wash buffer concentrate (4 x 1000 ml)



Serum



Plasma
EDTA



Plasma
HEP

* In development



Thyroid

REF	Format	Unit/Size	Storage	Sample
T3 HumaCLIA SR Quantitative determination of total triiodothyronine (T3)				
84615	Reagent kit	2 x 50 tests	2...8 °C	
T4 HumaCLIA SR Quantitative determination of total thyroxine (T4)				
84605	Reagent kit	2 x 50 tests	2...8 °C	
ft3 HumaCLIA SR Quantitative determination of free triiodothyronine (ft3)				
84620	Reagent kit	2 x 50 tests	2...8 °C	
ft4 HumaCLIA SR Quantitative determination of free thyroxine (ft4)				
84610	Reagent kit	2 x 50 tests	2...8 °C	
TSH HumaCLIA SR Quantitative determination of thyroid stimulating hormone (TSH)				
84600	Reagent kit	2 x 50 tests	2...8 °C	
anti-TG HumaCLIA SR Quantitative determination of anti-thyroglobulin antibodies				
84625	Reagent kit	2 x 50 tests	2...8 °C	
anti-TPO HumaCLIA SR Quantitative determination of anti-thyroid peroxidase antibodies				
84630	Reagent kit	2 x 50 tests	2...8 °C	
TG HumaCLIA SR* Quantitative determination of thyroglobulin				
84635	Reagent kit	2 x 50 tests	2...8 °C	



TSH HumaCLIA SR



Fertility Hormones


CLIA | FIA

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REF	Format	Unit/Size	Storage	Sample
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AMH HumaCLIA SR

Quantitative determination of anti-Müllerian hormone

82150	Reagent kit	2 x 50 tests	2...8 °C	
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HCG HumaCLIA SR

Quantitative determination of human chorionic gonadotropin

82100	Reagent kit	2 x 50 tests	2...8 °C	
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FSH HumaCLIA SR

Quantitative determination of follicle stimulating hormone


82120	Reagent kit	2 x 50 tests	2...8 °C	
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LH HumaCLIA SR

Quantitative determination of luteinizing hormone




LH HumaCLIA SR

82115	Reagent kit	2 x 50 tests	2...8 °C	
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Prolactin HumaCLIA SR

Quantitative determination of prolactin

82125	Reagent kit	2 x 50 tests	2...8 °C	
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Progesterone HumaCLIA SR

Quantitative determination of progesterone

82105	Reagent kit	2 x 50 tests	2...8 °C	
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Estradiol (E2) HumaCLIA SR

Quantitative determination of estradiol (E2)

82130	Reagent kit	2 x 50 tests	2...8 °C	
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Serum



Plasma
EDTA



Plasma
HEP

* In development



REF	Unit/Size	Unit/Size	Storage	Sample
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DHEA-S HumaCLIA SR*

Quantitative determination of dehydroepiandrosterone sulfate

82145	Reagent kit	2 x 50 tests	2...8 °C	
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Testosterone HumaCLIA SR

Quantitative determination of testosterone

82110	Reagent kit	2 x 50 tests	2...8 °C	
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Tumor Markers

REF	Format	Unit/Size	Storage	Sample
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AFP HumaCLIA SR

Quantitative determination of alpha-fetoprotein

83100	Reagent kit	2 x 50 tests	2...8 °C	
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CEA HumaCLIA SR

Quantitative determination of carcinoembryonic antigen

83105	Reagent kit	2 x 50 tests	2...8 °C	
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CA 125 HumaCLIA SR

Quantitative determination of cancer antigen 125

83110	Reagent kit	2 x 50 tests	2...8 °C	
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CA 15-3 HumaCLIA SR

Quantitative determination of cancer antigen 15-3

83115	Reagent kit	2 x 50 tests	2...8 °C	
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Tumor Markers

REF	Format	Unit/Size	Storage	Sample
CA 19-9 HumaCLIA SR				
Quantitative determination of cancer antigen 19-9				
83120	Reagent kit	2 x 50 tests	2...8 °C	
PSA HumaCLIA SR				
Quantitative determination of total prostate specific antigen				
83130	Reagent kit	2 x 50 tests	2...8 °C	
fPSA HumaCLIA SR				
Quantitative determination of free prostate specific antigen				
83125	Reagent kit	2 x 50 tests	2...8 °C	

Bone Markers

REF	Format	Unit/Size	Storage	Sample
PTH HumaCLIA SR				
Quantitative determination of parathyroid hormone				
85010	Reagent kit	2 x 50 tests	2...8 °C	
25-OH Vitamin D HumaCLIA SR				
Quantitative determination of 25-OH Vitamin D				
85000	Reagent kit	2 x 50 tests	2...8 °C	



Serum

Plasma
EDTAPlasma
HEP

* In development

** Non-CE – only for use outside Europe



Cardiac Markers

REF	Format	Unit/Size	Storage	Sample
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CK-MB HumaCLIA SR

Quantitative determination of creatine kinase-MB

85040	Reagent kit	2 x 50 tests	2...8 °C	
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Troponin I HumaCLIA SR

Quantitative determination of troponin I

85030	Reagent kit	2 x 50 tests	2...8 °C	
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BNP HumaCLIA SR*

Quantitative determination of brain natriuretic peptide

85045	Reagent kit	2 x 50 tests	2...8 °C	
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Myoglobin HumaCLIA SR

Quantitative determination of myoglobin

85035	Reagent kit	2 x 50 tests	2...8 °C	
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Anemia

REF	Format	Unit/Size	Storage	Sample
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Ferritin HumaCLIA SR**

Quantitative determination of ferritin

85049	Reagent kit	2 x 50 tests	2...8 °C	
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Folate HumaCLIA SR*

Quantitative determination of folate

85060	Reagent kit	2 x 50 tests	2...8 °C	
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Vitamin B12 HumaCLIA SR

Quantitative determination of Vitamin B12

85055	Reagent kit	2 x 50 tests	2...8 °C	
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Inflammation

REF	Format	Unit/Size	Storage	Sample
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PCT HumaCLIA SR

Quantitative determination of procalcitonin

85020	Reagent kit	2 x 50 tests	2...8 °C	
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Metabolism

REF	Format	Unit/Size	Storage	Sample
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Cortisol HumaCLIA SR*

Quantitative determination of cortisol

85070	Reagent kit	2 x 50 tests	2...8 °C	
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Infectious Diseases

REF	Format	Unit/Size	Storage	Sample
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anti-TP (Syphilis) HumaCLIA SR*

Quantitative determination of treponema pallidum antibody (anti-TP) Syphilis

81100	Reagent kit	2 x 50 tests	2...8 °C	
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Serum

Plasma
EDTAPlasma
HEP

* In development

** Non-CE – only for use outside Europe



Controls

REF	To be used with HumaCLIA SR reagents	Unit/Size	Storage
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Immunoassay Multi Control

Lyophilized human serum-based matrix containing multi-parameter analytes for HumaCLIA SR assays

84850	TSH, fT3, fT4, T3, T4, anti-TG, anti-TPO, TG, AFP, CEA, CA-125, CA 19-9, CA 15-3, FSH, LH, HCG, Progesterone, Testosterone, Prolactin, Estradiol (E2), DHEA-S, PSA**, fPSA**, 25-OH Vitamin D, C-Peptide, Ferritin, PTH**, Ferritin**, Folate, Vitamin B12, Cortisol, Insulin, Troponin I, CK-MB, Myoglobin	2 levels each with 2 x 3 ml	2...8 °C
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AMH Control

Ready to use control for AMH HumaCLIA SR

82850	AMH	2 levels each with 2 x 3 ml	2...8 °C
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PCT Control

Lyophilized control for PCT HumaCLIA SR

85820	PCT	2 levels each with 2 x 3 ml	2...8 °C
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Anti TP Control*

Ready to use control for anti-TP HumaCLIA SR

81800	anti-TP (Syphilis)	2 levels each with 2 x 2 ml	2...8 °C
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Diluent

REF	To be used with HumaCLIA SR reagents	Unit/Size	Storage
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Sample Diluent B

Dilution buffer to be used with HCG HumaCLIA SR

80110	HCG	2 x 45 ml	2...8 °C
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HumaFIA System

The HumaFIA single-cassette analyzer provides accurate readings wherever a quick result is needed: in emergency rooms, hospitals, doctors' offices, pediatric clinics, public health departments or laboratories. It is a small semi-automated platform for a large number of parameters. Ease of use and quality are built into this analyzer.

Suppression of background fluorescence through time-resolved detection enables sensitive testing. Built-in checks for incubation temperature and time, as well as sample type-specific calibration curves, ensure consistently high-quality results.

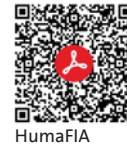


REF 16090

HumaFIA

Time-resolved fluorescence immunoassay system

- Workflow management for multi-throughput (every 20 sec).
- On-the-spot results
- Lab-free calibration by sample-type specific calibration card
- Easy testing by using whole blood, serum or plasma
- Auto-predilution calculation to extend linearity range



HumaFIA



Movie

Accessories

REF	Description
16090/510	Standard Cartridge HumaFIA
15250/70	Power Bank 73Wh
18250/73	Solar panel (foldable) 36W, USB connection

Consumables

REF	Description
18144/5	Printer paper (5 rolls)



Whole Blood



Serum



Plasma

* In development



HumaFIA SR Assays

REF	Format	Unit/Size	Storage	Sample
CRP HumaFIA SR				
Quantitative determination of C-reactive protein				
16090/20	Reagent kit	25 single cartridges	4...30 °C	
16090/21*	CRP control	2 levels each with 1 x 1 ml	2...8 °C	
PCT HumaFIA SR				
Quantitative determination of procalcitonin				
16090/25	Reagent kit	25 single cartridges	4...30 °C	
16090/26*	PCT control	2 levels each with 1 x 1 ml	2...8 °C	
NT-proBNP HumaFIA SR				
Quantitative determination of N-terminal pro-brain natriuretic peptide				
16090/30	Reagent kit	25 single cartridges	4...30 °C	
16090/31*	NT-proBNP control	2 levels each with 1 x 1 ml	2...8 °C	
Troponin I HumaFIA SR				
Quantitative determination of troponin I				
16090/35	Reagent kit	25 single cartridges	4...30 °C	
16090/36*	Troponin I control	2 levels each with 1 x 1 ml	2...8 °C	
D-Dimer HumaFIA SR				
Quantitative determination of D-Dimer				
16090/50	Reagent kit	25 single cartridges	4...30 °C	
16090/51*	D-Dimer control	2 levels each with 1 x 1 ml	2...8 °C	
IL-6 HumaFIA SR				
Quantitative determination of Interleukin 6				
16090/70	Reagent kit	25 single cartridges	4...30 °C	
16090/71*	IL-6 control	2 levels each with 1 x 1 ml	2...8 °C	
Ferritin HumaFIA SR				
Quantitative determination of ferritin				
16090/85	Reagent kit	25 single cartridges	4...30 °C	



HumaFIA SR Assays

REF	Format	Unit/Size	Storage	Sample
Vitamin-D HumaFIA SR				
Quantitative determination of 25-OH Vitamin D				
16090/55*	Reagent kit	25 single cartridges	4...30 °C	
16090/56*	Vitamin-D control	2 levels each with 1 x 1 ml	2...8 °C	
RF HumaFIA SR				
Quantitative determination of rheumatoid factor (RF)				
16090/60*	Reagent kit	25 single cartridges	4...30 °C	
ASO HumaFIA SR				
Quantitative determination of Anti-Streptolysin O (ASO)				
16090/80*	Reagent kit	25 single cartridges	4...30 °C	
Anti-CCP HumaFIA SR				
Quantitative determination of Anti-cyclic citrullinated peptide (Anti-CCP)				
16090/65*	Reagent kit	25 single cartridges	4...30 °C	
3-in-1 cTnl/Myo/CK-MB HumaFIA SR (3 parameter in 1 cartridge)				
Quantitative determination of Troponin I, Myoglobin and Creatine Kinase -MB				
16090/75*	Reagent kit	25 single cartridges	4...30 °C	
16090/91*	Myo control	2 levels each with 1 x 1 ml	2...8 °C	
16090/96*	CK-MB control	2 levels each with 1 x 1 ml		
16090/36*	Troponin I control	2 levels each with 1 x 1 ml		

ELISA

The HUMAN ELISA line of reagents and analyzers offers unique solutions for all sizes of laboratories from low to high throughput.

HUMAN ELISA reagents incorporate more than 100 assays for the detection of:

- Infectious Diseases
- Fertility Hormones
- Thyroid
- Metabolism
- Bone Markers
- Tumor Markers
- Allergy
- Autoimmune Diseases (IMTEC line)

HUMAN ELISAs are easy to use and flexible in automation.

The HUMAN family of fully automated ELISA analyzers provides best solutions for medium to high volume laboratories:

- Elisys Uno
- Elisys Duo
- Elisys Quattro

On the lower throughput end, HUMAN's ELISA line is completed with basic ELISA equipment for smaller laboratories or esoteric parameters:

- HumaReader Line
- Washer
- Incubator





ELISA Reagents

Infectious Diseases

ELISA infectious serology constitutes an indispensable and yet reliable method for accurate and individual diagnosis as well as prognosis. HUMAN provides a broad range of high quality state-of-the-art assays for the diagnosis of infections caused by viral, bacterial and parasitic agents. Our offer includes assays for:

- STDs (Sexually Transmitted Diseases) - a group of diseases that is among the five most important types of diseases affecting adults seeking health care in developing countries. Parameters include: HIV, hepatitis, syphilis.
- TORCH - a group of pathogens causing prenatal infections with potentially serious consequences for the unborn: *Toxoplasma*, rubella, cytomegalovirus, herpes simplex.
- Other infections: Varicella-zoster virus and measles
- Regional or endemic diseases with mild or symptomless courses, but serious consequences in the chronic phase: dengue.



CA 15-3

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Tumor Markers

Tumor markers are an integral part of modern cancer management. They are primarily used for monitoring and additionally for diagnostic and prognostic purposes, in combination with other clinical and paraclinical parameters.

Thyroid

Assays of a thyroid panel can help diagnose and monitor the treatment of thyroid disorders. HUMAN ELISA Thyroid is one of the broadest thyroid testing panels available on the market, including autoantibodies to thyroglobulin (TG), thyroid peroxidase (TPO) and TSH receptor (TRAb).

Fertility Hormones

HUMAN's panel of fertility parameters includes all relevant assays to detect ovulation and/or to diagnose infertility, including assays for steroid hormones/prohormones and reproductive hormones of the pituitary.

Metabolism and Bone Markers

HUMAN's quantitative ELISA assays for cortisol and 25-OH Vitamin D to help diagnose general metabolic disorders and bone disease, respectively.

Allergy

ELISA for the detection of total IgE as an aid in the diagnosis of allergies.

ELISA Reagents for Autoimmune Diseases

HUMAN, with its autoimmune brand IMTEC, is one of the leading experts and providers of autoimmune in vitro diagnostics. Further information can be found in the Autoimmune DX chapter (page 140) or in our separate Autoimmune DX product catalog.



Workstation



COMBIWASH

With the Combiwash, HUMAN offers a unique workstation for washing, shaking and incubation of microtiter plates. Flexible washing protocols can be programmed; programs for shaking and incubation are also freely definable.

 **Page 87**

ELISA

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HumaReader Single plus

Readers

A single strip and a high-speed plate reader designed for low throughput ELISA users. Both instruments are easy to use and provide reliable and fast results.

 **Page 88**

Elisys Automated Analyzers



Elisys Duo

HUMAN's automated ELISA analyzers cover the requirements of small to large ELISA laboratories. Full automation is available for 1, 2 or 4 plates with different test combinations on each plate. Sample barcode reading for secure and automatic sample identification is standard on the larger instruments. Most HUMAN ELISA tests are preprogrammed and additional applications can be added at any time.

