

# HUMAN Diagnostics

Global player. Local solutions. Individual support.

Product Catalog 2021 | 2022



**Human**

Diagnostics Worldwide



# HUMAN Diagnostics

Product Catalog 2021 | 2022

The logo graphic consists of a stylized, three-dimensional red and orange shape that resembles a folded ribbon or a series of overlapping planes, positioned to the left of the word 'Human'.

**Human**

Diagnostics Worldwide

# HUMAN Diagnostics

**Global player. Local solutions. Individual support.**



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

For 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 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.



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 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 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

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## 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](mailto:info@human.de)  
[www.human.de](http://www.human.de)

### 2 Production Site

**HUMAN Gesellschaft für  
Biochemica und Diagnostica mbH**

Stegelitzer Straße 3  
39126 Magdeburg  
Germany

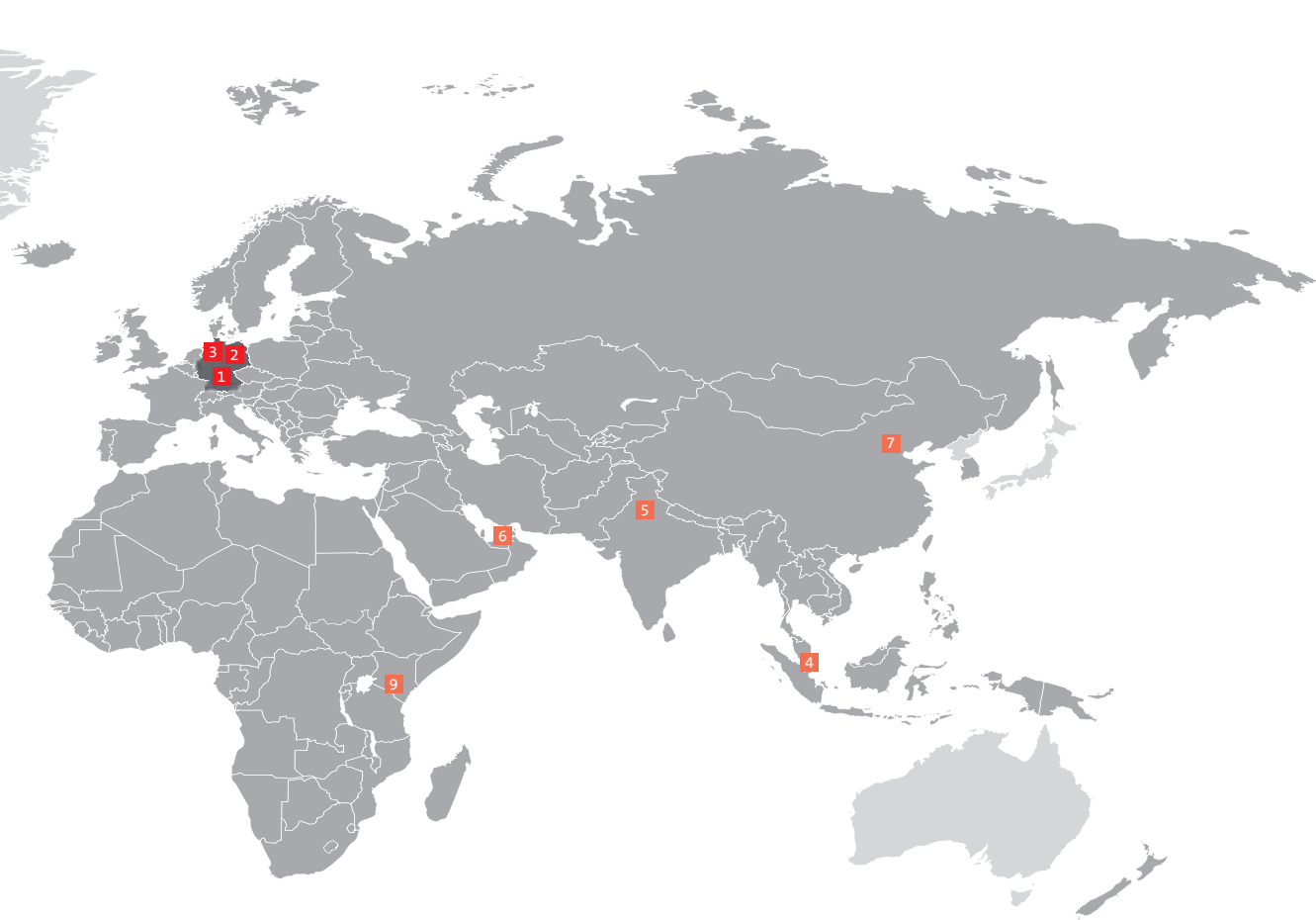
Phone: +49 391 244700  
Email: [info@human.de](mailto:info@human.de)

### 3 LABiTec®

**Labor BioMedical Technologies  
GmbH**

An der Strusbek 6  
22926 Ahrensburg  
Germany

Phone: +49 4102 47950  
Email: [service@labitec.de](mailto:service@labitec.de)



## Regional offices and training centre

### 4 Asia Pacific

#### Human Diagnostics Asia Pacific Pte. Ltd.

(Co. Regn No. 2007-17335M)  
33 Ubi Avenue 3, #01-59 Vertex,  
408868  
Singapore

Phone: +65 626 89829  
Email: asiapacific@human.de

### 5 India

#### HUMAN Diagnostics India

618, DLF Galleria  
Gurgaon Pin: 122009  
India

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

### 6 Middle East

#### HUMAN Diagnostics Middle East FZE

Office: Q3 - 198  
P. O. Box 122348 Sharjah  
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

Yongchang Industry Park No. 703  
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P.R. China

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### 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



## Quality is the essence

For HUMAN, quality is not simply a phrase, it is the essence of our philosophy. For almost 50 years, HUMAN has always acted in accordance with internationally recognized quality standards. Nowadays 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 valid European IVD Directive. 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  
in vitro diagnostic products and analyzers  
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 - ISO 13485:2016

Valid from	2019-03-12
Valid until	2022-03-11
Registration no.	D1030000073
Report no.	P18-01225-128829
Stuttgart	2019-03-01

Head of Certification Body



## 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 homepage) has been implemented in 2015 and maintained since then.



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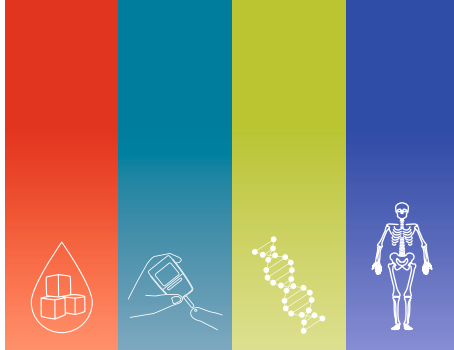
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# Clinical Chemistry

## 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 modern 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.

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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 Plus<sup>3</sup>



HumaStar 100

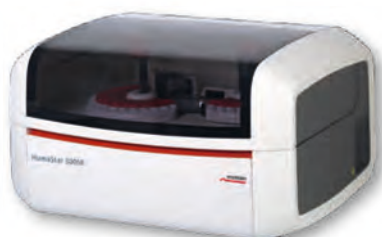
## HumaStar Analyzers

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
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### ACID PHOSPHATASE