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ELISA

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DENGUE IgG ELISA

Infectious Diseases

REF	Format	Unit/Size	Storage	Remark	Sample
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CMV

Qualitative determination of IgG or IgM antibodies to cytomegalovirus

51203	IgG	96 tests	2...8 °C	PEI calibration	SERUM
51103	IgM				

DENGUE

Qualitative determination of IgG or IgM antibodies to dengue virus

51240	IgG	96 tests	2...8 °C		SERUM	EDTA	HEP	CITRATE
51140	IgM				SERUM	EDTA	HEP	

H. PYLORI

Qualitative or quantitative determination of IgG or IgA antibodies to *Helicobacter pylori*

51222	IgG	96 tests	2...8 °C		SERUM	EDTA	HEP	CITRATE
51322	IgA							

HBsAg ultra sens

Qualitative determination of hepatitis B surface antigen (HBsAg)

51050	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM	EDTA	HEP	CITRATE
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anti-HBc*

Quantitative determination of total anti-HBc antibodies (anti-HBc-ab)

51260	Antibody test	96 tests	2...8 °C	PEI calibration	SERUM	EDTA	HEP	OXALATE
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anti-HBs*

Qualitative determination of antibodies to hepatitis B surface antigen (HBsAg)

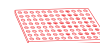
51255	Antibody test	96 tests	2...8 °C	PEI calibration	SERUM	EDTA	HEP	OXALATE
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Serum

Plasma
EDTAPlasma
HEPPlasma
CitratePlasma
Oxalate

* Currently without CE-mark



REF	Format	Unit/Size	Storage	Remark	Sample
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anti-HCV

Qualitative determination of anti-HCV antibodies

51275	Antibody test	96 tests	2...8 °C	Recomb. antigens	SERUM EDTA HEP CITRATE
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HIV Ag/Ab

Qualitative determination of the human immunodeficiency virus (HIV) p24 antigen and antibodies to HIV-1 (incl. Group O) and HIV-2

51215	Antigen / Antibody test	96 tests	2...8 °C	Recomb. antigens Monocl. antibodies	SERUM EDTA HEP CITRATE
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HSV

Qualitative determination of IgG antibodies to herpes simplex virus type 1 or 2 or IgM antibodies to herpes simplex virus

51216	HSV 1 IgG	96 tests	2...8 °C		SERUM
51226	HSV 2 IgG				
51126	HSV IgM				

MEASLES

Qualitative determination of IgG or IgM antibodies to measles virus

51206	IgG	96 tests	2...8 °C		SERUM
51106	IgM				

RUBELLA

Qualitative determination of IgG antibodies to rubella virus

51208	IgG	96 tests	2...8 °C	WHO calibration	SERUM
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ELISA

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ELISA

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Infectious Diseases

REF	Format	Unit/Size	Storage	Remark	Sample
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SYPHILIS SCREEN

Qualitative determination of antibodies to *Treponema pallidum*

51005	Antibody test	96 tests	2...8 °C		SERUM EDTA HEP CITRATE
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Toxo

Qualitative determination of IgG or IgM (μ -capture) antibodies to *Toxoplasma gondii*

51209	IgG	96 tests	2...8 °C	WHO calibration	SERUM
51119	IgM μ -capture				SERUM EDTA HEP CITRATE

VZV

Qualitative determination of IgG or IgM antibodies to varicella-zoster virus

51210	IgG	96 tests	2...8 °C		SERUM
51110	IgM				

Fertility Hormones

REF	Format	Unit/Size	Storage	Remark	Sample
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DHEA-S

Quantitative determination of dehydroepiandrosterone sulfate

55060	Antigen test	96 tests	2...8 °C		SERUM EDTA
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ESTRADIOL

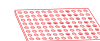
Quantitative determination of estradiol

55030	Antigen test	96 tests	2...8 °C		SERUM EDTA
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Serum

Plasma
EDTAPlasma
HEPPlasma
Citrate



Fertility Hormones

REF	Format	Unit/Size	Storage	Remark	Sample
ESTRIOL					
Quantitative determination of free estriol					
55040	Antigen test	96 tests	2...8 °C		SERUM EDTA
FSH					
Quantitative determination of follicle stimulating hormone (FSH)					
53020	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
hCG					
Quantitative determination of human chorionic gonadotropin (hCG)					
53040	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
LH					
Quantitative determination of luteinizing hormone (LH)					
53010	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
PRL					
Quantitative determination of prolactin (PRL)					
53030	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
PROGESTERONE					
Quantitative determination of progesterone					
55020	Antigen test	96 tests	2...8 °C		SERUM EDTA
TESTOSTERONE					
Quantitative determination of testosterone					
55010	Antigen test	96 tests	2...8 °C		SERUM EDTA

ELISA

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ELISA

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Thyroid

REF	Format	Unit/Size	Storage	Remark	Sample
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T3

Quantitative determination of total triiodothyronine (T3)

54010	Antigen test	96 tests	2...8 °C		SERUM EDTA HEP
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T4

Quantitative determination of total thyroxine (T4)

54020	Antigen test	96 tests	2...8 °C		SERUM EDTA HEP
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ft3

Quantitative determination of free triiodothyronine (ft3)

54015	Antigen test	96 tests	2...8 °C		SERUM
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ft4

Quantitative determination of free thyroxine (ft4)

54025	Antigen test	96 tests	2...8 °C		SERUM
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TSH

Quantitative determination of thyroid stimulating hormone (TSH, thyrotropin)

54030	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
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TSH RECEPTOR ANTIBODIES

Quantitative determination of anti-TSH receptor antibodies

ITC85030	Antibody test	96 tests	2...8 °C	WHO calibration	SERUM
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TG-ANTIBODIES

Quantitative determination of anti-thyroglobulin antibodies (IgG)

ITC85010	IgG	96 tests	2...8 °C	WHO calibration	SERUM
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ft3 ELISA



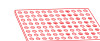
Serum



Plasma
EDTA



Plasma
HEP



Thyroid

REF	Format	Unit/Size	Storage	Remark	Sample
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TPO-ANTIBODIES

Quantitative determination of anti-thyroid peroxidase antibodies (IgG)

ITC85020	IgG	96 tests	2...8 °C	WHO calibration	SERUM
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ELISA

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Metabolism

REF	Format	Unit/Size	Storage	Remark	Sample
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CORTISOL

Quantitative determination of cortisol

55050	Antigen test	96 tests	2...8 °C		SERUM EDTA
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Bone Markers

REF	Format	Unit/Size	Storage	Remark	Sample
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25-OH Vitamin D

Quantitative determination of 25-OH vitamin D

55500	Antigen test	96 tests	2...8 °C	ID-LC / MS-MS calibration	SERUM HEP
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25-OH Vitamin D

Allergy

REF	Format	Unit/Size	Storage	Remark	Sample
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Total IgE

Quantitative determination of total immunoglobulin E (IgE)

51015	IgE	96 tests	2...8 °C	WHO calibration	SERUM
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ELISA

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Tumor Markers

REF	Format	Unit/Size	Storage	Remark	Sample
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AFP

Quantitative determination of alpha-fetoprotein

52010	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
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CA 125

Quantitative determination of carbohydrate antigen 125

52050	Antigen test	96 tests	2...8 °C		SERUM
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CA 15-3

Quantitative determination of carbohydrate antigen 15-3

52080	Antigen test	96 tests	2...8 °C		SERUM
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CA 15-3 ELISA

CA 19-9

Quantitative determination of carbohydrate antigen 19-9

52060	Antigen test	96 tests	2...8 °C		SERUM
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CEA

Quantitative determination of carcinoembryonic antigen

52020	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
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PSA

Quantitative determination of total prostate specific antigen

52030	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
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fPSA

Quantitative determination of free prostate specific antigen

52035	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
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Serum



Workstation

With Combiwash, HUMAN offers a unique workstation for the washing, shaking and incubation of microtiter plates. Flexible washing protocols can be programmed; shaking and incubation are also freely definable.

REF 18460

COMBIWASH

Automatic microtiter plate washer, shaker and incubator

- Up to 100 wash protocols
- 4 different wash bottles
- 2 incubator positions for 25°C / 30°C or 37°C
- Plate shaking ability



Accessories

REF	Description
18460/5	12-pin manifold
18460/26	110 VA transformer



Combiwash



Readers

Single strip and high speed plate reader are designed for low throughput ELISA users. Both instruments are easy to use and provide reliable and fast results.

ELISA

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REF 18000

HumaReader Single plus

Microtiter strip reader

- Most HUMAN assays preprogrammed (plug & run) and user programmable tests
- Color touchscreen
- Very short start-up time
- Convenient automatic strip transport (up to 3 strips)
- Curve and cut-off calculation
- Built-in printer and incubator
- Photometer with automatic filter wheel
- 4 filter wheel: 405, 450, 492, 630 nm installed

Accessories

REF	Description
18001	3 x 12 well boat
16801/20	Thermal printer paper (10 pcs)
17350/35	Filter optical 340 nm
17350/351	Filter optical 505 nm
17350/352	Filter optical 600 nm
17350/353	Filter optical 700 nm

Accessories

REF	Description
17350/354	Filter optical 545nm
17350/355	Filter optical 690 nm
17350/356	Filter optical 405 nm
17350/357	Filter optical 450 nm
17350/358	Filter optical 492 nm
17350/359	Filter optical 630 nm



HumaReader HS

REF 16670

HumaReader HS

Microtiter plate reader

- Most HUMAN assays preprogrammed (plug & run) and user programmable tests
- 8-channel, high-speed reading of full plate in 5 sec
- Memory for 200 tests and 10,000 results
- Touchscreen, Windows® software
- 8 filter wheel: 405, 450, 492, 630 nm installed

Accessories

REF	Description
16670/491	PC mouse with USB
18993L	Laser printer
16670/51	Filter optical 412 nm ¹
16670/52	Filter optical 420 nm ¹
16670/53	Filter optical 490 nm ¹
16670/54	Filter optical 505 nm ¹
16670/55	Filter optical 520 nm ¹
16670/56	Filter optical 540 nm ¹
16670/58	Filter optical 545 nm ¹
16670/59	Filter optical 546 nm ¹

Accessories

REF	Description
16670/57	Filter optical 550 nm ¹
16670/63	Filter optical 570 nm ¹
16670/60	Filter optical 578 nm ¹
16670/62	Filter optical 590 nm ¹
16670/61	Filter optical 595 nm ¹
16670/67	Filter optical 600 nm ¹
16670/65	Filter optical 650 nm ¹
16670/66	Filter optical 655 nm ¹

¹Spare part set attenuation glasses REF 16670/82 must be ordered separately!



Elisys Automated Analyzers

HUMAN's automated ELISA analyzers cover the requirements of small to large laboratories. Full automation is available for 1, 2 or 4 plates with different test combinations on each plate. Sample barcode reading for secure, automatic sample identification is standard on the larger instruments. Most HUMAN ELISA tests are preprogrammed and validated. Additional applications can be added at any time.



Elisys Uno



REF	17350
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Elisys Uno

1-plate fully automated ELISA analyzer incl. UPS

- Fully automatic processing of one microtiter plate
- Up to 8 parameters simultaneously on one plate
- Time management system
- Most HUMAN assays preprogrammed (plug & run) and user programmable tests
- 8 filter wheel: 405, 450, 492, 630 nm installed
- Robust steel needle with liquid level detection

Accessories

REF	Description
17359/1C	AID predilution rack
17359/10	Blood bank rack
17359/1B	Combined dilution/reagent rack
17359/3	Reagent rack Dengue & H. Pylori
17359/4	Reagent rack HIV & Hepatitis
17359/5	Reagent rack hormone
17359/2	Reagent rack infectious diseases
17359/1	Reagent rack open design
17359/7	Sample rack 96 round sample \varnothing 12 mm
17359/8	Sample rack 96 round sample \varnothing 13 mm
17353/9	Bottle set (wash, waste, rinse)
17353/6	Rinse bottle 1 l with plain cap
17353/2	Rinse bottle 1 l with sensor cap
17353/3	Wash bottle 2 l with sensor cap
17353/7	Wash/waste bottle 2 l plain cap (1 pc)
17353/8	Wash/waste bottle 2 l plain cap (3 pcs)
17353/4	Waste bottle 2 l with sensor cap
18992P	PC with Windows®
18991M	LCD monitor
18993L	Laser printer

Accessories

REF	Description
17350/35	Filter optical 340 nm
17350/351	Filter optical 505 nm
17350/352	Filter optical 600 nm
17350/353	Filter optical 700 nm
17350/354	Filter optical 545nm
17350/355	Filter optical 690 nm
17350/356	Filter optical 405 nm
17350/357	Filter optical 450 nm
17350/358	Filter optical 492 nm
17350/359	Filter optical 630 nm

Consumables

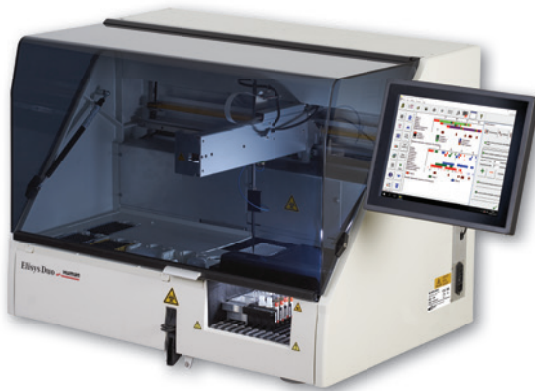
REF	Description
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/13	Reagent bottle 15 ml (12 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/14	Reagent bottle 30 ml (12 pcs)
17350/B100	Reagent bottle 100 ml (10 pcs)
17350/16	Sample vials 2 ml (500 pcs)
17350/15	Sample vial caps (500 pcs)



Elisys Automated Analyzers

ELISA

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REF 17200

Elisys Duo

2-plate fully automated ELISA analyzer incl. UPS

- Up to 3 plates in one run
- Swing arm mounted „all in one PC“ with Windows® 10 (touchscreen)
- Continuous loading of reagents, plates and samples
- Most HUMAN assays preprogrammed (plug & run) and user programmable tests
- 8 filter wheel with 450 nm and 620 nm installed
- Maximum safety with conductive disposable tips



Elisys Duo



Movie

Accessories

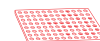
REF	Description
17200/30	Adapter 100 ml HUMAN square bottle
17200/31	Adapter ring 15 ml closed (set of 4)
17200/27	Adapter ring 15 ml (set of 6)
17200/28	Adapter ring 2.5 ml (set of 6)
17200/29	Adapter ring 16 ml (set of 6)
17200/139	Bottle organizer tray
17200/57	Filter optical 405 nm
17200/55	Filter optical 492 nm
17200/54	Filter optical 532 nm
17200/53	Filter optical 550 nm
17200/59	Filter optical 570 nm
17200/50	Filter optical 650 nm
17200/51	Filter optical 690 nm
18993L	Laser printer
17200/24	Rack control
17200/25	Rack reagent (2 lanes)
17200/23	Rack sample

Accessories

REF	Description
17200/124	Cap, bottle 2 l
17200/125	Square bottle, 1 l with cap
17200/123	Square bottle, PVC, 2 l without cap
17200/38	Washer bottle 1 l (level switch red)
17200/39	Washer bottle 2 l (level switch blue)
17200/40	Washer bottle 2 l (level switch yellow)

Consumables

REF	Description
16300/10	300 µl disposable tips (10 x 96 pcs)
16300/11	1100 µl disposable tips (10 x 96 pcs)
17200/255	Deep well dilution plate square (40 pcs)
17200/137	Waste bag with 'Biohazard' label (10 pcs)
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/B100	Reagent bottle 100 ml (10 pcs)