Humazym colorimetric test

12660	M-test, Reagent kit	16 x 2 ml	2...8 °C	
10660	Reagent kit	6 x 15 ml		



### ALBUMIN liquicolor

Colorimetric test, monoreagent, BCG method

10560	Complete kit	1000 ml	2...25 °C	  
156004		4 x 100 ml		



### ALKALINE PHOSPHATASE liquicolor

AMP buffer, IFCC

12117	Reagent kit	10 x 10 ml	2...8 °C	 
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### ALKALINE PHOSPHATASE opt. liquicolor

DEA buffer, DGKC




12217	Reagent kit	16 x 5 ml	2...8 °C	 
12017		10 x 10 ml		
12027		8 x 50 ml		
12037		4 x 250 ml		



anti-STREPTOLYSIN-O



### alpha-AMYLASE liquicolor

Colorimetric test, monoreagent

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



### anti-STREPTOLYSIN-O

Latex enhanced immunoturbidimetric test

11251P	Reagent kit	2 x 50 ml	2...8 °C	
11351	Standard 	2 x 1 ml		

### APOLIPOPROTEIN A1

Immunoturbidimetric test

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



Serum



Plasma  
EDTA



Plasma  
HEP



Cerebrospinal  
fluid



Urine



not included  
but required







REF	Format	Unit/Size	Storage	Sample
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**APOLIPOPROTEIN B**

Immunturbidimetric test

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

**auto-BILIRUBIN-D** liquicolor

Colorimetric test, DPD method, for automated analyzers



10741	Reagent kit	375 ml	2...8 °C	 
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BILIRUBIN DIRECT/TOTAL liquicolor




**auto-BILIRUBIN-T** liquicolor

Colorimetric test, DPD method, for automated analyzers

10742	Reagent kit	375 ml	2...8 °C	 
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**BILIRUBIN** liquicolor

Colorimetric test, dichloroaniline (DCA) method

10012	Reagent kit	200 ml	2...25 °C	  
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**BILIRUBIN DIRECT/TOTAL** liquicolor

Colorimetric test, Jendrassik/Gróf method

10740	Reagent kit	2 x 100 ml	15...25 °C	 
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**CALCIUM** liquicolor

Colorimetric test, monoreagent, o-cresolphthalein-complexone (OCPC) method

10011	Complete kit	200 ml	2...25 °C	 
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**CHLORIDE** liquicolor

Colorimetric test, monoreagent, TPTZ method

10115	Complete kit	200 ml	2...25 °C	  
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## Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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### CHOLESTEROL liquicolor

Enzymatic colorimetric test, monoreagent with LCF, CHOD-PAP method

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




### CHOLINESTERASE liquicolor

Enzymatic colorimetric test, Butyrylthiocholine method

12007	Reagent kit	1 x 120 ml	2...8 °C	
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### CK-MB liquiUV

Immuno-inhibition method

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


### CK-MB (NAC-activated)

Humazym M-test, immuno-inhibition method

12008	Reagent kit	20 x 3 ml	2...8 °C	
13612	Calibrator 	2 x 1 ml		
13611	Control 	2 x 2 x 2 ml		


### CK NAC activated

Humazym M-test, optimized method (GSCC)

12005	Reagent kit	20 x 3 ml	2...8 °C	
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### CK NAC activated liquiUV

IFCC method

12015	Reagent kit	10 x 10 ml	2...8 °C	
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### COMPLEMENT C3

Immunoturbidimetric test

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



Serum

Plasma  
EDTAPlasma  
HEP

Urine



not included  
but required



REF	Format	Unit/Size	Storage	Sample
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**COMPLEMENT C4**

Immunoturbidimetric test

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




**auto-CREATININE** liquicolor

Colorimetric kinetic method (Jaffé), for automated analyzers

10052	Complete kit	250 ml	15...25 °C	  
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**CREATININE** liquicolor

Colorimetric test, kinetic and endpoint method (Jaffé)

10051	Complete kit	200 ml	15...25 °C	  
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**CREATININE (enzym)** liquicolor

Enzymatic colorimetric test

10053	Complete kit	80 ml	2...8 °C	
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**CRP**

Immunoturbidimetric test for C-reactive protein

11241	Reagent kit	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	1 x 40 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	1 x 37.5 ml	2...8 °C	  
11614	Calibrator set 	4 x 0.5 ml		






## Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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### gamma-GT liquicolor

Colorimetric test, Persijn/van der Slik method

12213	Reagent kit	16 x 5 ml	2...8 °C	  
12013		10 x 10 ml		
12023		8 x 50 ml		
12033		4 x 250 ml		




### GLUCOSE liquicolor

Enzymatic colorimetric test, GOD-PAP method

10121	Complete kit	1000 ml	2...8 °C	  
10260		4 x 100 ml		



### GLUCOSE liquiUV<sup>mono</sup>

Hexokinase method, monoreagent

10786	Complete kit	1 x 1000 ml	2...8 °C	  
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### 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		




### GOT (ASAT) IFCC mod. liquiUV

Modified IFCC method (334 nm, 340 nm, 365 nm)

12211	Reagent kit	16 x 5 ml	2...8 °C	  
12011		10 x 10 ml		
12021		8 x 50 ml		
12031		4 x 250 ml		

### GPT (ALAT) IFCC mod. liquiUV

Modified IFCC method (334 nm, 340 nm, 365 nm)

12212	Reagent kit	16 x 5 ml	2...8 °C	  
12012		10 x 10 ml		
12022		8 x 50 ml		
12032		4 x 250 ml		



Whole Blood



Capillary Blood



Serum



Plasma EDTA



Plasma HEP



not included but required

REF	Format	Unit/Size	Storage	Sample
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**HbA1c liquidirect**

Immunoassay, direct method referenced to IFCC method

10770	Reagent kit	40 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		



HbA1c liquidirect

**HDL CHOLESTEROL liquicolor**

Enzymatic colorimetric test, direct homogeneous method

10084	Complete kit	80 ml	2...8 °C	SERUM EDTA HEP
10284		200 ml		

**HDL CHOLESTEROL**

Precipitation method with phosphotungstic acid

10018	Precipitant/ Standard	4 x 80 ml, 1 x 3 ml	2...25 °C	SERUM EDTA HEP
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**HEMOGLOBIN liquicolor**

Photometric colorimetric test, cyanmethemoglobin method

10751	Reagent kit	for 10 x 500 ml	15...25 °C	WB CB
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**HOMOCYSTEINE liquiUV**

Enzymatic UV test

11140	Complete kit	1 x 34 ml	2...8 °C	SERUM EDTA HEP
11145	Calibrator set	2 x 3 ml		
11143	Control	3 x 1.5 ml		

**IMMUNOGLOBULINS direct IgA**

Immunoturbidimetric test

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

**IMMUNOGLOBULINS direct IgG**

Immunoturbidimetric test

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




## Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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### IMMUNOGLOBULINS direct IgM