REF	16300
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Elisys Quattro

4-plate fully automated ELISA analyzer incl. UPS

- Up to 4 plates in one run, 4 independent incubators
- True walk-away loading capacity
- Up to 180 samples, up to 60 reagents
- Continuous loading of reagents, plates and samples
- Most HUMAN assays preprogrammed (plug & run) and user programmable tests
- Maximum safety with conductive disposable tips



Elisys Quattro

ELISA

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Accessories

REF	Description
16300/71	Cable RS232 PCSys/analyzer
17200/124	Cap, bottle 2 l
17200/57	Filter optical 405 nm
17200/55	Filter optical 492 nm
17200/54	Filter optical 532 nm
17200/53	Filter optical 550 nm
17200/59	Filter optical 570 nm
17200/50	Filter optical 650 nm
17200/51	Filter optical 690 nm
16300/102	Plate carrier 'A1'
16300/38	Reagent rack 0
16300/40	Reagent rack 2
16300/39	Reagent rack II
16300/40-2	Reagent rack R
16300/41	Sample rack 20 positions
17200/125	Square bottle, 1 l with cap
17200/123	Square bottle, PVC, 2 l without cap
16300/49	Washer bottle 1 l black

Accessories

REF	Description
17200/38	Washer bottle 1 l (level switch red)
17200/39	Washer bottle 2 l (level switch blue)
17200/40	Washer bottle 2 l (level switch yellow)
18992P	PC with Windows®
18991M	LCD monitor
18993L	Laser printer

Consumables

REF	Description
16300/10	300 µl disposable tips (10 x 96 pcs)
16300/11	1100 µl disposable tips (10 x 96 pcs)
18631	Dilution cuvettes
17200/137	Waste bag with 'Biohazard' label (10 pcs)
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/B100	Reagent bottle 100 ml (10 pcs)



Elisys Automated Analyzers at a Glance

ELISA

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	Elisys Uno	Elisys Duo	Elisys Quattro
Analyzer type	1-plate fully automated ELISA analyzer	2-plate fully automated ELISA analyzer	4-plate fully automated ELISA analyzer
Plate loading capacity	1 plate/run	Up to 3 plates/run	Up to 7 plates/run
Samples positions	96 (without predilution)	Up to 144 tubes	Up to 180 tubes
Reagent positions	27 positions on one reagent rack	40 positions on five reagent racks	60 positions on five reagent racks
Internal barcode reader	No	Sample ID, rack type	Sample ID, rack type
Pipetting system	1 steel needle (no tips)	300 µl and 1100 µl carbon tips (conductive)	300 µl and 1100 µl carbon tips (conductive)
Number of tips	–	Up to 3 tip racks for 300 µl or 1100 µl disposable tips	Up to 5 tip racks for 300 µl, or 1100 µl disposable tips
Onboard capacity tips	–	288 tips	480 tips
Computer	External	Internal	External
Interfaces	USB	USB, VGA, LAN	R232
LIS	Ethernet, uni-directional, free definable protocol, manual execution	Ethernet, bi-directional, ASTM & free definable protocol	Ethernet, bi-directional, ASTM & free definable protocol



Hemostasis

HUMAN offers laboratories integrated hemostasis test solutions with HEMOSTAT reagents and HumaClot analyzers. Semi-automated, as well as fully-automated HumaClot analyzers support an accurate and economical assessment of the coagulation status. The applications of the HEMOSTAT reagents are pre-programmed and fully validated.

The HUMAN coagulation portfolio includes a broad range of commonly performed screening parameters, indicating medical disorders related to coagulation and fibrinolysis. They are utilized for the assessment of a potential risk for bleeding and thrombotic events. Furthermore, coagulation parameters as D-dimer are utilized as risk indicator for the progression of inflammatory diseases, such as COVID-19.

Prothrombin Time (PT), offered lyophilized or liquid, is intended for the global assessment of the extrinsic coagulation pathway or for monitoring oral anticoagulant therapy with vitamin K antagonists, such as warfarin. The activated Partial Thromboplastin Time (aPTT) indicates Hemophilia A, B, and C and is applied for monitoring the therapy with unfractionated heparin (UFH). Furthermore, HUMAN offers solutions for the determination of functional fibrinogen and the thrombin time. Antithrombin and free Protein S are utilized as established thrombophilia diagnostic parameters.





Hemostat Reagents

REF	Format	Unit/Size	Storage	Remark	Sample
HEMOSTAT THROMBOPLASTIN^{liquid}					
Thromboplastin for the determination of prothrombin time (PT)					
31012	Reagent kit	RGT 6 x 2 ml	2...8 °C	Liquid stable rabbit brain extract	
HEMOSTAT THROMBOPLASTIN-SI					
Thromboplastin for the determination of prothrombin time (PT)					
31002	Reagent kit	RGT 6 x 2 ml, BUF 6 x 2 ml	2...8 °C	Lyophilized rabbit brain extract	
31003		RGT 6 x 10 ml, BUF 6 x 10 ml			
HEMOSTAT aPTT-EL					
Activated partial thromboplastin time (aPTT)					
33002	Complete kit	RGT1 6 x 4 ml, RGT2 6 x 4 ml	2...8 °C	Rabbit brain extract Liquid stable reagent Ellagic acid activator	
33012	aPTT reagent	RGT1 6 x 4 ml			
33013	aPTT reagent	RGT1 6 x 10 ml			
33022	CaCl ₂	RGT2 4 x 30 ml			
HEMOSTAT FIBRINOGEN					
Coagulation assay for the quantitative determination of fibrinogen (Claus method)					
32002	Complete kit	RGT 5 x 2 ml, BUF 1 x 100 ml, CAL 2 x 1ml	2...8 °C	Human thrombin with 100 IU/ml	
HEMOSTAT THROMBIN TIME					
Coagulation assay for thrombin time (TT) determination					
34002	Reagent kit	RGT 3 x 3 ml	2...8 °C		
HEMOSTAT D-DIMER					
Immunoturbidimetric assay for quantitative D-dimer determination measured at 405 nm					
36002	Complete kit	RGT 2 x 1 ml, BUF 2 x 2.5ml, CAL 1 x 1 ml, DIL 1 x 6 ml	2...8 °C		





REF	Format	Unit/Size	Storage	Remark	Sample
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HEMOSTAT free PROTEIN S

Immunoturbidimetric assay for the quantitative determination of free Protein S

36201	Reagent kit	RGT 2 x 2.5 ml, BUF 2 x 4.0 ml, DIL 2 x 6.5ml	2...8 °C	Liquid, ready to use. QC with HEMOSTAT Calibrator and Control Plasma	CITRATE
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HEMOSTAT ANTITHROMBIN^{liquid}

Chromogenic assay for quantitative determination of antithrombin activity

36102	Reagent kit	RGT 4 x 3 ml, SUB 2 x 3 ml	2...8 °C	Liquid stable reagent	CITRATE
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Hemostat Controls and Calibrator

REF	Format	Unit/Size	Storage
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HEMOSTAT CONTROL PLASMA

Lyophilized human plasma for routine quality control

35001	Control Normal	6 x 1 ml	2...8 °C
35002	Control Abnormal	6 x 1 ml	

HEMOSTAT D-DIMER CONTROL HIGH/LOW

Lyophilized human plasma enriched with D-dimer

36012	Controls: low and high	HIGH 2 x 1 ml LOW 2 x 1ml	2...8 °C
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HEMOSTAT CALIBRATOR

Lyophilized human plasma for calibration

35500	Calibrator	4 x 1 ml	2...8 °C
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HEMOSTAT ANTITHROMBIN^{liquid}

HEMOSTAT D-DIMER and D-DIMER control



HumaClot Instruments



REF 18680

HumaClot Junior

Compact 1-channel coagulation instrument

- Measurement of 1 sample
- 4 sample incubation positions
- 1 reagent incubation position



REF 15650

HumaClot Duo Plus

Manual 2-channel coagulation instrument

- Simultaneous measurement of 2 samples
- 18 sample incubation positions
- 4 reagent incubation positions (1 stirred)
- Built-in printer
- Optional autopipette with electronic trigger start

Family of semi-automated instruments with one concept for three instruments:



- TIC²⁺ Technology
- Latest LED technology with reference channel
- Validated applications for HUMAN reagents preprogrammed
- Guided workflow
- Light protection cover with pipetting support
- Durable and maintenance-free
- Closed consumable system with smart card
- Optional external sample barcode reader



REF 15660

HumaClot Quattro

Manual 4-channel coagulation instrument

- Simultaneous measurement of 4 samples
- 16 sample incubation positions
- 4 reagent incubation positions (1 stirred)
- Built-in printer
- Optional autopipette with electronic trigger start

Accessories

REF	Description
19130A*	AutoHumapette 20 – 200 µl
15660/55	Barcode scanner - mini DIN
15651/20	Thermo printer EU 230 VAC
15651/21	Thermo printer US 120 VAC
15651/22	Thermo printer JP 120 VAC
15660/53	Printer cable - mini DIN (external printer)
18250/74*	Battery pack with USB fan (12/24 VDC, 73Wh for 5h operation of HumaClot Duo Plus / Quattro)
18250/73	Solar panel (up to 36 W, for charging of battery pack)
15660/54	USB cable A-B for host connection
15660/56	Y-cable (external printer & barcode reader)

Consumables

REF	Description
15660/10	Cuvettes dispo incl. mixer (5 x 100 pcs)
15660/11	Cuvettes bag incl. mixer (1 x 500 pcs)
15660/12	Cuvettes bag incl. mixer (5 x 500 pcs)
18909/20	Thermal printer paper, external printer (5 pcs)
18144/5	Thermal printer paper, internal printer (5 pcs)



HumaClot Instruments

* Only for HumaClot Duo Plus and Quattro



HumaClot Analyzer

REF 15800

HumaClot Pro

Fully-automated coagulation analyzer incl. UPS



- Up to 100 PT per hour
- 3 wavelengths: 405 nm, 570 nm, 740 nm
- Complete hemostasis reagents storable onboard
- Multilingual (GB / ES / FR / RU / DE)
- According to HUMAN's plug & run philosophy, validated applications for HUMAN reagents preprogrammed, including D-dimer
- TIC²⁺ Technology
- Integrated PC and touchscreen
- Internal sample barcode reader
- 3 STAT positions



- › Maximum precision by sample mixing
- › Homogenization of reaction mix through stirring
- › Maximum assay measurement flexibility with clotting, chromogenic, immunologic and turbidimetric measurement



HumaClot Pro



Movie

Accessories

REF	Description
15800/50	Stir bars for reagent mixer
18993L	Laser printer
15800/53	Adapter reagent cup (1 pc)

Consumables

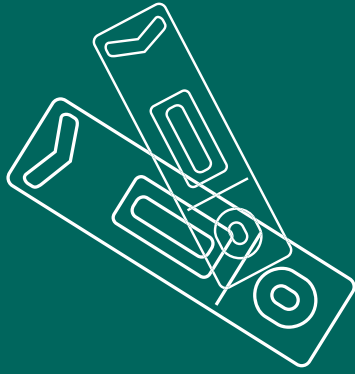
REF	Description
15800/10	Cuvette rings 6 x 10 x 32 (1,920 tests)
15800/25	Sample cups 4 ml (2 x 250 pcs)
17470/59	Sample cups 2 ml (500 pcs)
15800/20	Washing solution 5 x 15 ml
15800/30	Cleaner 5 x 15 ml
15800/15	Reagent cup 1 ml (100 pcs)
15800/40	Reagent container 5 ml with cap (50 pcs)



HumaClot Instruments at a Glance



	HumaClot Junior	HumaClot Duo Plus	HumaClot Quattro	HumaClot Pro
Type	Semi-automated	Semi-automated	Semi-automated	Fully-automated
Channels	1	2	4	2
Wavelengths	405 nm	405 nm	405 nm	405, 570, 740 nm
No. of parameters	15	15	15	50
Preinstalled HUMAN application settings	Prothrombin Time (PT) Activated partial thromboplastin time (aPTT) Thrombin Time (TT) Fibrinogen (FIB) D-Dimer (DD) Antithrombin (AT)			
Sample incubation positions 37 °C	4	18	16	32 incubation positions per cuvette ring
Sample positions	4	18	16	25 (22 + 3 STAT)
Sample mixer	Yes			
Reagent positions	1	4	4	15 reagents 2 wash/clean solution
Reagent stirring bar	No	1 reagent position	1 reagent position	3 reagent positions
Reagent prewarming	Heated reagent position	Heated reagent position	Heated reagent position	Needle heating
Calibration	2 - 9 calibration points	2 - 9 calibration points	2 - 9 calibration points	Up to 7 calibration points incl. auto-dilution
Auto-pipette	No	Optional	Optional	Pipetting unit incl. (automated)
Sample barcode (sample ID)	Optional	Optional	Optional	Built-in
Closed consumables	Yes, by smart card technology			
Battery pack	No	Optional REF 18250/74	Optional REF 18250/74	No



Rapid Tests

HUMAN offers a comprehensive line of rapid tests based on different technologies: immunochromatography, latex agglutination and hemagglutination.

The tests are designed and manufactured according to the high European quality standards and provide rapid and accurate results. They are easy to use, require no instrumentation and allow a cost-effective diagnosis.

HUMAN's range covers the needs of our customers worldwide and includes tests to diagnose diseases occurring in countries with both temperate and tropical climates.





Infectious Diseases

The rapid and early diagnosis of infectious diseases is critical for therapy and infection control measures. HUMAN manufactures a broad range of high quality tests, e.g. for the diagnosis of sexually-transmitted or mosquito-borne diseases. HUMAN's tests are designed to provide reliable and easy-to-read results within minutes. Many HUMAN rapid tests allow the use of whole blood and are, therefore, ideally suited for remote settings.

REF	Format	Unit/Size	Storage	Specification	Sample
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HEXAGON CHLAMYDIA

Immuno-chromatographic rapid test for *Chlamydia trachomatis* LPS antigen

58012	Test device	30 tests	2...25 °C		
58912	Collection tubes, swabs	60 units			

HEXAGON HCV*

Immuno-chromatographic rapid test for antibodies to hepatitis C virus

58072	Complete kit	40 tests	2...30 °C	Test device and diluent	
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HEXAGON HIV

Immuno-chromatographic rapid test for antibodies to HIV-1 and HIV-2 (3rd generation)

57002P	Complete kit	40 tests	2...30 °C	Test device and diluent	
57004P		100 tests			

HEXAGON H. PYLORI

Immuno-chromatographic rapid test for *H. pylori* IgG, IgM, IgA antibodies (3rd generation)

58022	Complete kit	20 tests	2...30 °C	Test device and diluent	
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HEXAGON HBsAg*

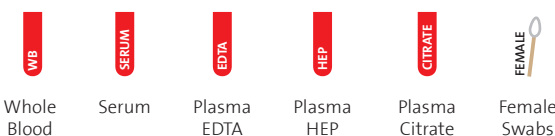
Immuno-chromatographic rapid test for hepatitis B surface antigen (HBsAg)

58003	Test strips	3 x 20 tests	2...25 °C	Test strips	
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HEXAGON MALARIA

Immuno-chromatographic rapid test for malaria Pf/Pan (HRPII/pLDH) antigen

58054	Complete kit	40 tests	2...30 °C	Test device and diluent	
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* Currently without CE-mark



REF	Format	Unit/Size	Storage	Specification	Sample
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HEXAGON SYPHILIS

Immunochemical rapid test for *T. pallidum* IgG, IgM, IgA antibodies (3rd generation)

58042	Complete kit	20 tests	2...30 °C	Test device and diluent	WB SERUM EDTA HEP CITRATE
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HumaTex Toxo*

Latex agglutination slide test for antibodies to *Toxoplasma gondii*

50023	Complete kit	2.5 ml	2...8 °C	Test device, pipette and diluent	SERUM
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IM Quick Test

Hemagglutination slide test for heterophilic antibodies associated with infectious mononucleosis

40038	Complete kit	40 tests	2...8 °C		SERUM
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SYPHILIS RPR Test

Rapid plasma reagin charcoal enhanced flocculation test for reagin antibodies

50001	Complete kit	100 tests	2...8 °C		SERUM EDTA
50002		500 tests			
50016	Economic kit	500 tests		Reduced accessories	

SYPHILIS TPHA liquid

Hemagglutination test for antibodies to *Treponema pallidum*

50101	Complete kit	100 tests	2...8 °C		SERUM
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HumaTex FEBRILE ANTIGENS

Multiscreening kit, agglutination slide and tube test for qualitative and semi-quantitative determination of antibodies to *Salmonella typhi* H, *Salmonella typhi* O, *Salmonella paratyphi* AH, *Salmonella paratyphi* BH, *Brucella abortus*, *Proteus* OX 19 including positive and negative controls

50201	Complete kit 6 antigens, PC, NC	100 tests per antigen	2...8 °C	Multiple	SERUM
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Infectious Diseases

Rapid Tests

102

REF	Format	Unit/Size	Storage	Specification	Sample
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SALMONELLA KIT

Agglutination slide and tube test for qualitative and semi-quantitative determination of antibodies against *Salmonella typhi* H, *Salmonella typhi* O, *Salmonella paratyphi* AH, *Salmonella paratyphi* AO, *Salmonella paratyphi* BH, *Salmonella paratyphi* BO, *Salmonella paratyphi* CH, *Salmonella paratyphi* CO

50301	Antigen kit 8 antigens, controls not incl.	100 tests per antigen	2...8 °C	Multiple	
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INDIVIDUAL FEBRILE ANTIGENS

Agglutination slide and tube tests for qualitative and semi-quantitative determination of antibodies to febrile antigens and controls

50271	<i>Salmonella typhi</i> H	8 x 100 tests	2...8 °C	Antigen kit (controls not included)	
50281	<i>Salmonella typhi</i> O				
50211	<i>Salmonella paratyphi</i> AH				
50231	<i>Salmonella paratyphi</i> BH				
50291	<i>Brucella abortus</i>				
50200	Control PC/NC	2 x 2 ml			

Cardiac Markers

Biochemical marker useful in the management of acute myocardial infarction (AMI) or myocarditis. The rapid test provides an aid to early diagnosis of AMI and therapeutic monitoring.

REF	Format	Unit/Size	Storage	Specification	Sample
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HEXAGON TROPONIN

Immunochromatographic rapid test for cardiac troponin I (cTnI)

27032P	Complete kit	20 tests	2...25 °C	Detection limit 0.5 ng/ml	
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Pregnancy

Hexagon and HumaPreg pregnancy tests feature a sensitivity of at least 25 IU/l hCG and are available in different test formats, single sealed cassettes and strip tests.

REF	Format	Unit/Size	Storage	Specification	Sample
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HEXAGON hCG 1-Step^{Urine}

Immunochromatographic pregnancy test urine

68902	Test strips (6 mm)	60 tests	4...30 °C	Single sealed Detection limit: 25 IU/l hCG	
68932	Test strips, slim line (4 mm)	150 tests			

HUMAPREG^{Urine}

Immunochromatographic pregnancy test for urine

68004	Complete kit	40 tests	4...30 °C	Test devices Single sealed with transfer pipettes. Detection limit 25 IU/l hCG	
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Tumor Markers

Rapid tests used in the context of gastrointestinal disorders, colorectal cancer or prostate cancer screening.

REF	Format	Unit/Size	Storage	Specification	Sample
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HEXAGON OBTI

Immunochromatographic rapid test for occult blood in stool

28009	Complete kit	24 tests	2...30 °C	Specific for human hemoglobin, 0.05 – 2000 µg/ml human Hb in transport medium	
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HEXAGON PSA

Immunochromatographic rapid test for prostate specific antigen (PSA)

28032	Complete kit	20 tests	2...30 °C	Detection limit 4 ng/ml	
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Rheumatology

Whenever there is a suspicion of autoimmune rheumatic diseases: latex agglutination tests provide qualitative or semi-quantitative results in just two minutes – ideal for a first quick overview.

Rapid Tests

REF	Format	Unit/Size	Storage	Specification	Sample
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SLE LATEX TEST

Latex slide test for non-diluted serum

104

40030	Complete kit	50 tests	2...8 °C		SERUM
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HumaTex ASO

Latex slide test for non-diluted serum

40063	Complete kit	100 tests	2...8 °C	200 IU/l serum	SERUM
40060	Latex reagent				

see also ASO immunoturbidimetric test

HumaTex CRP

Latex slide test for non-diluted serum

40043	Complete kit	100 tests	2...8 °C	6 mg/l serum	SERUM
40040	Latex reagent				

see also CRP immunoturbidimetric test

HumaTex RF

Latex slide test for non-diluted serum

40053	Complete kit	100 tests	2...8 °C	12 IU/l serum	SERUM
40050	Latex reagent				

see also RF immunoturbidimetric test

GLYCINE-NACL Buffer

Dilution buffer for latex agglutination tests HumaTex SLE, ASO, CRP and RF

40037		100 ml	2...25 °C		
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Whole Blood



Serum



Plasma EDTA



Plasma HEP



Urinalysis

HUMAN offers urine test strips for visual or automated reading and a system for low to medium throughput laboratories. Test strips with 11 and 13 parameters (including microalbumin plus creatinine) are available.



Combina Strips

HUMAN offers an extensive line of urine test strips for visual or automated reading.


- Urine test strips with 11 and 13 parameters
- Microalbumin and creatinine on 13 parameter strip

REF	Parameters	Unit/Size	Storage	Sample
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106


COMBINA 11 S

Urine test strips

23111	Glucose, ketones, pH, protein, nitrite, specific gravity, bilirubin, urobilinogen, blood, leukocytes, ascorbic acid	150 tests	2...30 °C	
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COMBINA 13

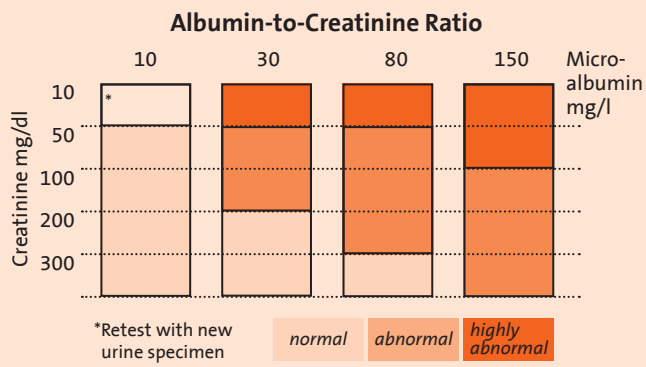
Urine test strips

22132	Glucose, ketones, pH, protein, nitrite, specific gravity, bilirubin, urobilinogen, blood, leukocytes, ascorbic acid, microalbumin, creatinine	100 tests	2...30 °C	
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Risk Factor Albumin-to-Creatinine Ratio

Urinary excretion of microalbumin indicates kidney damage – often found in patients with diabetes and hypertension – and is a recognized risk factor for progression of kidney and cardiovascular disease.

Parallel measurement of creatinine and albumin to diagnose microalbuminuria makes the collection of 24-hour urine samples obsolete, as the albumin-to-creatinine ratio allows to correct variations in diuresis.





Combilyzer System



REF	17600
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Combilyzer¹³

System for small to medium volume laboratories

- System solution for Combina 13 strips
- Photoelectric colorimetry test principle
- Throughput: 60 samples/hour (standard mode)
120 samples/hour (fast mode)
- Calculates albumin-to-creatinine ratio
- Flags for abnormal results
- Onboard storage of 1,000 results
- Conventional, arbitrary and SI units
- Barcode reader for Combina 13 strips and samples
- Built-in thermal printer
- Serial port for unidirectional connection with LIS port for external printer
- Onboard service & system diagnose tools



Consumables

REF	Description
22132	Combina 13 (100 tests)
18144/5	Printing paper (5 pcs)

REF	22132
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COMBINA 13

Comprehensive urinary profile including microalbumin and creatinine

- Strip for testing ascorbic acid, bilirubin, blood, creatinine, glucose, ketones, leukocytes, microalbumin, nitrite, pH, protein, specific gravity, urobilinogen
- Especially suited for first time urine testing – no need for timed collection
- Albumin-to-creatinine ratio automatically calculated by Combilyzer¹³
- For visual and automated reading with Combilyzer¹³
- Semi-quantitative visual reading for all parameters at 60 seconds



Microscopes

The HumaScope line constitutes a new generation of binocular laboratory microscopes in modern ergonomic design and latest LED technology. Developed for use in laboratories, doctors' offices, education and research.





HumaScopes with LED Illumination



REF 14400

HumaScope Light^{LED} Binocular laboratory LED illuminated microscope

- Achromatic objectives (antifungal coated) 4x, 10x, 40x and 100x oil
- Rechargeable battery – 5 days independent from constant power supply
- LED illumination, no bulb replacement required
- Especially for health care in remote areas, because of battery option



REF 14500

HumaScope Classic^{LED} Binocular laboratory LED illuminated microscope

- Semi-plan objectives (antifungal coated) 4x, 10x, 40x and 100x oil
- Compensation free Siedentopf head, inward 4-position objective revolver
- Koehler illumination
- Rechargeable battery – 5 days independent from constant power supply
- LED illumination, no bulb replacement required



REF 14600

HumaScope Advanced^{LED} Binocular laboratory LED illuminated microscope

- Plan achromatic objectives (antifungal coated) 4x, 10x, 40x and 100x oil
- Compensation free Siedentopf head, inward 5-position objective revolver
- Koehler illumination
- LED illumination, no bulb replacement required
- Rechargeable battery – 5 days independent from constant power supply

REF 14601

HumaScope Advanced^{LED} Trinocular Complete set

- HumaScope Advanced^{LED} (Binocular) + trinocular head



REF 14700

HumaScope Premium^{LED} Binocular laboratory LED illuminated microscope

- Infinity corrected plan achromatic objectives (antifungal coated)
4x, 10x, 40x and 100x oil
- Compensation free Siedentopf head, inward 5-position objective revolver
- Koehler illumination
- Extra strong LED illumination, no bulb replacement required
- One finger focusing



HumaScope Fluo^{LED} LED fluorescence microscope with trinocular head

- Infinity corrected plan achromatic objectives (antifungal coated)
4x, 10x, 40x and 100x oil
- Compensation free Siedentopf head, inward 5-position objective revolver
- Koehler illumination
- Extra strong LED illumination, no bulb replacement required
- Optional – up to 4 fluorescence channels available
- Optional – rechargeable batteries

REF 14701

HumaScope Premium^{LED} Trinocular Complete set

- HumaScope Premium^{LED} (binocular) + trinocular head



HumaScope Fluo^{LED}



Movie

REF	Features
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HumaScope Fluo^{LED} State-of-the-art optics

14800	2-channel LED fluorescence (blue, green)
14804	2-channel LED fluorescence (blue, green) with rechargeable batteries
14801	3-channel LED fluorescence (blue, green, UV)
14802	3-channel LED fluorescence (blue, green, violet)
14803	4-channel LED fluorescence (blue, green, UV, violet)



HumaScopes at a Glance



	HumaScope Light ^{LED}	HumaScope Classic ^{LED}
Technical data	REF 14400	REF 14500
Light source	LED 3.6 V, 0.3 W	LED 3.6 V, 0.3 W
Head	Binocular Compensation free 360° rotatable 30° inclination Left side diopter adjustments ±5	Binocular Compensation free 360° rotatable 30° inclination Left side diopter adjustments ±5
Eyepiece	Widefield, 10x / 18 mm Diopter adjustment	Widefield, 10x / 18 mm Diopter adjustment
Objectives	Achromatic 4x, 10x, 40x, 100x (Oil immersion) 40, 100x spring loaded	Semi-plan achromatic 4x, 10x, 40x, 100x (Oil immersion) 40, 100x spring loaded
Revolver	4-positions forward	4-positions reverse
Stage	Size: 115 x 125 mm x / y movement: 50 x 20 mm	Size: 125 x 135 mm x / y movement: 75 x 35 mm
Focus system	Coaxial course / fine focus gear transmission with tension adjustable knob and limit stopper system	Coaxial course / fine focus gear transmission with tension adjustable knob and up-stop knob
Condenser	Abbe condenser 1.25 N.A. Rack and pinion adjustment Height adjustable Filter holder	Abbe condenser 1.25 N.A. Rack and pinion adjustment Height adjustable Filter holder
Power supply	110 – 230 V, 50 – 60 Hz Rechargeable battery 3 x AA 1.2 V 1,800 mAh	110 – 230 V, 50 – 60 Hz Rechargeable battery 3 x AA 1.2 V 1,800 mAh



HumaScope Advanced ^{LED}	HumaScope Premium ^{LED}	HumaScope Fluo ^{LED}
REF 14600 REF 14601 with trinocular head	REF 14700 REF 14701 with trinocular head	REF 14800, 2-channel LED fluorescence (blue, green) REF 14804 with rechargeable batteries REF 14801, 3-channel fluorescence (blue, green, UV) REF 14802, 3-channel fluorescence (blue, green, violet) REF 14803, 4-channel fluorescence (blue, green, UV, violet)
LED 3.6 V, 0.3 W	LED 3.6 V, 3.0 W	Transmitted light white LED, 3 W Adjustable brightness Fluorescence illumination: LED 3.6 V, 3 W
Binocular Compensation free 360° rotatable 30° inclination Left side diopter adjustments ±5	Binocular Compensation free 360° rotatable 30° inclination Left side diopter adjustments ±5	Trinocular Compensation free 360° rotatable 30° inclination Interpupillary distance 53 – 75 mm Left side diopter adjustments ±5
Widefield, 10x / 18 mm Diopter adjustment	Widefield, 10x / 22 mm Diopter adjustment	Widefield, 10x / 22 mm Diopter adjustment
Plan achromatic 4x, 10x, 40x, 100x (Oil immersion) 40, 100x spring loaded	Infinity-plan achromatic 4x, 10x, 40x, 100x (Oil immersion) 40, 100x spring loaded	Infinity-plan achromatic 4x / 0.10; 10x / 0.25; 40x / 0.85 FL; 100x / 1.25 Oil 40x & 100x spring loaded Parfocal, antifungal treated
5-positions reverse	5-positions reverse	5-positions reverse
Size: 125 x 135 mm x / y movement: 75 x 35 mm	Size: 210 x 140 mm x / y movement: 75 x 50 mm	Size: 210 x 140 mm x / y movement: 75 x 50 mm
Coaxial course / fine focus gear transmission with tension adjustable knob and up-stop knob	Coaxial course / fine focus gear transmission with tension adjustable knob and up-stop knob	Coaxial course / fine focus gear transmis- sion with tension adjustable knob and up limit stopper system 4 mm movement per full turn, 2 µm increased
Abbe condenser 1.25 N.A. Rack and pinion adjustment Height adjustable Filter holder	Abbe condenser 1.25 N.A. Rack and pinion adjustment Height adjustable Filter holder	Abbe condenser 1.25 N.A. Rack and pinion adjustment Height adjustable Filter holder
110 – 230 V, 50 – 60 Hz Rechargeable battery 3 x AA 1.2 V 1,800 mAh	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz Rechargeable battery 8 x AA 1.2 V 1,800 mAh only for REF 14804