Immunoturbidimetric test

11503	Reagent kit	2 x 10 ml	2...8 °C	
11504	Calibrator set <sup>+</sup>	5 x 2 ml		
11505	Direct buffer	4 x 40 ml		



### IRON liquicolor

Photometric colorimetric test, monoreagent with LCF, chromazurol B method

10229	Complete kit	2 x 30 ml	2...25 °C	 
10230		2 x 100 ml		




### IRON TPTZ liquicolor

Photometric colorimetric test, TPTZ method

12290	Complete kit	2 x 25 ml	2...8 °C	 
12291		2 x 100 ml		

### LDH SCE mod. liquiUV

LDH SCE mod. liquiUV modified SCE method




12214	Reagent kit	16 x 5 ml	2...8 °C	  
12014		10 x 10 ml		
12024		8 x 50 ml		



LDL CHOLESTEROL liquicolor



### LDL CHOLESTEROL liquicolor

Enzymatic colorimetric test, direct homogeneous method

10094	Complete kit	80 ml	2...8 °C	  
10294		200 ml		

### LIPASE liquicolor

Enzymatic colorimetric test

12006	Reagent kit	4 x 10 ml	2...8 °C	 
12026		6 x 20 ml		
13160	Calibrator <sup>+</sup> (Autocal)	4 x 5 ml		



REF	Format	Unit/Size	Storage	Sample
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**LIPOPROTEIN (a)**

Latex enhanced immunoturbidimetric test

11105	Reagent kit	1 x 3 ml	2...8 °C	
11107	Standard +	2 x 0.5 ml		

**MAGNESIUM** liquicolor

Photometric colorimetric test, monoreagent with LCF, xylydyl blue method

10010	Complete kit	2 x 100 ml	2...25 °C	
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MICROALBUMIN

**MICROALBUMIN**

Immunoturbidimetric test

11120	Reagent kit	1 x 5 ml	2...8 °C	
11124	Standard +	2 x 1 ml		

**PANCREAS-AMYLASE** liquicolor

Enzymatic colorimetric test

12009	Reagent kit	4 x 10 ml	2...8 °C	
12029		6 x 20 ml		
13160	Calibrator + (Autocal)	4 x 5 ml		

**PHOSPHORUS** liquirapid

Photometric UV-test, monoreagent, ammonium molybdate method

10027	Complete kit	2 x 100 ml	2...25 °C	
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**POTASSIUM** liquirapid

Photometric turbidimetric test, tetraphenylboron method

10118	Complete kit	100 ml	2...25 °C	
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**POTASSIUM** liquiUV

Enzymatic UV test

10120	Complete kit	40 ml	2...8 °C	
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## Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
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### RHEUMATOID FACTORS

Latex enhanced immunoturbidimetric test

11261PA	Reagent kit	2 x 50 ml	2...8 °C	
11361	Standard 	2 x 3 ml		


### SODIUM liquicolor

Enzymatic colorimetric test

10113	Complete kit	40 ml	2...8 °C	 
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### SODIUM RAPID

Photometric colorimetric test, Mg-Uranylacetate method

573351	Complete kit	60 ml	15...25 °C	
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### TIBC

Total Iron Binding Capacity test, iron saturation and aluminum oxide absorption method, for use with **Iron liquicolor (10229/10230)** and **Iron TPTZ (12290/12291/12290300/12290600)**




10670	Saturation solution, Absorbant	100 tests	15...25 °C	 
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SODIUM liquicolor



### TOTAL PROTEIN liquicolor

Photometric colorimetric test, monoreagent, Biuret method

157004	Complete kit	4 x 100 ml	2...25 °C	  
10570		1000 ml		




### TRANSFERRIN

Immunoturbidimetric test

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

### TRIGLYCERIDES liquicolor<sup>mono</sup>

Photometric colorimetric test, monoreagent with LCF, GPO-PAP method

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



Serum



Plasma  
EDTA



Plasma  
HEP



Cerebrospinal  
fluid




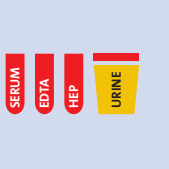



Urine



not included  
but required





REF	Format	Unit/Size	Storage	Sample
<b>URINARY TOTAL PROTEIN</b> liquicolor Colorimetric test, Pyrogallol red method				
10590	Complete kit	3 x 30 ml	2...8 °C	
<b>UREA</b> liquicolor Enzymatic colorimetric test, modified Berthelot method				
10505	Complete kit	200 ml	2...8 °C	
10506	Reagent 1, Enzyme, Standard	1000 ml		
10507	Reagent 2	1000 ml		
<b>UREA</b> liquiUV Kinetic GLDH method				
10521	Complete kit	8 x 50 ml	2...8 °C	
<b>URIC ACID</b> liquicolor <sup>plus</sup> Enzymatic colorimetric test with LCF, PAP method with ascorbate oxidase				
10694	Complete kit	3 x 100 ml	2...8 °C	
<b>URIC ACID</b> liquicolor Enzymatic colorimetric test, monoreagent with LCF, PAP method				
10690	Complete kit	4 x 30 ml	2...8 °C	
10691		4 x 100 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 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 <sup>mono</sup>	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 <sup>rmono</sup>	x	x	x	
UREA liquicolor	x	x	x	
UREA liquiUV	x	x	x	
URIC ACID liquicolor <sup>plus</sup>	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
- 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 117)
17070	HumaCube 110 VAC (page 117)

### 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)

Humalyzer  
Primus

#### Accessories

REF	Description
17050	HumaCube 230 VAC (page 117)
17070	HumaCube 110 VAC (page 117)
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
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



HumaStar 100|200



Movie



German Design Award  
SPECIAL MENTION 2015



**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



**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 – 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 <b>16890/10</b> ) (10 pcs)
16890/13	Reagent bottles tray 30 positions, included in standard delivery
16890/14	20 ml bottle adapter (15 pcs)
16890/15	Reagent adapter for cup or tube (1 pc)
16890/41	Closing lid for reagent positions (15 pcs)
18992PC	PC with Windows®
17901M	Monitor 19 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 <b>16890/10</b> with <b>16890/12</b> , 1,000 pcs)
17470/59	Sample cups 2 ml (for sample tray <b>16890/11</b> , 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

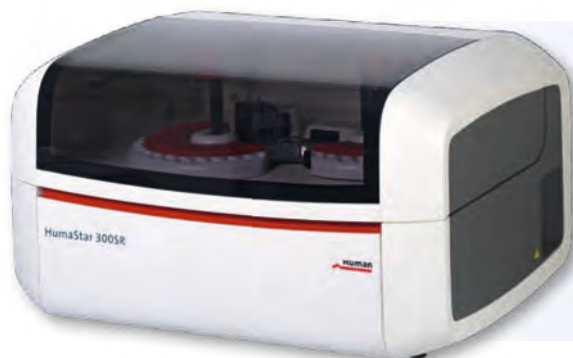


	HumaStar 100	HumaStar 200
Throughput, max. tests/hour	100	200
Throughput, typical mix	100	127
Random access/ batch	Random access	Random access
Pipetting system	1 needle, int. + ext. wash	1 needle, int. + ext. wash
Photometer	Direct, cuvette	Direct, cuvette
Wash station	Yes	Yes
Water consumption	< 1 l/h	< 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	30
Reagent cooling	Yes	Yes
Needle shock detector	Yes	Yes
LIS	Ethernet, bidirectional, ASTM	Ethernet, bidirectional, ASTM
Languages	English, French, Italian, Spanish	English, French, Italian, Spanish
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



HumaStar 300SR

- 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

#### 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 <b>16890/10</b> ) (10 pcs)
18992PC	PC with Windows®
17901M	Monitor 19 inch
18995MT	Touchscreen monitor 24 inch
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 <b>16890/10</b> with <b>16890/12</b> , 1,000 pcs)
17470/59	Sample cups 2 ml (for sample tray <b>16890/11</b> , 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