HumaScope Stereo Microscopes



REF 14900

HumaScope Stereo

Binocular stereo microscope

- Latest LED illumination technique
- With reflected and transmitted illumination
- Left/right diopter adjustment ± 5
- Magnification 7x – 45x
- Excellent optics



REF 14901

HumaScope Stereo Trinocular

Complete set with trinocular head*

Accessories

REF	Description
14900/1	Eyepiece WF10x (22 mm)
14900/2	Eyepiece WF15x (15 mm)
14900/3	Eyepiece WF20x (12 mm)
14900/4	Eyepiece WF25x (9 mm)
14900/5	Reticle eyepiece WF10x (20 mm) 0,1 mm/Div1
14900/6	Objective 0.5x W.D. 137 mm
14900/7	Objective 0.75x W.D. 103 mm
14900/9	Objective 1.5x W.D. 48 mm
14900/10	Objective 2x W.D. 29 mm
14900/11	Trinocular adapter 1x for CCD camera
14900/12	Trinocular adapter 0.5x for CCD camera

* C-Mount adapter for camera operation necessary



Accessories for LED Microscopes

REF	Description	Fluo	Premium	Advanced	Classic	Light
14000/72	Blue filter	X	X	X	X	X
14000/54	C-mount adapter 0.4x for trinocular head	X	X	X	X	
14000/55	C-mount adapter 1x for trinocular head		X	X	X	
14000/80	C-mount adapter 0.5x for trinocular	X	X	X	X	
16160	Cleaner set (lens cleaning fluid, lens cleaning rods, lens cleaning tissues, air duster microfiber cloth, dust bellow)	X	X	X	X	X
14000/52	Dark field condenser		X	X	X	X
14000/53	Dark field condenser oil	X	X	X	X	X
14000/16	Eyepiece 10x 18 mm view field					X
14000/17	Eyepiece 10x 18 mm view field			X	X	
14000/18	Eyepiece 10x 20 mm view field		X			
14000/19	Eyepiece 16x 11 mm view field		X	X	X	X
14000/20	Eyepiece 20x 11 mm view field		X	X	X	
14000/133	Eyepiece 20x 22 mm view field	X				
14000/205	Eyepiece adapter 0.5x	X	X	X	X	X
14000/125	Eyepiece pointer achromatic 10x 18 mm					X
14000/128	Eyepiece pointer achromatic 16x 11 mm			X	X	X
14000/131	Eyepiece pointer fluo 10x 22 mm	X				
14000/132	Eyepiece pointer fluo 15x 22 mm	X				
14000/127	Eyepiece pointer infinity 10x 20 mm		X			
14000/130	Eyepiece pointer infinity 10x 22 mm	X				
14000/21	Eyepiece micrometer 10 mm with 100 division for 18 mm view field			X	X	X
14000/22	Eyepiece micrometer 10 mm with 100 division for 20 mm view field		X			
14000/126	Eyepiece pointer plan achromatic 10x 18 mm			X	X	
14000/73	Frosted filter	X	X	X	X	X
14000/74	Green filter	X	X	X	X	X
14000/71	Mirror set			X	X	X
14000/10	Monocular head			X	X	
14000/23	Objective achromatic 4x					X
14000/24	Objective achromatic 10x					X
14000/30	Objective achromatic 20x					X
14000/25	Objective achromatic 40x					X
14000/26	Objective achromatic 60x					X
14000/27	Objective achromatic 100x					X
14000/32	Objective achromatic 60x				X	
14000/34	Objective semi plan 4x				X	
14000/35	Objective semi plan 10x				X	

Microscopes

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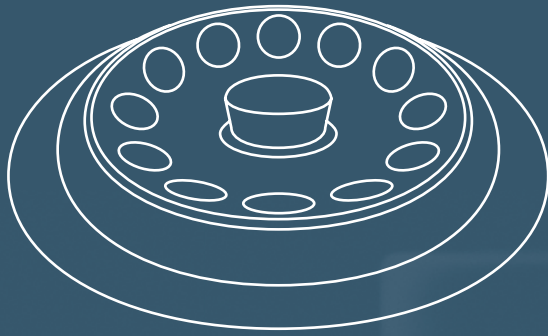
Accessories for LED Microscopes

REF	Description	Fluo	Premium	Advanced	Classic	Light
14000/36	Objective semi plan 20x				X	
14000/37	Objective semi plan 40x				X	
14000/38	Objective semi plan 100x				X	
14000/39	Objective plan 4x			X	X	
14000/40	Objective plan 10x			X	X	
14000/41	Objective plan 20x			X	X	
14000/42	Objective plan 40x			X	X	
14000/43	Objective plan 60x			X	X	
14000/44	Objective plan 100x			X	X	
14000/45	Objective plan infinity 4x	X	X			
14000/46	Objective plan infinity 10x	X	X			
14000/47	Objective plan infinity 20x	X	X			
14000/48	Objective plan infinity 40x		X			
14000/140	Objective plan infinity 60x	X	X			
14000/49	Objective plan infinity 100x	X	X			
14000/75	Oil	X	X	X	X	X
14000/82	Rubber eyeguard (set of 2)		X	X	X	X
14000/59	Simple achromatic phase contrast kit			X	X	X
14000/58	Simple polarisation kit		X	X	X	
14000/57	Simple polarisation kit					X
14000/68	Stage micrometer 1 mm / 100 division	X	X	X	X	X
14000/83	Transport box (plastic)			X	X	
14000/84	Transport box (plastic, light)					X
14000/13	Trinocular head			X	X	
14000/15	Trinocular infinity head		X			
14000/60	Turret achromatic phase contrast kit			X	X	
14000/62	Turret plan infinity phase contrast kit	X	X			
14000/61	Turret plan phase contrast kit			X	X	
14000/81	Yellow filter	X	X	X	X	X

Digital cameras for HumaScope Line (distributed by HUMAN)

REF	Description	Fluo	Premium	Advanced	Classic	Light
14000/866	Digital camera (USB 2) 5 megapixel	X	X	X	X	X
14000/867	Digital camera (USB 3) 5 megapixel	X	X	X	X	X
14000/877	Digital camera (USB 2) 10 megapixel	X	X	X	X	X
14000/878	Digital camera (USB 3) 10 megapixel	X	X	X	X	X

For operation with a trinocular, a C-mount adapter is necessary.



Laboratory Equipment

HUMAN's line of laboratory equipment comprises a broad range of high quality products with a modern design for all kinds of laboratories.

- Pipettes
- Mixers, shakers and rollers
- Centrifuges
- Incubators
- Waterbaths
- Water purification





Pipettes

Full range of precise liquid handling with HumaPette Premium Line (fully autoclavable) and HumaPette Smart Line.



HumaPette SMART LINE

Reliability in your hand

Pipetting is often the largest source of errors in the lab. Having confidence in your measurements is a key to good science and results. The HumaPette Smart Line fulfills all requirements of high quality at a superior price/performance ratio. If you need state-of-the-art, ergonomically designed and highly accurate pipettes, then the HumaPette Smart-Line is your perfect option!

Fulfills all criteria of a pipette for routine use

- Convenient plunger position
- Low force to push plunger
- Easy set and read display
- Feedback from button operation
- Simple calibration

HumaPette Smart LINE Fixed volume pipettes

REF	Volume	Accuracy	Precision CV %	Pipette Tips
19500L	5 µl	1.3 %	1.2 %	19320/20
19505L	10 µl	0.8 %	0.8 %	19320/20
19510L	20 µl	0.6 %	0.5 %	19910/20
19515L	25 µl	0.5 %	0.3 %	19910/20
19520L	50 µl	0.5 %	0.3 %	19910/20
19525L	100 µl	0.5 %	0.3 %	19910/20
19530L	200 µl	0.4 %	0.2 %	19910/20
19535L	250 µl	0.4 %	0.2 %	19920/40
19540L	500 µl	0.3 %	0.2 %	19920/40
19545L	1000 µl	0.3 %	0.2 %	19920/40

Pipette Tips for HumaPette SMART LINE and PREMIUM LINE

REF	Description
19320/20	0.5 – 20 µl, 1 x 1000 tips 'crystal'
19910/20	2 – 200 µl, 10 x 1000 tips 'yellow'
19920/40	50 – 1000 µl, 10 x 500 tips 'blue'
19150/10	0.5 – 5 ml, 200 tips/bag 'white'
19160/10	1 – 10 ml, 10 x 100 tips 'white'
19320/10	5 – 300 µl, 1000 tips/bag for HumaPette Premium 8-Channel

Adjustable pipettes

REF	Volume	Accuracy	Precision CV %	Pipette Tips
19110L	0.5 – 10 µl	1.0 %	0.8 %	19320/20
19120L	5 – 50 µl	0.6 %	0.3 %	19910/20
19125L	10 – 100 µl	0.8 %	0.15 %	19910/20
19130L	20 – 200 µl	0.6 %	0.15 %	19910/20
19140L	100 – 1000 µl	0.6 %	0.2 %	19920/40
19150L	1000 – 5000 µl	0.5 %	0.15 %	19150/10

REF 19160L

HumaPette Linear Stand

For HumaPette Smart-Line and Premium Line





HumaPette PREMIUM LINE

Fully autoclavable pipettes (fully demountable)

The HumaPette Premium Line stands out for:

- Modern ergonomic design
- Effortless one-hand operation for right- and left-handed users
- Highest quality „Made in Germany“ with a QC certificate for each pipette
- Fully autoclavable (20 min at 121 °C)
- Tool-free maintenance
- Precision you can rely on

HumaPette PREMIUM LINE

Fixed volume pipettes

REF	Volume	Accuracy	Precision CV %	Pipette Tips
19505P	10 µl	≤ 1.0 %	≤ 0.5 %	19320/20
19510P	20 µl	≤ 0.8 %	≤ 0.4 %	19320/20
19515P	25 µl	≤ 0.8 %	≤ 0.4 %	19910/20
19520P	50 µl	≤ 0.8 %	≤ 0.4 %	19910/20
19525P	100 µl	≤ 0.6 %	≤ 0.2 %	19910/20
19530P	200 µl	≤ 0.6 %	0.2 %	19910/20
19540P	500 µl	≤ 0.6 %	0.2 %	19920/40
19545P	1000 µl	≤ 0.6 %	0.2 %	19920/40

Digital adjustable pipettes

REF	Volume	Accuracy	Precision CV %	Pipette Tips
19110P	0.5 – 10 µl	≤ 1.0 %	≤ 0.5 %	19320/20
19120P	2 – 20 µl	≤ 0.8 %	≤ 0.4 %	19320/20
19125P	10 – 100 µl	≤ 0.6 %	≤ 0.2 %	19910/20
19130P	20 – 200 µl	≤ 0.6 %	≤ 0.2 %	19910/20
19140P	100 – 1000 µl	≤ 0.6 %	≤ 0.2 %	19920/40
19150P	500 – 5000 µl	≤ 0.6 %	≤ 0.2 %	19150/10
19160P	1 – 10 ml	≤ 0.6 %	≤ 0.2 %	19160/10



HumaPette PREMIUM 8-Channel

HumaPette PREMIUM 8-Channel

REF	Volume	Accuracy	Precision CV %	Pipette Tips
19320P	5 – 50 µl	≤ 0.8 %	≤ 0.4 %	19910/20
19330P	30 – 300 µl	≤ 0.6 %	≤ 0.3 %	19320/10



Mixers



HumaTwist

Vortex mixer

Versatility at its best

- Continuous and touch operation
- Adjustable speed 0 – 2,500 rpm
- Reduced vibration by specially designed silicone absorber
- Steel base with ultra high vibration damping

Ordering Information HumaTwist

REF	Voltage
17175	(230 VAC/50 Hz), EU 2 pin plug (CEE 7/7)
17176	(230 VAC/60 Hz), UK 3 pin plug (BS 1363)
17177*	(110 VAC/50 Hz), US 3 pin plug (NEMA 5-15)
17178*	(110 VAC/60 Hz), US 3 pin plug (NEMA 5-15)

Accessories HumaTwist

REF	Description
17175/5	100 mm plate attachment with rubber pad
17175/6**	Holder for 48 test tubes (6 mm)
17175/7**	Holder for 18 test tubes (10 mm)
17175/8**	Holder for 12 test tubes (12 mm)
17175/9**	Holder for 8 test tubes (16 mm)
17175/10**	Holder for 8 test tubes (20 mm)



REF 14580

HumaRock eco

Rocking shaker

- Tilt angle $\pm 7^\circ$
- Adjustable speed up to 80 rpm
- Universal plug (EU, UK, US)



REF 15460

HumaRoll

Tube roller

- Adjustable speed up to 70 rpm
- Amplitude of 24 mm
- Capacity: 5 lines 280 mm length
- Universal IEC power connector (EU plug)

* Increased delivery time or order 220 V version with transformer REF 18970

** 17175/5 required



Centrifuges

Benchtop centrifuges with maintenance-free induction motors from small to medium sized capacity.



HuMax HCT

Hematocrit and microliter benchtop centrifuge

- Maximum speed/RCF: 14,000 rpm/18,624 x g
- Maximum capacity: 24 x 2 ml (fix angle rotor)
- Delivered with hematocrit rotor for 24 hematocrit capillary tubes
- Programmable microprocessor controlled system
- Digital display for speed and time
- Timer: 30 sec – 99 min and hold position
- Maintenance-free brushless induction motor

Consumables (distributed by HUMAN)

REF	Description
749510	Hematocrit sealing compound 10 plates
749321	Micro hematocrit tubes 10 x 100 pcs
749311	Micro hematocrit tubes Na-hep 10 x 100 pcs

Ordering Information HuMax HCT

REF	Voltage
15500	230 VAC EU plug
15500/110*	110 VAC US plug



REF	15450

HuMax 3K

Small capacity benchtop centrifuge

- Maximum speed/RCF: 4,500 rpm, 2,490 x g
- Maximum capacity: 8 x 15 ml or 12 x 10 ml
- Programmable microprocessor control system
- Digital display for speed and time
- Timer: 30 sec – 99 min and hold position
- Maintenance-free brushless induction motor
- Delivered with angle rotor
- Delivered with \varnothing 15.6 mm short & long adapters



Centrifuges



HuMax 4K

Small capacity benchtop centrifuge

- Maximum speed/RCF: 6,000 rpm, 2,822 x g
- Maximum capacity: 12 x 15 ml
- Programmable microprocessor control system
- Digital display for speed and time
- Timer: 1 – 99 min and hold position
- Maintenance-free brushless induction motor
- Delivered with angle rotor 12 x 15 ml

Ordering Information HuMax 4K

REF	Voltage
15200/2	230 VAC
15200/1*	110 VAC



HuMax 5K

Medium capacity benchtop centrifuge

- Maximum speed/RCF: 4,100 rpm, 2,819 x g
- Maximum capacity: angle rotor 16 x 15 ml
swing-out rotor 4 x 100 ml
- Programmable microprocessor control system
- Digital display for speed and time
- Timer: 1 – 99 min and hold position
- Maintenance-free brushless induction motor
- Imbalance detection
- Delivered without rotor

Ordering Information HuMax 5K

REF	Description
15300/2	230 VAC
15300/1*	110 VAC

* Increased delivery time or order 220 V version with transformer REF 18970



REF 17160

HuMax 14K

Multipurpose high-speed centrifuge

- Maximum speed/RCF: 14,000 rpm, 18,405 x g
- Maximum capacity: 4 x 200 ml (swing-out rotor); 24 x 2 ml (angle rotor)
- Electronic imbalance detection
- Timer: 1 – 99 min and hold position
- Programmable speed, acceleration and braking rates
- Memory for 10 programs
- Maintenance-free brushless induction motor
- Delivered without rotor (available rotors are listed on page 113)



HuMax Micro

Micro benchtop centrifuge

- Fixed speed/RCF: 7,000 rpm/2,680 x g
- Maximum capacity: 8 x 2 ml / 16 x 0.2 ml
- Delivered with rotor & adapters



Ordering Information HuMax Micro

REF	Description
15150	110 – 230 VAC EU plug
15150/110	110 – 230 VAC US plug



HuMax Centrifuges at a Glance



	HuMax Micro	HuMax HCT	HuMax 3K
Max speed	7,000 rpm	14,000 rpm rotor REF 15502 12,000 rpm rotor REF 15501	4,500 rpm
RCF	2,680 x g	18,624 x g rotor REF 15502 13,620 x g rotor REF 15501	2,490 x g
Max. capacity	4 x 2 ml rotor REF 15150/10 16 x 0.2 ml rotor REF 15150/11 PCR-strip	24 x 2 ml rotor REF 15502 24 x capillary tubes rotor REF 15501	12 x 10 ml 8 x 15 ml
Available rotors	Fixed-angle rotor	Fixed-angle rotor REF 15502 Hematocrit rotor REF 15501	Fixed-angle rotor
Available adapter	Rotor REF 15150/10 0.5 ml 0.2 ml	Rotor REF 15502 0.5 ml 0.2 ml	15 ml 10 ml
Timer	None	30 sec – 99 min and hold	30 sec – 99 min and hold
Speed range	7,000 rpm	200 – 14,000 rpm	300 – 4,500 rpm
Lid lock	Power off	Double	Single
Digital display	No	RPM / RCF / Time Temperature	RPM / RCF / Time
Imbalance detection	No	No	No
Acceleration/ breaking rate	Fix	Fix	Fix
Rotor included	Yes, both	Yes, Hematocrit REF 15501	Yes



	HuMax 4K	HuMax 5K	HuMax 14K
	6,000 rpm	4,100 rpm	14,000 rpm rotor REF 17163 4,100 rpm rotor REF 17162 4,100 rpm rotor REF 17161
	2,822 x g	2,450 x g rotor REF 15301P 2,819 x g rotor REF 15301 2,142 x g rotor REF 15302P 2,011 x g rotor REF 15303	18,405 x g rotor REF 17163 3,007 x g rotor REF 17162 3,045 x g rotor REF 17161
	12 x 15 ml	30 x 15 ml rotor REF 15301P 4 x 100 ml rotor REF 15301 16 x 15 ml rotor REF 15302P 2 x MTP rotor REF 15303	24 x 2 ml rotor REF 17163 30 x 15 ml rotor REF 17162 4 x 200 ml rotor REF 17161
	Fixed-angle rotor	Fixed-angle rotor REF 15301P Fixed-angle rotor REF 15302P Swing-out rotor REF 15301 Swing-out MTP REF 15303	Fixed-angle rotor REF 17162 & REF 17163 Swing-out rotor REF 17161
	1.5/2 ml 7 ml 5 ml	Rotor REF 15301P 1.5/2 ml, 7 ml, 5 ml Rotor REF 15302P 1.5/2 ml, 7 ml, 5 ml Rotor REF 15301 100 ml, 50 ml conical, 4 x 15 ml 2 x 15 ml conical, 4 x 7 ml, 4 x 5 ml	Rotor REF 17162 1.5/2 ml, 7 ml, 5 ml Rotor REF 17161 100 ml w/wo cap, 50 ml conical w/wo cap, 7 x 15 ml w/wo cap, 3 x 15 ml conical w/wo cap 7 x 5 or 7 ml w/wo cap Rotor REF 17163 500/800 µl, 200 µl, 250/400/750 µl
	1 – 99 min and hold	1 – 99 min and hold	1 – 99 min and hold
	1,000 – 6,000 rpm	1,000 – 4,100 rpm	500 – 14,000 rpm
	Single	Single	Double
	RPM / RCF / Time	RPM / RCF / Time	RPM / RCF / Time
	No	Yes	Yes
	Fix	5	10
	Yes, 12 x 15 ml	No	No



Accessories for HuMax Centrifuges

REF	Description	Volume	Capless tube dimensions
17155	Adapter for 4K standard 15302P/17162	1 x 1.5/2 ml	Ø 11 x 70 mm
17156	Adapter for 4K standard 15302P/17162	1 x 7 ml	Ø 13 x 115 mm
17157	Adapter for 4K standard 15302P/17162	1 x 5 ml	Ø 13 x 90 mm
15301P	Fixed-angle rotor 4,100 rpm, 2,450 x g	30 x 15 ml	Ø 17 mm
15302P	Fixed-angle rotor 4,100 rpm, 2,142 x g	16 x 15 ml	Ø 17 mm
15303	Microtiterplate rotor 4,100 rpm, 2,011 x g	2 plates	
15301	Swing-out rotor 4,100 rpm, 2,819 x g	4 x inserts	
15305	Set of 4 inserts for 15301	1 x 100 ml	Ø 46.5 x 108 mm
15306	Set of 4 inserts for 15301	1 x 50 ml conical	Ø 30 x 120 mm
15307	Set of 4 inserts for 15301	4 x 15 ml	Ø 17 x 108.5 mm
15308	Set of 4 inserts for 15301	2 x 15 ml conical	Ø 17 x 121 mm
15309	Set of 4 inserts for 15301	4 x 7 ml	Ø 13 x 110 mm
15310	Set of 4 inserts for 15301	4 x 5 ml	Ø 13 x 85 mm
17162	Fixed-angle rotor 4,100 rpm, 3,007 x g	30 x 15 ml	Ø 17 mm
17161	Swing-out rotor 4,100 rpm 3,045 x g	4 x buckets	
17161/1	Set of 4 buckets for 17161	1 x 200 ml	Ø 57 mm
17161/2	Set of 4 buckets for 17161	1 x 200 ml with sealing	Ø 57 mm
17161/3	Set of 4 PP bottles with cap for 17161/1 or 17161/2	1 x 200 ml	Ø 56.5 mm
17161/4	Set of 4 inserts for 17161/1 Set of 4 inserts for 17161/2	1 x 100 ml	Ø 45.0 x 125 mm Ø 45.0 x 119 mm
17161/5	Set of 4 inserts for 17161/1 Set of 4 inserts for 17161/2	1 x 50 ml conical	Ø 30.0 x 131 mm Ø 30.0 x 125 mm
17161/6	Set of 4 inserts for 17161/1 Set of 4 inserts for 17161/2	7 x 15 ml	Ø 17.0 x 126 mm Ø 17.0 x 120 mm
17161/7	Set of 4 inserts for 17161/1 Set of 4 inserts for 17161/2	3 x 15 ml conical	Ø 17.0 x 134 mm Ø 17.0 x 128 mm
17161/8	Set of 4 inserts for 17161/1 Set of 4 inserts for 17161/2	7 x 5 or 7 ml	Ø 13.5 x 128 mm Ø 13.5 x 122 mm
17163	Fixed-angle rotor 14,000 rpm, 18,407 x g	24 x 1.5 or 2 ml	Ø 11.0 x 50 mm
17163/1	Adapter for 17163	500/800 µl	Ø 8.0 x 35 mm
17163/2	Adapter for 17163	200 µl PCR	Ø 6.5 x 37 mm
17163/3	Adapter for 17163	250/400/700 µl	Ø 6.0 x 34 mm
15501	Hematocrit rotor 12,000 rpm, 13,680 x g	24 x capillary tubes	Ø 1.75 x 75 mm
15502	Fixed-angle rotor 14,000 rpm, 18,624 x g	24 x 2 ml	Ø 11 x 39 mm
15503	Adapter for fixed-angle rotor (15502)	200 µl	
15504	Adapter for fixed-angle rotor (15502)	500 µl	
15450/10	Set of 12 adapters	7 - 10 ml	Ø 13 mm
15450/11	Set of 12 adapter inserts for 15450/10 (short tube)	1.5 - 5 ml	Ø 13 mm
15150/12	Set of 8 adapter for 15150/10	8 x 0.2 ml	
15150/13	Set of 8 adapter for 15150/10	8 x 0.5 ml	



Incubator / Waterbath



HumaTherm

Microprocessor controlled incubator

- Temperature range: ambient +5 °C to 80 °C
- Digital display for temperature and time
- Safety thermostat
- Programmable PID microprocessor control system
- Up to 8 GB of external memory for temperature data logging

Ordering Information HumaTherm

REF	Voltage
17195	230 VAC
17195/110*	110 VAC

Accessories HumaTherm

REF	Description
17196/20	Shelf
17196/21	Shelf carrier



HumAqua 5

Unstirred waterbath

- Tank volume: 6 l
- Useful volume: 4 l
- Temperature range: ambient +5 °C to 99.9 °C
- Digital display for temperature and time
- Delivered without cover
- Up to 8 GB of external memory for temperature data logging

Ordering Information HumAqua 5

REF	Voltage
17180/2	230 VAC
17180/1*	110 VAC

Accessories HumAqua 5

REF	Description
17180/10	Plexiglass cover (resists up to 60 °C)
17180/11	Stainless steel cover
17180/12	Rack for 52 tubes 13 x 70 mm
17180/13	Rack for 30 tubes 16 x 70 mm
17180/14	Rack for 27 tubes 18 x 70 mm
17180/15	Rack for 12 tubes 30 x 70 mm

* Increased delivery time or order 220 V version with transformer REF 18970



HumaCube

Benchtop incubator for round tubes

with reliable accuracy and uniformity of temperature

- 20 positions of 13 mm diameter
- 4 positions of 15 mm diameter
- Temperature range: 25 °C, 30 °C, 37 °C, 45 °C
- Digital display for temperature

Ordering Information HumaCube

REF	Voltage
17050	230 VAC
17070	110 VAC



HumaPure

Cost efficient water ion exchanger for low demand

- Constant water quality
- Capacity 450 l
(at 10° total salinity and conductivity limit of 20 µS/cm)
- Flow rate 65 l/h
- Measuring range µS/cm 0 – 30
- LED measuring device
- Included: device, tubings and cartridge

Ordering Information HumaPure

REF	Voltage
15140	110 VAC / 230VAC

Ordering Information HumaPure Set HumaPure with Prefilter Set

REF	Voltage
15142	110 VAC / 230VAC

Accessories HumaPure

REF	Description
15141	Prefilter set Prefilter housing, prefilter, tube set

Consumables HumaPure

REF	Description
15140/10	Cartridge
15141/10	Spare prefilter (2 pcs)



Diabetes DX

Today, diabetes affects hundreds of millions of patients worldwide and still grows. This is not only a huge medical, but also an economic burden increasingly affecting low- and middle-income countries, where about 80% of the world's diabetics live.

With its Diabetes DX products, HUMAN helps to ease and improve both an early diagnosis of diabetes, but also better diabetes monitoring and diabetes management after diagnosis.

Regardless whether this is to be done at the point of care such as diabetes centers, medical offices or if the blood analysis is conducted in specialized laboratories. HUMAN's Diabetes DX products fulfill every need with highest quality and precision.

The HumaSens2.0 glucose meter measures blood glucose rapidly and is intended either for professional use and self-testing. HumaMeter A1c and HumaNex A1c Variant precisely determine the important long-term parameter glycated hemoglobin HbA1c.


Additional serum, plasma, whole blood and urine assays for the diagnosis and monitoring of diabetes patients are available as HUMAN multi-purpose or system reagent kits.

The Combina urine test strips are ideal for diabetes screening as they offer testing of Glucose, Ketones, Microalbumin and Creatinine.




Blood Glucose Measurement



Clinical Chemistry Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
GLUCOSE liquicolor GOD method				
10121	Complete kit	R1 1 x 1000 ml, STD 1 x 3 ml	2...8 °C	
10260		R1 4 x 100 ml, STD 1 x 3 ml		


GLUCOSE liquiUV^{mono}
Hexokinase method, monoreagent

10786	Complete kit	R1 1 x 1000 ml, STD 1 x 3 ml	2...8 °C	
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MICROALBUMIN
Immunoturbidimetric test

11120	Reagent kit	R1 2 x 25 ml, R2 1 x 5 ml	2...8 °C	
11124	Standard 	2 x 1 ml		

Clinical Chemistry System Reagents

REF	Format	Unit/Size	Storage	Sample
GLUCOSE liquicolor Enzymatic colorimetric test, GOD-PAP method				
10260300	Reagent kit	2 x 150 tests	2...8 °C	
10260600		6 x 210 tests		

MICROALBUMIN
Immunoturbidimetric test

11120600	Reagent kit	1 x 90 tests	2...8 °C	
11124	Standard 	2 x 1 ml		

Urinalysis Test Strips

HUMAN offers a line of urine test strips for visual or automated reading. Further information can be found on page 106.



Serum

Plasma
EDTAPlasma
HEP

Urine

not included
but required



The HumaSens2.0 stands for a reliable, precise and easy to use blood glucose monitoring system that offers the patient maximum freedom and convenience. They deliver results rapidly, require only a minimal volume of capillary blood and come as a convenient starter pack without expiring components.



HumaSens2.0



HumaSens2.0

Blood glucose monitoring system

- Measuring time: 5 sec
- Strip ejector to minimize infection risk
- Measuring range: 20 – 600 mg/dl (1.1 – 33.3 mmol/l)
- Memory: 360 results
- Sample volume: 0.7 µl

REF	Format	Contents
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HumaSens2.0

Blood glucose meter

17560	Starter pack	1 x User manual (4 languages: GB, D, F, E) 1 x Quick guide (4 languages: GB, D, F, E) 1 x Patient diary 1 x Pouch 1 x Battery (CR2032)
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Test strips and control solutions are not included to guarantee optimum expiry times when purchased.

System Reagents

REF	Description	Unit/Size
17562*	Glucose Test Strips Blue HumaSens2.0/HumaSens2.0 ^{plus} /HumaSens/HumaSens Plus (50)	2 x 25 pcs
17562/10**	Glucose Control HumaSens2.0/HumaSens2.0 ^{plus} /HumaSens/HumaSens Plus (BLU GLU strip)	2 x 2 ml

* Usable for HumaSens2.0, HumaSens2.0^{plus}, HumaSens, HumaSens^{plus}

** Usable with Glucose test strips 17562 only for HumaSens2.0, HumaSens2.0^{plus}, HumaSens, HumaSens^{plus}



HbA1c Measurement

Clinical Chemistry Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
HbA1c liquidirect Immunoassay, direct method referenced to IFCC method				
10770	Reagent kit	40 ml	2...8 °C	
10776	Calibrator set	4 x 0.5 ml		
10775	Control blood normal/abnormal	2 x 2 x 0.5 ml		

GLYCOHEMOGLOBIN HbA1

Fast ion exchange resin separation method

10657	Complete kit	20 tests	2...8 °C	
10658		100 tests		
10259	Control	2 x 1 ml		

Clinical Chemistry System Reagents

REF	Format	Unit/Size	Storage	Sample
HbA1c liquidirect Immunoassay, direct method referenced to IFCC method				
10770600	Reagent kit	1 x 135 tests	2...8 °C	
10776	Calibrator set	4 x 0.5 ml		
10775	Control blood normal	2 x 0.5 ml		
	Control blood abnormal	2 x 0.5 ml		

Whole
Bloodnot included
but required



HbA1c (glycated hemoglobin A1c) is used by diabetes professionals worldwide for the routine monitoring of their patients' diabetes status and compliance. HumaMeter A1c for POC and the HumaNex A1c Variant for laboratory testing are perfect systems for HbA1c determination.