#### Accessories

REF	Description
16663-04	ISE module field installation kit for Na, K, Cl
16660/251	USB-RS232-adapter
18993L	Laser printer
18992PC	PC with Windows®
17901M	Monitor 19 inch
18995MT	Touchscreen monitor 24 inch
16660/254	Sample segment diameter max. 16 mm
16661/15	Sample segment diameter max. 13 mm



HumaStar 600



Movie

#### ISE Reagents

REF	Description
16660/14-01	ISE reagent pack
16663/40	ISE tri-level QC kit

#### 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
17470/59	Sample cups 2 ml (500 pcs)

#### ISE Consumables

REF	Description
16660/11-01	ISE cleaning solution kit 6 x 12 ml
16660/13-01	ISE urine diluent 500 ml
16660/42-01	Li electrode
16660/4-01	Na electrode
16660/5-01	K electrode
16660/6-01	Cl electrode
16660/7-01	Ref. electrode



## 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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### ACID PHOSPHATASE

Humazym colorimetric test

10660600	Reagent kit	3 x 50 tests	2...8 °C	SERUM
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### ALBUMIN liquicolor

Colorimetric test, BCG method, monoreagent

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

### ALKALINE PHOSPHATASE liquicolor

AMP buffer, IFCC

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

### ALKALINE PHOSPHATASE opt. liquicolor

DEA buffer, DGKC

12027300	Reagent kit	2 x 150 tests	2...8 °C	SERUM HEP
12027600		3 x 250 tests		

### alpha-AMYLASE liquicolor

Colorimetric test, monoreagent

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



ALKALINE PHOSPHATASE liquicolor

### anti-STREPTOLYSIN-O

Latex enhanced immunoturbidimetric test

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

### APOLIPOPROTEIN A1

Monoreagent

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



Serum



Plasma  
EDTA



Plasma  
HEP



not included  
but required



REF	Format	Unit/Size	Storage	Sample
<b>APOLIPOPROTEIN B</b>				
Monoreagent				
11102600	Reagent kit	1 x 70 tests	2...8 °C	
11104	Standard	2 x 1 ml		
<b>auto-BILIRUBIN-D</b> liquicolor				
DPD method				
10741300	Reagent kit	2 x 100 tests	2...8 °C	 
10741600		5 x 210 tests		
<b>auto-BILIRUBIN-T</b> liquicolor				
DPD method				
10742300	Reagent kit	2 x 150 tests	2...8 °C	 
10742600		5 x 210 tests		
<b>CALCIUM</b> liquicolor				
Colorimetric test, monoreagent, o-cresolphthalein-complexone (OCPC) method				
10011300	Reagent kit	3 x 100 tests	2...25 °C	 
10011600		3 x 430 tests		
<b>CHOLESTEROL</b> liquicolor				
Enzymatic colorimetric test, monoreagent with LCF, CHOD-PAP method				
10028300	Reagent kit	2 x 100 tests	2...8 °C	  
10028600		3 x 150 tests		
<b>CHOLINESTERASE</b> liquicolor				
Enzymatic colorimetric test, Butyrylthiocholine method				
12007300	Reagent kit	2 x 100 tests	2...8 °C	
<b>CHLORIDE</b> liquicolor				
Colorimetric test, monoreagent, TPTZ method				
10115300	Reagent kit	2 x 50 tests	2...25 °C	







## System Reagents HumaStar 300SR | HumaStar 600

REF	Format	Unit/Size	Storage	Sample
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### CK-MB liquiUV

Immuno-inhibition 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 method

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

Immunoturbidimetric test

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

### COMPLEMENT C4

Immunoturbidimetric test



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



CRP


### auto-CREATININE liquicolor

Colorimetric kinetic method (Jaffé)

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





### CREATININE (enzym) liquicolor

Enzymatic colorimetric test

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

### CRP

Immunoturbidimetric test for C-reactive protein colorimetric test, monoreagent with LCF, CHOD-PAP method

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
<b>FERRITIN</b>				
Latex enhanced immunoturbidimetric test				
11610600	Reagent kit	1 x 90 tests	2...8 °C	
13020600	Calibrator 500	4 x 0.5 ml		
<b>gamma-GT liquicolor</b>				
Colorimetric test, Persijn/van der Slik method				
12023300	Reagent kit	2 x 100 tests	2...8 °C	
12023600		3 x 250 tests		
<b>GLUCOSE liquicolor</b>				
Enzymatic colorimetric test, GOD-PAP method				
10260300	Reagent kit	2 x 150 tests	2...8 °C	
10260600		6 x 210 tests		
<b>GOT (ASAT) IFCC mod. liquiUV</b>				
Modified IFCC method				
12021300	Reagent kit	2 x 200 tests	2...8 °C	
12021600		5 x 310 tests		
<b>GPT (ALAT) IFCC mod. liquiUV</b>				
Modified IFCC method				
12022300	Reagent kit	2 x 200 tests	2...8 °C	
12022600		5 x 310 tests		
<b>HDL CHOLESTEROL liquicolor</b>				
Enzymatic colorimetric test, direct homogeneous 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
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**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		



**IMMUNOGLOBULINS direct IgA**

Immunoturbidimetric test

11501300	Reagent kit	1 x 100 tests	2...8 °C	
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	
11502600		1 x 250 tests		
11504	Calibrator set 	5 x 2 ml		



**IMMUNOGLOBULINS direct IgM**

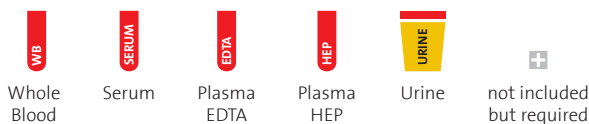
Immunoturbidimetric test

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

**IRON TPTZ** liquicolor

Photometric colorimetric test, monoreagent with LCF, TPTZ method

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





REF	Format	Unit/Size	Storage	Sample
<b>LDH SCE mod.</b> liquiUV Modified SCE method				
12014300	Reagent kit	2 x 100 tests	2...8 °C	
12014600		2 x 180 tests		
<b>LDL CHOLESTEROL</b> liquicolor Enzymatic colorimetric test, direct homogeneous method				
10094600	Reagent kit	2 x 90 tests	2...8 °C	
<b>LIPASE</b> liquicolor Enzymatic colorimetric test				
12006600	Reagent kit	2 x 100 tests	2...8 °C	
<b>LIPOPROTEIN (a)</b> Latex enhanced immunoturbidimetric test				
11105600	Reagent kit	1 x 90 tests	2...8 °C	
11107	Lp(a) Standard	2 x 0.5 ml		
<b>MAGNESIUM</b> liquicolor Photometric colorimetric test, monoreagent with LCF, xylydyl blue method				
10010300	Reagent kit	4 x 30 tests	2...25 °C	
10010600		4 x 60 tests		
<b>MICROALBUMIN</b> Immunoturbidimetric test				
11120600	Reagent kit	1 x 90 tests	2...8 °C	
11124	Standard	2 x 1 ml		
<b>PANCREAS-AMYLASE</b> liquicolor Enzymatic colorimetric test				
12009600	Reagent kit	2 x 100 tests	2...8 °C	



## System Reagents HumaStar 300SR | HumaStar 600

REF	Format	Unit/Size	Storage	Sample
<b>PHOSPHORUS</b> liquirapid				
Photometric UV-test, monoreagent, ammonium molybdate method				
10027300	Reagent kit	4 x 30 tests	2...25 °C	
10027600		4 x 60 tests		
<b>POTASSIUM</b> 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		
<b>RHEUMATOID FACTORS</b>				
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		
<b>SODIUM</b> 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		
<b>TOTAL PROTEIN</b> liquicolor				
Photometric colorimetric test, monoreagent, Biuret method				
10570300	Reagent kit	2 x 150 tests	2...25 °C	  
10570600		6 x 210 tests		
<b>TRIGLYCERIDES</b> liquicolor <sup>mono</sup>				
Photometric colorimetric test, monoreagent with LCF, GPO-PAP method				
10724300	Reagent kit	3 x 60 tests	2...8 °C	  
10724600		3 x 210 tests		



Serum

Plasma  
EDTAPlasma  
HEPCerebrospinal  
fluid

Urine

not included  
but required



REF	Format	Unit/Size	Storage	Sample
<b>TRANSFERRIN</b> Immunoturbidimetric test				
11115600	Reagent kit	1 x 70 tests	2...8 °C	
11117	Standard $\oplus$	2 x 1 ml		
<b>UREA liquiUV</b> Kinetic GLDH method				
10521300	Reagent kit	2 x 150 tests	2...8 °C	
10521600		5 x 250 tests		
<b>URINARY TOTAL PROTEIN liquicolor</b> Colorimetric test, Pyrogallol red method				
10590300	Reagent kit	3 x 50 tests	2...8 °C	
10595	Standard $\oplus$	2 x 3 ml		
<b>URIC ACID liquicolor<sup>plus</sup></b> Enzymatic colorimetric test with LCF, PAP 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 Plus<sup>3</sup>

Na<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>

REF 17470/20

### Humalyte Plus<sup>5</sup>

Na<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>, pH\*, iCa<sup>++</sup>

#### System Reagents

REF	Description
17470/82	Reagent Pack Humalyte Plus <sup>3</sup>
17470/83	Reagent Pack Humalyte Plus <sup>5</sup>
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

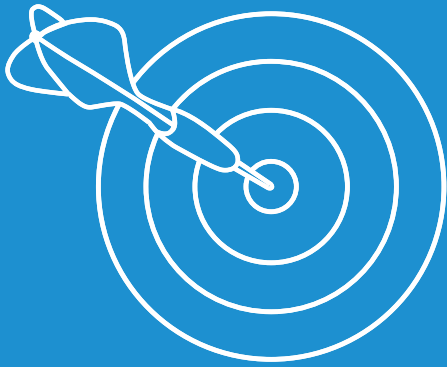
#### Consumables

REF	Description
17470/72	Weekly cleaning solution 100 ml
17470/71	Daily cleaning solution 100 ml
17470/11	K electrode (K <sup>+</sup> )
17470/12	Na electrode (Na <sup>+</sup> )
17470/13	Cl electrode (Cl <sup>-</sup> )
17470/14	Ca electrode (iCa <sup>++</sup> ) (Humalyte Plus <sup>5</sup> )
17470/15	pH electrode (pH) (Humalyte Plus <sup>5</sup> )
17470/17	Reference electrode
17470/18	Internal electrode
17470/19	Reference membrane (10 pcs)
17470/76	Ca filling solution 100 ml (Humalyte Plus <sup>5</sup> )
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. Thus, they provide a proficiency test for your individual HUMAN system. 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 Marker  
Tumor Marker 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 homepages of our partners and get in contact

ESfEQA: [www.esfeqa.eu/en](http://www.esfeqa.eu/en) or contact ESfEQA at [info@esfeqa.eu](mailto:info@esfeqa.eu)

HuQAS: [www.huqas.org](http://www.huqas.org) or contact HuQAS at [info@huqas.org](mailto: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<sup>TS</sup>|30<sup>TS</sup>, 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.

 **Page 52**



3-part HumaCount Reagents



HumaCount 80<sup>TS</sup>



HumaCount 30<sup>TS</sup>

## 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 the analysis of red blood cells and platelets.

 **Page 53**



5-part HumaCount Reagents



HumaCount 5D



HumaCount 5L



## HumaSRate 24<sup>PT</sup> ESR-System

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 and offers more flexibility to perform ESR tests at any time and without additional blood sampling.



HumaSRate 24<sup>PT</sup>

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HumaCount 5D<sup>CRP</sup>

The HumaCount 5D<sup>CRP</sup> 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.

 [Page 54](#)



## 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<sup>TS</sup>|30<sup>TS</sup> Anti-Clogging Technology 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<sup>TS</sup>|30<sup>TS</sup>|(60<sup>TS</sup>)

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<sup>TS</sup> 80 samples/hour



REF 16420/30

### HumaCount 30<sup>TS</sup> 30 samples/hour



HumaCount  
80<sup>TS</sup>|30<sup>TS</sup>



Movie

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

\*\* Reagents are suitable for previous HumaCount and HumaCount<sup>plus</sup>



Auto-sampler



- > 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

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

**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<sup>CRP</sup> 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<sup>CRP</sup>) 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



OpimalCount 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



OpimalCount Technology

NEW

REF 16451

### HumaCount 5D<sup>CRP</sup> 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<sup>CRP</sup>



Whole Blood



Capillary Blood

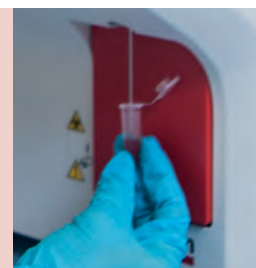




**OptimalCount Technology for capillary samples**

**OptimalCount  
Technology**

- > Accuracy as high as on venous samples
- > Defined blood volume by capillary tube
- > Total sample volume 20 µl, 0 µl dead volume
- > Dilution defined by auto-diluent dispense
- > No manual steps required



**Accessories - HumaCount 5D and HumaCount 5D<sup>CRP</sup>**

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

**Consumables - HumaCount 5D and HumaCount 5D<sup>CRP</sup>**

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

\*distributed by HUMAN



**System reagents for HumaCount 5D and HumaCount 5D<sup>CRP</sup>**

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<sup>CRP</sup>, for CRP detection**

REF	Description	Unit/Size	Storage	Sample
16451/70	C-reactive Protein Reagent Kit	CRP-Reagent 1, 1 x 75 ml CRP-Reagent 2, 1 x 25 ml	2...8 °C	
16451/40	CRP-Control	2 x 0.5 ml	2...8 °C	
16451/50	CRP-Calibrator	6 x 0.5 ml	2...8 °C	



## HumaCount Systems at a glance



	HumaCount 80 <sup>TS</sup>  30 <sup>TS</sup>	HumaCount 5D <sup>CRP</sup>	HumaCount 5D	HumaCount 5L
<b>Leucocyte differentiation</b>	3-part	5-part	5-part	5-part
<b>Throughput</b>	80 samples/hour 30 samples/hour	60 samples/hour	60 samples/hour	60 samples/hour
<b>No. of parameters</b>	22	32	29	26
<b>Sample volume</b>	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
<b>Display</b>	800 x 480 pixels	800 x 600 pixels	800 x 600 pixels	800 x 600 pixels
<b>LIS / HL7</b>	X	X	X	X
<b>Veterinary mode</b>	X			