NGSP & IFCC CERTIFIED

REF 16080

HumaMeter A1c

Point-of-care testing of glycated hemoglobin HbA1c

- Accurate, reliable and fast – results in only 4 minutes!
- Easiest handling
- Boronate Affinity Quenching Technology for highest precision



HumaMeter A1c



Movie

Accessories

REF	Description
16081	Printer

System Reagents

REF	Format	Description
16085/50	HumaMeter A1c Reagent kit	50 tests
16086	HumaMeter A1c Control kit	4 x 0.25 ml

Consumables

REF	Description
16082	Printer paper roll (320 labels)



HbA1c Measurement

The HumaNex A1c Variant is our newest addition to our offering for HbA1c testing and is well-suited for small to medium HbA1c volumes while adding the advantage of variant detection.

NGSP & IFCC CERTIFIED**REF**

16190

HumaNex A1c Variant

HPLC system for small- and medium-scale measurement of glycated hemoglobin HbA1c

- Gold standard HPLC technology
- Ultra-sharp chromatographic resolution
- Detect common Hb variants (HbE, HbS, HbC, HbD)
- Measuring range 3 % to 18 % NGSP
- Less than 1.2 % CV
- Intuitive, touch-controlled software
- Fully automated with an onboard capacity of 10 samples
- Sample identification via external barcode reader
- Sample volume: 5 µl diluent mode / 1.5 ml whole blood mode
- Cap piercing











HumaNex A1c Variant

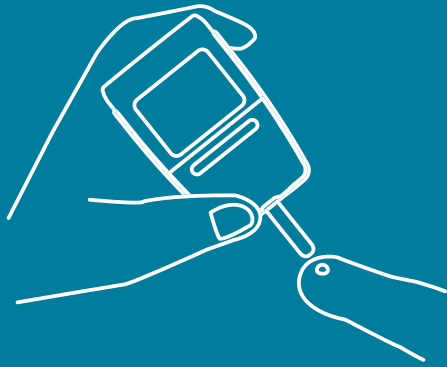


Movie

System Reagents

REF	Description	Unit/Size	Specification	Storage	Sample
16195	HumaNex A1c Variant Reagent kit	200 tests	Reagents for 200 tests	10...30 °C	 
16197	HumaNex A1c Variant Calibrator kit	2 levels: each 1 x 0.1 ml	Lyophilized whole blood with added glycated hemoglobin and stabilizer	2...8 °C	 
16199	HumaNex A1c Variant Control kit	2 levels: each 1 x 0.1 ml	Lyophilized whole blood with added glycated hemoglobin and stabilizer	2...8 °C	 
16190/10	HumaNex A1c Variant Column	1,600 tests	Column for 1600 tests including 4 filters, long stability	10...30 °C	 

Whole Blood
(EDTA-Tube)Diluted
Whole Blood



Point of Care

HUMAN's point of care systems offer high quality and precision in conjunction with rapid results and ease of use.

The HumaSens2.0^{plus} multi-monitoring system provides a measurement of Total Cholesterol (TC), Uric Acid (UA) and Glucose (GLU) with unprecedented speed, resulting in an efficient lab-in-your-palm for vital markers. All you need is a capillary whole blood sample of just 0.7 μ l (GLU), 1 μ l (UA) or 10 μ l (TC).

All of HUMAN's point of care systems are designed for reliability and safety. They are extremely easy to handle and minimize user errors. Extensive studies have been carried out to ensure their utmost safety and reliability.





Blood Glucose Monitoring

The HumaSens2.0 is a reliable, precise and easy to use blood glucose monitoring system that offers the patient maximum freedom and convenience. Results are delivered rapidly, require only a minimal volume of capillary blood and come as a convenient starter pack without expiring components.



HumaSens2.0

Blood glucose monitoring system

- Measuring time: 5 sec
- Strip ejector to minimize infection risk
- Measuring range: 20 – 600 mg/dl (1.1 – 33.3 mmol/l)
- Memory: 360 results
- Sample volume: 0.7 µl

REF	Format	Contents
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HumaSens2.0 Blood glucose meter

17560	Starter pack	1 x User manual (4 languages: GB, D, F, E) 1 x Quick guide (4 languages: GB, D, F, E) 1 x Patient diary 1 x Pouch 1 x Battery (CR2032)
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Test strips and control solutions are not included to guarantee optimum expiry times when purchased.

System Reagents

REF	Description	Unit/Size
17562*	Glucose Test Strips Blue HumaSens2.0/HumaSens2.0 ^{plus} /HumaSens/HumaSens Plus (50)	2 x 25 pcs
17562/10**	Glucose Control HumaSens2.0/HumaSens2.0 ^{plus} /HumaSens/HumaSens Plus (BLU GLU strip)	2 x 2 ml

* Usable for HumaSens2.0, HumaSens2.0^{plus}, HumaSens, HumaSens^{plus}

** Usable with Glucose test strips 17562 only for HumaSens2.0, HumaSens2.0^{plus}, HumaSens, HumaSens^{plus}



Multi-Parameter Monitoring

The HumaSens2.0^{plus} multi parameter system combines the efficiency and performance characteristics of the HumaSens2.0 glucose monitoring system with unprecedented speed and versatility of additional total cholesterol and uric acid measurement in one hand-held instrument. The proven reliability, excellent performance, auto strip identification and a strip ejection function make it an ideal lab-in-your palm system.

AUTO STRIP
IDENTIFICATION



HumaSens2.0^{plus}

Multi-parameter monitoring

Glucose, uric acid and total cholesterol



HumaSens2.0^{plus}

	Measuring time	Measuring range	Memory	Sample volume
Glucose	5 sec	20 – 600 mg/dl	360	0.7 µl
Uric Acid	15 sec	3 – 20 mg/dl	50	1 µl
Total Cholesterol	26 sec	100 – 400 mg/dl	50	10 µl

REF	Format	Contents
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HumaSens2.0^{plus}

Multi-parameter monitoring system

17561	Starter Pack	1 x User manual (4 languages: GB, D, F, E) 1 x Quick guide (4 languages: GB, D, F, E) 1 x Patient diary 1 x Pouch 1 x Battery (CR2032)
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Test strips and control solutions are not included to guarantee optimum expiry times when purchased.

System Reagents

REF	Description	Unit/Size
17562*	Glucose Test Strips Blue HumaSens2.0/HumaSens2.0 ^{plus} /HumaSens/HumaSens Plus (50)	2 x 25 pcs
17562/10**	Glucose Control HumaSens2.0/HumaSens2.0 ^{plus} /HumaSens/HumaSens Plus (BLU GLU strip)	2 x 2 ml
17566	Uric Acid Test Strips HumaSens 2.0 ^{plus}	1 x 25 pcs
17566/10	Uric Acid Control Solution HumaSens 2.0 ^{plus}	2 x 2 ml
17567	Total Cholesterol Test Strips HumaSens 2.0 ^{plus}	2 x 10 pcs
17567/10	Total Cholesterol Control Solution HumaSens 2.0 ^{plus}	2 x 1.5 ml



Hemoglobin A1c Measurement

HbA1c (glycated hemoglobin A1c) is used by diabetes professionals worldwide for the routine monitoring of their patients' diabetes status and compliance. HumaMeter A1c for POC and low throughput and HumaNex A1c (page 138) for laboratory testing are perfect systems for HbA1c determination.

NGSP & IFCC CERTIFIED

REF

16080

HumaMeter A1c

Point-of-care testing of glycated hemoglobin HbA1c

- Accurate, reliable and fast results in only 4 minutes
- Easiest handling
- Boronate Affinity Quenching Technology for highest precision



HumaMeter A1c



Movie

Accessories

REF	Description
16081	Printer

System Reagents

REF	Format	Description
16085/50	HumaMeter A1c Reagent kit	50 tests
16086	HumaMeter A1c Control kit	4 x 0.25 ml

Consumable

REF	Description
16082	Printer paper rolls (320 labels)



Molecular DX

Molecular diagnostic is one of the fastest growing segments within in vitro diagnostics. It analyzes genetic material of humans or pathogens to obtain clinical information associated with diseases. Loop-mediated isothermal amplification (LAMP) is a molecular technology for the detection of pathogens. It enables the amplification at one temperature and the detection of target DNA faster than traditional PCR based methods.

The amplified products are detected visually by reading green fluorescence or by the measurement of turbidity in real-time. Its robustness, high sensitivity and the ease of use make LAMP an excellent and nearly failsafe tool to improve the diagnostic in remote areas.

In cooperation with our partner EIKEN CHEMICALS CO. LTD., HUMAN provides an innovative LAMP testing system for the screening of infections with bacteria belonging to the *Mycobacterium Tuberculosis Complex* (MTBC) which was recommended by the WHO since 2016 as an alternative to smear microscopy. Furthermore, with the Loopamp™ Malaria Pan, Malaria Pf and Malaria Pv Detection Kits, HUMAN provides testing systems for Malaria screening especially in low prevalence areas.



TB-LAMP



Malaria-LAMP



LAMP Method

LAMP, an abbreviation for loop-mediated isothermal amplification is an accurate, simple, rapid and cost-effective molecular method. It is characterized by the use of four different primers, which are specifically designed to recognize six distinct regions on the target gene and by a constant temperature during the amplification process. The formed dumbbell-like structures of the DNA provide an increased number of starting points for the DNA synthesis and thus offer a faster multiplication of the target gene. The entire workflow consists of only four major steps: the sample transfer and lysis, the DNA/RNA extraction with the help of the Loopamp™ PURE DNA Extraction Kit or the Loopamp™ Viral RNA Extraction Kit, the loop-mediated isothermal amplification, and the result reading with the HumaLoop or the HumaTurb system.


PURE Extraction

The procedure for Ultra Rapid Extraction (PURE) is a fast and efficient extraction method to obtain highly pure DNA from patient samples. It is easy to perform and does not need any additional equipment. After a five minutes heating treatment, the lyzed sample is transferred into the adsorbent tube containing white powder that binds possible inhibitors of the LAMP reaction. The purified DNA is directly transferred into the LAMP reaction tube.

REF	Format	Unit/Size	Storage	Sample
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Loopamp™ PURE DNA Extraction Kit

Manual nucleic acid purification


970000	Complete kit	90 tests	2...30 °C	
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LAMP MTBC Assay Accessory

REF	Format	Unit/Size	Storage	Sample
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Pipette-60 Set

The pipette has a fixed volume of 60 µl. The filter tips come with a wider hole than traditional filter tips to ease the transfer of viscous sputum samples.

971000	Complete kit	1 pipette + 4 x 96 filter tips	2...30 °C	
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LAMP Assays

With the isothermal amplification process, all reagents are manufactured to work perfectly at a constant temperature. During the amplification process, four different primers recognize six distinct target regions. The products obtained are a mixture of stem loop DNA pieces with multiple loops. The detection of amplified products can be performed in two different ways, either by the detection of calcein emitted green fluorescence or by measuring the turbidity that is generated during the amplification of target DNA.



TB-LAMP



Malaria-LAMP



REF	Format	Unit/Size	Storage	Sample
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Loopamp™ MTBC Detection Kit

LAMP assay for the qualitative detection of bacteria belonging to *Mycobacterium Tuberculosis Complex* (MTBC)

972000	Complete kit	2 x 48 tests	2...30 °C	SP
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Loopamp™ Malaria Pan Detection Kit

LAMP assay for the qualitative detection of *Plasmodium pan* species

974000	Complete kit	10 x 48 tests	2...30 °C	WB
977000		2 x 48 tests		

Loopamp™ Malaria Pv Detection Kit

LAMP assay for the qualitative detection of *Plasmodium vivax* species

975000	Complete kit	2 x 48 tests	2...30 °C	WB
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Loopamp™ Malaria Pf Detection Kit

LAMP assay for the qualitative detection of *Plasmodium falciparum* species

978000	Complete kit	2 x 48 tests	2...30 °C	WB
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Instruments

HumaLoop T | M

HUMAN provides solutions for primary and district laboratories (level I+II). The application is simplified by consolidated processing: sample lysis, amplification and detection are performed on a single instrument. Preinstalled incubation times and temperatures as well as easy interpretable results by visual reading of green fluorescence make HumaLoop T and M ideal tools for the molecular screening of pathogens in peripheral laboratories. HumaLoop T and M are semi-automated incubator and fluorescence analyzer, using Loop-mediated isothermal amplification (LAMP). HumaLoop T allows the qualitative detection of bacteria belonging to the *Mycobacterium Tuberculosis Complex* (MTBC) in human sputum samples. HumaLoop M allows the qualitative detection of *Plasmodium spp., vivax* or *falciparum* DNA from human blood samples.

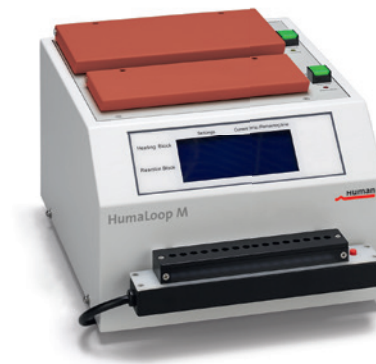
Easy to use LAMP technology for primary and district laboratories

One concept – two instruments

- Results in 1 - 2 h depending on sample number
- For up to 16 tests/run
- Visual result reading



REF 961000



REF 962000



Malaria-LAMP

HumaLoop T

- For the detection of MTBC
- Lysis temperature: 90 °C
- Amplification temperature: 67 °C



TB-LAMP



Detect TB. Accurately. Easily

HumaLoop M

- For the detection of Malaria and other parameters
- Lysis temperature: 75 °C
- Amplification temperature: 65 °C

Accessories

REF	Description
980000	HuMax ITA Micro centrifuge with a preinstalled program for incubation, mixing and centrifugation of Loopamp™ reaction tubes
18965/100	Solar Panel (100W) Mobile solar panel for charging the battery system
18965/220	Portable Battery System (220V, 300W) With the portable battery system the LAMP devices can be operated up to three runs without electricity





HumaTurb System

HumaTurb system allows the real-time detection of turbidity which is generated during the amplification process. The entire system consists of two parts: the control unit HumaTurb C, which is for the individual set up of incubation times, temperatures and HumaTurb A, the amplification unit for performing LAMP reactions. For the lysis of the sample, the HumaHeat with its inserts adapted to the Loopamp™ heating tubes is additionally required. Data archiving via USB, LIS connectivity and the capability to run different assays simultaneously make the HumaTurb system ideal for the fast and sensitive molecular detection of pathogens in reference and regional laboratories (level III+IV).

Scalable LAMP system for reference and regional laboratories



REF 963200

HumaTurb C + A

- Results in 1 - 2 h depending on sample number
- For any throughput up to 96 tests/run
- Different assays can be performed simultaneously
- Capable of being extended with up to six HumaTurb A units for an increased throughput
- Flexible data transfer via USB enables LIS connectivity
- Built-in printer

Accessories

REF	Description
18965/100	Solar Panel (100W) Mobile solar panel for charging the battery system
18965/220	Portable Battery System (220V, 300W) With the portable battery system the LAMP devices can be operated up to three runs without electricity



REF 963100

HumaTurb A

HumaTurb C is connectable with up to six HumaTurb A units for an increased throughput of up to 96 tests/run.

- For usage with HumaTurb C

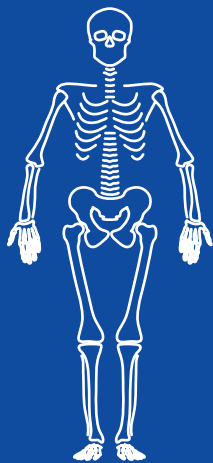


MANDATORY

REF 964000

HumaHeat

The heating unit is used for the sample lysis with the Loopamp™ PURE heating tube in combination with the HumaTurb system.



Autoimmune DX

HUMAN presents the well-established, successful IMTEC product line to provide diagnostic tools for autoimmune diseases.