**Parameters**

<b>WBC</b>	X	X	X	X
<b>LYM / LYM%</b>	X	X	X	X
<b>MID / MID%</b>	X			
<b>MON / MON%</b>		X	X	X
<b>NEU / NEU%</b>		X	X	X
<b>EOS / EOS%</b>		X	X	X
<b>BAS / BAS%</b>		X	X	X
<b>ALY / ALY%*</b>		X	X	
<b>LIC / LIC%*</b>		X	X	
<b>NRBC / NRBC %*</b>		X		
<b>GRA / GRA%</b>	X			
<b>RBC</b>	X	X	X	X
<b>HCT</b>	X	X	X	X
<b>MCV</b>	X	X	X	X
<b>RDW<sub>cv</sub></b>	X	X	X	X
<b>RDW<sub>sd</sub></b>	X	X	X	X
<b>HGB</b>	X	X	X	X
<b>MCH</b>	X	X	X	X
<b>MCHC</b>	X	X	X	X
<b>PLT</b>	X	X	X	X
<b>PCT</b>	X	X	X	X
<b>MPV</b>	X	X	X	X
<b>PDW<sub>cv</sub></b>	X	X	X	X
<b>PDW<sub>sd</sub></b>	X			X
<b>P-LCC*</b>	X	X	X	X
<b>P-LCR*</b>	X	X	X	X
<b>CRP</b>		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<sup>PT</sup> offers the flexibility to run ERS tests at any time without additional blood collection.



REF	15024
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### HumaSRate 24<sup>PT</sup>

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<sup>PT</sup>



### Consumables

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

### Test Credits - HumaSRate 24<sup>PT</sup>

REF	Description
15024/12	Smart Card for HumaSRate 24 <sup>PT</sup> (1,200 tests)



## CLIA

HumaCLIA 150 is the ideal immunoassay system for testing in central and remote labs.

In addition to rapid test strips and ELISA microplate technology, HUMAN also provides random-access instrumentation based on chemiluminescence detection technology (CLIA).

With the innovative HumaCLIA 150, HUMAN offers a state-of-the-art system based on CLIA detection technology capable of running a wide range of different immunoassays.







CLIA

60

## 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

- Up to 150 tests/hour
- Cooled reagent positions: 20
- Sample/STAT positions: 50
- Reaction tube capacity: 1000
- Assay kits: 2 x 50 tests including calibrators



HumaCLIA 150



Assay Sheet

#### 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  
EDTAPlasma  
HEP

\* Coming soon



## Thyroid

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



TSH HumaCLIA SR

CLIA

61



## Fertility Hormones

CLIA

62

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

\* Coming soon





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 Marker

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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CLIA


64

## Tumor Marker

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	
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### PSA HumaCLIA SR\*

Quantitative determination of total prostate specific antigen

83130	Reagent kit	2 x 50 tests	2...8 °C	
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### fPSA HumaCLIA SR\*

Quantitative determination of free prostate specific antigen


83125	Reagent kit	2 x 50 tests	2...8 °C	
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## Bone Marker

REF	Format	Unit/Size	Storage	Sample
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### PTH HumaCLIA SR\*

Quantitative determination of parathyroid hormone

85010	Reagent kit	2 x 50 tests	2...8 °C	
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### 25-OH Vitamin D HumaCLIA SR\*

Quantitative determination of 25-OH Vitamin D

85000	Reagent kit	2 x 50 tests	2...8 °C	
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Serum

Plasma  
EDTAPlasma  
HEP

\* Coming soon



## Cardiac Marker

REF	Format	Unit/Size	Storage	Sample
<b>CK-MB HumaCLIA SR*</b> Quantitative determination of creatine kinase-MB				
85040	Reagent kit	2 x 50 tests	2...8 °C	
<b>Troponin I HumaCLIA SR*</b> Quantitative determination of troponin I				
85030	Reagent kit	2 x 50 tests	2...8 °C	
<b>BNP HumaCLIA SR*</b> Quantitative determination of brain natriuretic peptide				
85045	Reagent kit	2 x 50 tests	2...8 °C	
<b>Myoglobin HumaCLIA SR*</b> Quantitative determination of myoglobin				
85035	Reagent kit	2 x 50 tests	2...8 °C	

## Anemia

REF	Format	Unit/Size	Storage	Sample
<b>Folate HumaCLIA SR*</b> Quantitative determination of folate				
85060	Reagent kit	2 x 50 tests	2...8 °C	
<b>Vitamin B12 HumaCLIA SR*</b> Quantitative determination of vitamin B12				
85055	Reagent kit	2 x 50 tests	2...8 °C	

CLIA

65



## Inflammation

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

### PCT HumaCLIA SR\*

Quantitative determination of procalcitonin

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

66

## 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\*

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

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



Plasma  
EDTA



Plasma  
HEP

\* Coming soon



## Controls

REF	To be used with HumaCLIA SR	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, 25-OH Vitamin D, PTH, Folate, Vitamin B12, Cortisol, 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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### BNP Control\*

Lyophilized control for BNP HumaCLIA SR

85845	BNP	2 levels each with 2 x 2 ml	2...8 °C
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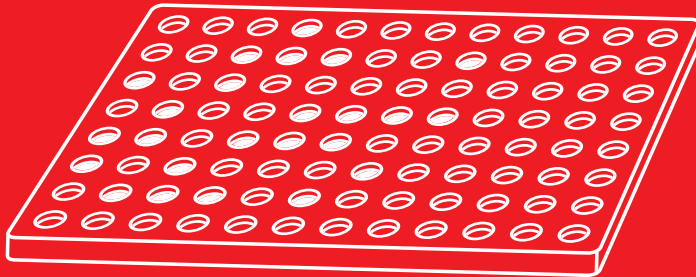
## Diluent

REF	To be used with HumaCLIA SR	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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## 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 Marker
- Tumor Marker
- 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: Epstein-Barr virus, varicella-zoster virus, measles, mumps, etc.
- 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 Marker

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 our separate Autoimmune DX product catalog.





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## 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.

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ELISA

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HumaReader Single plus

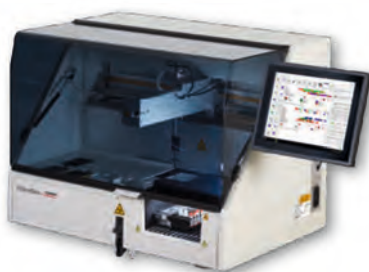
## Readers

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.

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## 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
51140	IgM				

### EBV

Qualitative determination of IgG or IgM antibodies to Epstein-Barr virus

51204	IgG	96 tests	2...8 °C		SERUM
51104	IgM				

### H. PYLORI

Qualitative 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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SERUM

Serum

EDTA

Plasma  
EDTA

HEP

Plasma  
HEP

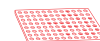
CITRATE

Plasma  
Citrate

OXALATE

Plasma  
Oxalate

\* Currently without CE-mark



REF	Format	Unit/Size	Storage	Remark	Sample
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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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### 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				

### MUMPS

Qualitative determination of IgG or IgM antibodies to mumps virus

51207	IgG	96 tests	2...8 °C		SERUM
51107	IgM				

### RUBELLA

Qualitative determination of IgG or IgM ( $\mu$ -capture) antibodies to rubella virus

51208	IgG	96 tests	2...8 °C	WHO calibration	SERUM
51108	IgM $\mu$ -capture				SERUM EDTA HEP CITRATE



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 ( $\mu$ -capture) antibodies to *Toxoplasma gondii*

51209	IgG	96 tests	2...8 °C	WHO calibration	SERUM
51119	IgM $\mu$ -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

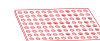
Quantitative determination of estradiol

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
<b>ESTRIOL</b> Quantitative determination of free estriol					
55040	Antigen test	96 tests	2...8 °C		SERUM EDTA
<b>FSH</b> Quantitative determination of follicle stimulating hormone (FSH)					
53020	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
<b>hCG</b> Quantitative determination of human chorionic gonadotropin (hCG)					
53040	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
<b>LH</b> Quantitative determination of luteinizing hormone (LH)					
53010	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
<b>PRL</b> Quantitative determination of prolactin (PRL)					
53030	Antigen test	96 tests	2...8 °C	WHO calibration	SERUM
<b>PROGESTERONE</b> Quantitative determination of progesterone					
55020	Antigen test	96 tests	2...8 °C		SERUM EDTA
<b>TESTOSTERONE</b> 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



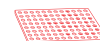
Serum



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

77

## 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 Marker

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
-----	--------	-----------	---------	--------	--------

### 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
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### 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

80



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)

REF

16670

### HumaReader HS

Microtiter plate reader



HumaReader HS

- 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 <sup>1</sup>
16670/52	Filter optical 420 nm <sup>1</sup>
16670/53	Filter optical 490 nm <sup>1</sup>
16670/54	Filter optical 505 nm <sup>1</sup>
16670/55	Filter optical 520 nm <sup>1</sup>
16670/56	Filter optical 540 nm <sup>1</sup>
16670/58	Filter optical 545 nm <sup>1</sup>
16670/59	Filter optical 546 nm <sup>1</sup>

#### Accessories

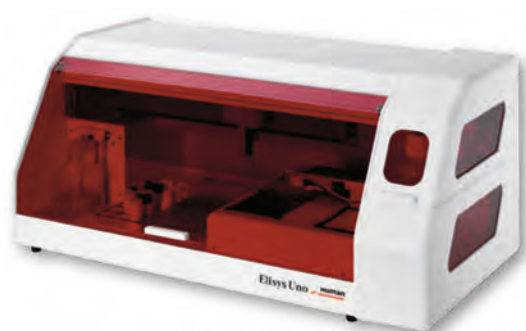
REF	Description
16670/57	Filter optical 550 nm <sup>1</sup>
16670/63	Filter optical 570 nm <sup>1</sup>
16670/60	Filter optical 578 nm <sup>1</sup>
16670/62	Filter optical 590 nm <sup>1</sup>
16670/61	Filter optical 595 nm <sup>1</sup>
16670/67	Filter optical 600 nm <sup>1</sup>
16670/65	Filter optical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

<sup>1</sup>Spare 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. All HUMAN ELISA tests are preprogrammed and validated. Additional applications can be added at any time.



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



Elisys Uno

#### 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 ø 12 mm
17359/8	Sample rack 96 round sample ø 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®
17901M	TFT screen
18993L	Laser printer

#### 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 carbon coated tips



Elisys Duo



Movie

#### Accessories

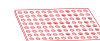
REF	Description
17200/30	Adapter 100 ml HUMAN square bottle
17200/31	Adapter ring 15 ml closed (set of 4)
17200/27	Adapter ring 15 ml (set of 6)
17200/28	Adapter ring 2.5 ml (set of 6)
17200/29	Adapter ring 16 ml (set of 6)
17200/139	Bottle organizer tray
17200/57	Filter optical 405 nm
17200/55	Filter optical 492 nm
17200/54	Filter optical 532 nm
17200/58	Filter optical 540 nm
17200/53	Filter optical 550 nm
17200/59	Filter optical 570 nm
17200/61	Filter optical 610 nm
17200/50	Filter optical 650 nm
17200/51	Filter optical 690 nm
18993L	Laser printer
17200/26	Rack 2 position square bottle (3 lanes)
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)



Windows® 10 compatible software

REF 16300

## Elisys Quattro

4-plate fully automated ELISA analyzer incl. UPS

- Up to 7 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 carbon coated 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
17200/58	Filter optical 540 nm
17200/53	Filter optical 550 nm
17200/59	Filter optical 570 nm
17200/61	Filter optical 610 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®
17901M	TFT screen
18993L	Laser printer

### Consumables

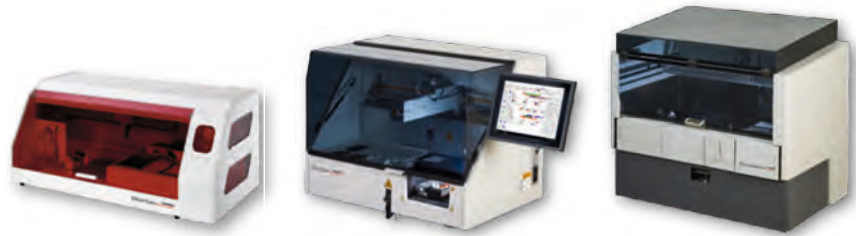
REF	Description
16300/10	300 µl disposable tips (10 x 96 pcs)
16300/11	1100 µl disposable tips (10 x 96 pcs)
18631	Dilution cuvettes
17200/137	Waste bag with 'Biohazard' label (10 pcs)
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/B100	Reagent bottle 100 ml (10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





## Hemostat Reagents

REF	Format	Unit/Size	Storage	Remark	Sample
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### HEMOSTAT THROMBOPLASTIN<sup>liquid</sup>

Thromboplastin for the determination of prothrombin time (PT)

31012	Reagent kit	6 x 2 ml	2...8 °C	Liquid stable rabbit brain extract	
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### HEMOSTAT THROMBOPLASTIN-SI

Thromboplastin for the determination of prothrombin time (PT)

31002	Reagent kit	6 x 2 ml	2...8 °C	Lyophilized rabbit brain extract	
31003		6 x 10 ml			

### HEMOSTAT aPTT-EL

Activated partial thromboplastin time

33002	Reagent kit	6 x 4 ml	2...8 °C	Rabbit brain extract Liquid stable reagent Ellagic acid activator	
33012	aPTT reagent	6 x 4 ml			
33013	aPTT reagent	6 x 10 ml			
33022	CaCl <sub>2</sub>	4 x 30 ml			

### HEMOSTAT FIBRINOGEN

Thrombin reagent for the quantitative determination of fibrinogen (Claus method)

32002	Complete kit	5 x 2 ml	2...8 °C	Human thrombin with 100 IU/ml	
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### HEMOSTAT THROMBIN TIME

Clotting assay for thrombin time (TT) determination

34002	Reagent kit	3 x 3 ml	2...8 °C		
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### HEMOSTAT D-DIMER

Immunoturbidimetric test for quantitative D-dimer determination measured at 405 nm

36002	Complete kit	2 x 1 ml	2...8 °C		
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REF	Format	Unit/Size	Storage	Remark	Sample
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**HEMOSTAT free PROTEIN S**

Immunoturbidimetric test for the quantitative determination of free Protein S

36201	Complete kit	2 x 2.5 ml	2...8 °C	Liquid, ready to use. QC with HEMOSTAT Calibrator and Control Plasma	CITRATE
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**HEMOSTAT ANTITHROMBIN<sup>liquid</sup>**

Chromogenic Factor Xa assay for quantitative antithrombin

36102	Reagent kit	4 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	Normal	6 x 1 ml	2...8 °C
35002	Abnormal	6 x 1 ml	