In our competence centre for autoimmune diagnostics in Magdeburg, an expert team of scientists and technicians develops and produces a broad range of high-quality autoimmune diagnostic products comprising ELISA and line immunoassays (LIA).

With autoimmunity globally rising, IMTEC product line shows consistent reliability and a continuous development. It is CE marked and distributed globally by our qualified partners.





Autoimmune DX

HUMAN provides a broad range of high quality autoimmune diagnostic products comprizing ELISA and line immuno assays (LIA). To offer wider insights into the full autoimmune diagnostic portfolio, HUMAN offers a separate Autoimmune DX product catalog.

For more information discover our Autoimmune DX product catalog or visit our website:



Autoimmune DX

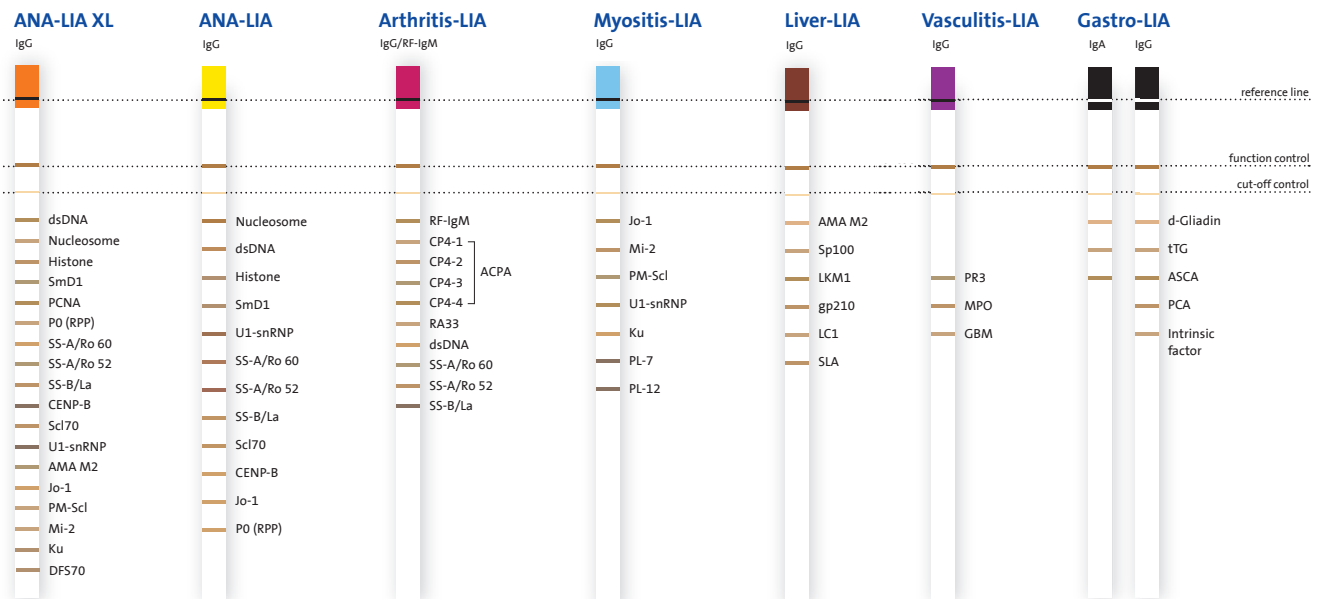


Autoimmune DX Catalog

LIA Technology

Autoimmune diseases are characterized by autoantibody found in patient sera. HUMAN's autoimmune line immuno assays (LIAs) are developed for rapid autoantibody profiling. LIAs are simple to use screening assays. By employing disease-specific antigens, up to 18 different autoantibodies can be differentiated with a single-shot assay. This state-of-the-art autoimmune diagnostic tool is produced by spotting antigens in lines on a simple nitrocellulose membrane utilizing the newest technologies available in the market, including HUMAN's patented epitope-preserving technology.

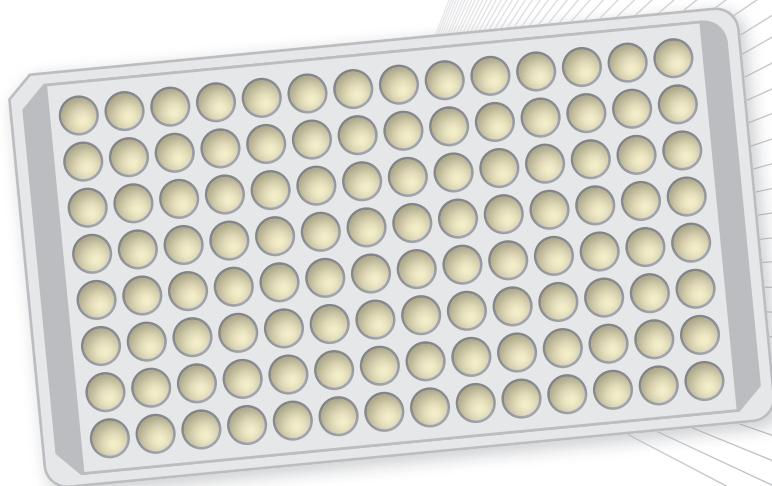
Bound autoantibodies are visualized by using specific HRP-conjugated secondary antibodies that specifically target human autoantibodies and a LIA-specific substrate. Positive samples for autoantibodies can be easily detected by comparing the pattern of coloured lines to the standardized line (cut-off) that is also spotted on the LIAs. LIAs are ideal autoimmune diagnostic tools for screening and differential diagnosis as well as monitoring autoimmune patients by identifying specific autoantibodies in one shot.





ELISA Technology

The HUMAN ELISAs for Autoimmune DX offer a unique solution for all sizes of laboratories from low to high throughput. The ELISA line consists of more than 50 ELISAs (both qualitative and quantitative) for the differential diagnosis of autoimmune diseases. To offer the best solution for the requirements of each laboratory, HUMAN offers screening ELISAs for the detection of different subtypes (IgG, IgM, IgA) in one assay and single parameter ELISAs for separate autoantigens. The quantitative ELISAs are ideally suited for the monitoring of disease progression. All ELISAs are optimized for automation and most are validated for use with HUMAN's automated ELISA instruments: Elisys Uno, Elisys Duo and Elisys Quattro. Handling is as simple as can be thanks to ready-to-use reagents, breakable microtiter wells and reagents largely interchangeable between different assays and lots. The incubation conditions are the same for almost all assays.



- AMA M2
- ANA
- Annexin V
- beta₂-glycoprotein 1
- C1q
- C1q-CIC
- C3d-CIC
- Cardiolipin
- CCP
- CENP-B
- CIC
- d-Gliadin
- dsDNA
- GBM
- gp210
- Histone
- Jo-1
- Ku
- LKM-1
- LPS
- MPO
- Nucleosome
- oxLDL
- PO (RPP)
- PCNA
- Phosphatidic acid
- Phosphatidylethanolamine
- Phosphatidylinositol
- Phosphatidylserine
- PM-Scl
- PR3
- Prothrombin
- RA33
- RF
- Salmonella
- Scl70
- SmD1
- SS-A/Ro 52
- SS-A/Ro 60
- SS-B/La
- T3
- T4
- Thyroglobulin
- Tissue transglutaminase
- TPO
- TSH-receptor
- U1-snRNP



Autoimmune DX – Rheumatology

Autoimmune

150

REF	Product Name	Description	Format	LIA	ELISA
ITC94000	Arthritis-LIA	Determination of rheumatoid arthritis antibodies	IgG/RF IgM	x	
ITC92007	ANA-LIA XL	Determination of anti-nuclear antibodies	IgG	X	
ITC60201	Myositis-LIA PL	Determination of myositis antibodies	IgG	X	
ITC60001	ANA Screen	Determination of antibodies to anti-nuclear antigens	IgG/IgA/IgM		X
ITC70001	ANA Screen (cut-off)		IgG/IgA/IgM		X
ITC70005	ENA Screen (cut-off)	Determination of antibodies to extractable nuclear antigens	IgG		X
ITC70025	Jo-1-Antibodies	Determination of antibodies to Jo-1	IgG		X
ITC70026	SS-A/Ro-Antibodies	Determination of antibodies to SS-A/Ro	IgG		X
ITC70024	SS-B/La-Antibodies	Determination of antibodies to SS-B/La	IgG		X
ITC70028	Scl70-Antibodies	Determination of antibodies to Scl70	IgG		X
ITC70022	U1-snRNP-Antibodies	Determination of antibodies to U1-snRNP	IgG		X
ITC92000	ANA-LIA	Determination of anti-nuclear antibodies	IgG	X	
ITC60033	ENA-Profile	Simultaneously determination of antibodies to extractable nuclear antigens	IgG		X
ITC59033	Anti-C1q-Antibodies	Determination of autoantibodies to complement C1q	IgG		X
ITC59001	dsDNA-Antibodies	Determination of antibodies to double-stranded DNA	IgG		X
ITC59002	Nucleosome-Antibodies	Determination of antibodies to nucleosomes	IgG		X
ITC60029	SmD1-Antibodies IgG	Determination of antibodies to SmD1	IgG		X
ITC60021	CCP-Antibodies	Determination of antibodies to cyclic citrullinated peptide	IgG		X
ITC60015	RA33-Antibodies	Determination of antibodies to RA33	IgG		X
ITC60003	RF IgM	Determination of antibodies to rheumatoid factor	IgM		X
ITC82040	Vasculitis-LIA	Determination of vasculitis antibodies	IgG	X	
ITC82070	GBM-Antibodies	Determination of antibodies to glomerular basement membrane	IgG		X



REF	Product Name	Description	Format	LIA	ELISA
ITC82030	MPO-ANCA	Determination of antibodies to myeloperoxidase	IgG		X
ITC82020	PR3-ANCA	Determination of antibodies to proteinase 3	IgG		X
ITC59070	Phospholipid-Antibodies Screen	Determination of antibodies to phospholipids	IgG/IgM		X
ITC59550	Annexin V-Antibodies Screen	Determination of antibodies to annexin V	IgG/IgA/IgM		X
ITC59050	beta2-Glycoprotein 1-Antibodies Screen	Determination of antibodies to beta2-Glycoprotein 1	IgG/IgA/IgM		X
ITC59150	beta2-Glycoprotein 1-Antibodies IgG		IgG		X
ITC59250	beta2-Glycoprotein 1-Antibodies IgM		IgM		X
ITC59076	Cardiolipin-Antibodies Screen	Determination of antibodies to cardiolipin	IgG/IgA/IgM		X
ITC59082	Cardiolipin-Antibodies Combi		IgG/IgM		X
ITC59071	Cardiolipin-Antibodies IgG		IgG		X
ITC59081	Cardiolipin-Antibodies IgM		IgM		X
ITC59500	oxLDL-Antibodies Ig(GM)	Determination of antibodies to oxidized low-density lipoproteins	IgG/IgM		X
ITC59400	Phosphatidylethanolamine-Antibodies Screen	Determination of antibodies to phosphatidylethanolamine	IgG/IgA/IgM		X
ITC59027	Phosphatidylserine-Antibodies Screen	Determination of antibodies to phosphatidylserine	IgG/IgA/IgM		X
ITC59011	Phosphatidylserine-Antibodies IgG		IgG		X
ITC59021	Phosphatidylserine-Antibodies IgM		IgM		X
ITC59450	Prothrombin-Antibodies Screen	Determination of antibodies to prothrombin	IgG/IgA/IgM		X
ITC59031	CIC IgG	Determination of antibodies to C1q circulating immune complexes	IgG		X
ITC59035	Complement Activity	Determination of complement activity	IgG		X
ITC59032	C3d-CIC	Determination of antibodies to C3d circulating immune complexes	IgG		X
ITC40040	Salmonella-Antibodies Screen (cut-off)	Determination of antibodies to Salmonella	IgG/IgA/IgM		X
ITC40050	Salmonella-Antibodies IgA (cut-off)		IgA		X



Autoimmune DX – Hepatology

REF	Product Name	Description	Format	LIA	ELISA
ITC66205	Liver-LIA	Qualitative determination of antibodies to autoimmune liver diseases	IgG	X	
ITC60040	AMA M2	Determination of antibodies to anti-mitochondrial antigen M2	IgG		X
ITC66050	LKM-1-Antibodies	Determination of antibodies to liver-kidney microsomal antigen 1	IgG		X
ITC82020	PR3-ANCA	Quantitative determination of IgG antibodies to proteinase 3	IgG		X

Autoimmune DX – Gastroenterology

REF	Product Name	Description	Format	LIA	ELISA
ITC30701	Gastro-LIA	Determination of antibodies to gastro intestinal diseases	IgG / IgA	X	
ITC30605	d-Gliadin-Antibodies IgA	Determination of antibodies to deamidated Gliadin	IgA		X
ITC30505	d-Gliadin-Antibodies IgG		IgG		X
ITC30400	t-Transglutaminase-Antibodies IgA	Determination of antibodies to tissue transglutaminase	IgA		X
ITC30300	t-Transglutaminase-Antibodies IgG		IgG		X

Autoimmune DX – Endocrinology

REF	Product Name	Description	Format	LIA	ELISA
ITC85010	TG-Antibodies	Determination of antibodies to thyroglobulin	IgG		X
ITC85020	TPO-Antibodies	Determination of IgG antibodies to thyroperoxidase	IgG		X
ITC85030	TSH Receptor Antibodies	Determination of IgG antibodies to TSH-receptor			X
54015	fT3 (Free Triiodothyronine)	Determination of free Tyroxine			X
54025	fT4 (Free Thyroxine)	Determination of free Triiodothyronine			X
54030	TSH (Thyrotropin)	Determination of Thyrotropin			X

Brands and Symbols

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Brands and Symbols

Lipid Clearing Factors (LCF)

In some cases, patient samples, particularly those with increased lipid concentrations (Triglycerides, Cholesterol), appear turbid. This can cause problems in the performance of photometric tests as the turbidity may lead to falsely elevated test results with endpoint determinations. To avoid such problems, pretreatment steps to eliminate the turbidity of the samples are often employed. However, such pretreatment steps are time-consuming and error-prone. HUMAN has developed a mixture of special ingredients, collectively called the LCF, to avoid these pretreatment steps. LCF is integrated in the respective test kit reagents and works while the samples are incubated. Clearing is achieved in a few minutes (e.g. up to 2,000 mg/dl triglycerides, equivalent to 22.8 mmol/l, are cleared within 2–3 minutes at room temperature).

Features

- Correct test results, even with highly lipemic specimens
- Turbid samples can directly be integrated into the routine analysis, in particular important for automated analyzer systems
- No separate working steps required
- No extended or additional incubation time

Products with LCF

CHOLESTEROL liquicolor

IRON liquicolor

MAGNESIUM liquicolor

TRIGLYCERIDES GPO liquicolor

URIC ACID liquicolor

CRP-hs

IMTEC

IMTEC is the brand name of HUMAN autoimmune diagnostics.

Legend / Abbreviations

Expiry date

The reagents are stable even after opening until the expiration date printed on the kit or vial label, when stored at the stated temperature.

Kit formats

Complete kit includes all components necessary for a test run. Reagent kit includes reagents but no standard, otherwise the component is specified under its REF M-test: single test.

GSCC

German Society for Clinical Chemistry

IFCC

International Federation of Clinical Chemistry

NGSP

National Glycohemoglobin Standardization Program

LCF

Lipid Clearing Factor

SCE

Scandinavian Committee on Enzymes

Stability

The stability of the reagents is described in the respective package inserts.

Storage

Temperature at which the kit should always be stored when not in use.

WR (Working reagent)

Reagent after reconstitution or mixture of liquid components, which is used for the test run.

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