**HEMOSTAT D-DIMER CONTROL HIGH/LOW**

Lyophilized human plasma enriched with D-dimer

36012	Controls: 2 x low, 2 x high	4 x 1 ml	2...8 °C
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**HEMOSTAT CALIBRATOR**

Lyophilized human plasma pool

35500		4 x 1 ml	2...8 °C
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HEMOSTAT ANTITHROMBIN<sup>liquid</sup>

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:



- TIC<sup>2+</sup> 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
- TIC<sup>2+</sup> 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

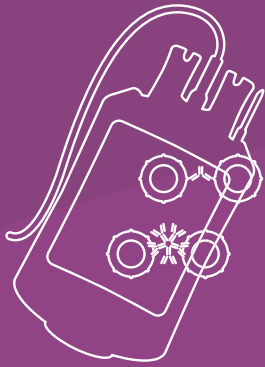
REF	Description
15800/10	Cuvette rings 6 x 10 x 32 (1,920 tests)
15800/25	Sample cups 4 ml (2 x 250 pcs)
17470/59	Sample cups 2 ml (500 pcs)
15800/20	Washing solution 5 x 15 ml
15800/30	Cleaner 5 x 15 ml
15800/15	Reagent cup 1 ml (100 pcs)
15800/40	Reagent container 5 ml with cap (50 pcs)



## HumaClot instruments at a Glance



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



# Immunoematology

HUMAN offers the complete range of CE-marked reagents for blood grouping. Together with our long-term German partner we offer mono-, polyclonal, rare antibodies and supplements. All necessary parameters for the determination in the ABO system, the Rhesus subgroups, the Kell system, MNS and P1 system are offered. Furthermore, Coombs sera, Duffy, Kidd and Lewis sera as well as rare sera are an integral part of our portfolio.



## Immuno-hematology Reagents

Below is the list of blood typing parameters available under the HUMAN brand (until 2022; depending on stock). Starting Q3/2021, we will expand our portfolio to 60 parameters (Rh system, Kell, Duffy, Kidd, Lewis, MNSs, Combs and more). These products will be distributed by HUMAN in cooperation with our long-term German partner. The main parameters under the HUMAN label will also be replaced by the respective product of our partner in the future (after the stock is used up).

Remark	Name	REF	Unit/Size	Storage
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### Anti-A blood grouping reagent

Monoclonal blood grouping reagent for ABO typing, for direct agglutination tests (tube, slide, plate)

HUMAN label	<b>HumaType Anti-A</b>	71012	3 x 10 ml	2...8 °C
Distributed by HUMAN	<b>Anti-A Clone 11H5</b>	01110	1 x 10 ml	

### Anti-B blood grouping reagent

Monoclonal blood grouping reagent for ABO typing, for direct agglutination tests (tube, slide, plate)

HUMAN label	<b>HumaType Anti-B</b>	71022	3 x 10 ml	2...8 °C
Distributed by HUMAN	<b>Anti-B Clone 6F9</b>	02110	1 x 10 ml	

### Anti-A,B blood grouping reagent

Monoclonal blood grouping reagent for ABO typing

HUMAN label	<b>HumaType Anti-A,B</b>	71032	3 x 10 ml	2...8 °C
Distributed by HUMAN	<b>Anti-AB Clones: A:5E10; B:2D7</b>	03110	1 x 10 ml	

### Anti-D blood grouping reagent

Monoclonal & blended monoclonal rhesus typing reagents, for direct agglutination tests (tube, slide, microplate)

HUMAN label	<b>HumaType Anti-D (IgM)</b>	71042	3 x 10 ml	2...8 °C
Distributed by HUMAN	<b>Anti-D Clone: RUM1</b>	06210	1 x 10 ml	
HUMAN label	<b>HumaType Anti-D (IgM/IgG)</b>	71052	3 x 10 ml	
Distributed by HUMAN	<b>Anti-D Blend</b>	07110	1 x 10 ml	

### Anti-Human Globulin reagents

Polyspecific reagent, rabbit, green dyed, for direct and indirect antiglobulin tests

HUMAN label	<b>HumaType Anti-Human Globulin</b>	71062	3 x 10 ml	2...8 °C
Distributed by HUMAN	<b>AHG</b>	34310	1 x 10 ml	

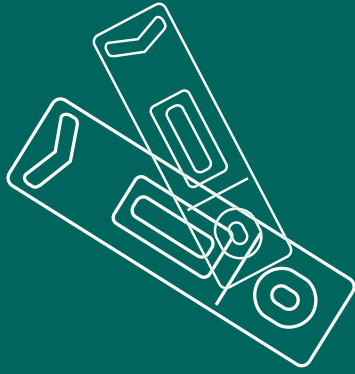
### Albumin 22% reagent

Potentiating medium for blood grouping tests

HUMAN label	<b>HumaType Albumin 22%</b>	71072	3 x 10 ml	2...8 °C
Distributed by HUMAN	<b>Bovine Albumin 22%</b>	39110	1 x 10 ml	

#### You are interested in the extended blood typing panel?

Please contact your local sales representative or email us at: [human@human.de](mailto:human@human.de) to find out which distributed by HUMAN products are immediately available for your region.



# 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 CHAGAS

Immuno-chromatographic rapid test for antibodies to *Trypanosoma cruzi*

58002	Complete kit	20 tests	2...30 °C	Test device and diluent	
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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 DENGUE NS1-Ag

Immuno-chromatographic rapid test for dengue virus NS1 antigen

58085	Complete kit	30 tests	2...30 °C	Test device and diluent	
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### HEXAGON DENGUE IgM/IgG

Immuno-chromatographic rapid test for IgM and IgG antibodies to dengue virus

58082	Complete kit	30 tests	2...30 °C	Test device and diluent	
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### HEXAGON DENGUE Dual NS1-Ag & IgM/IgG

Immuno-chromatographic rapid test for NS1 antigen of dengue virus and IgM/IgG antibodies to dengue virus (dual strip design)

58088	Complete kit	30 tests	2...30 °C	Test device and diluent	
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### 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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\* Currently without CE-mark

Whole Blood	Serum	Plasma EDTA	Plasma HEP	Plasma Citrate	Female Swabs	Nasopharyngeal Swabs





REF	Format	Unit/Size	Storage	Specification	Sample
<b>HEXAGON HIV</b>					
Immunochematographic rapid test for antibodies to HIV-1 and HIV-2 (3 <sup>rd</sup> generation)					
57002P	Complete kit	40 tests	2...30 °C	Test device and diluent	
57004P		100 tests			
<b>HEXAGON H. PYLORI</b>					
Immunochematographic rapid test for <i>H. pylori</i> IgG, IgM, IgA antibodies (3 <sup>rd</sup> generation)					
58022	Complete kit	20 tests	2...30 °C	Test device and diluent	
<b>HEXAGON HBsAg*</b>					
Immunochematographic rapid test for hepatitis B surface antigen (HBsAg)					
58003	Test strips	3 x 20 tests	2...25 °C	Test strips	
<b>HEXAGON MALARIA</b>					
Immunochematographic rapid test for malaria Pf/Pan (HRPII/pLDH) antigen					
58054	Complete kit	25 tests	1...40 °C	Test device and diluent	
<b>HEXAGON STREP A</b>					
Immunochematographic rapid test for group A streptococcus antigen					
58062	Complete kit	20 tests	2...25 °C	Test device, extraction solutions, pipette and extraction tube	
<b>HEXAGON SYPHILIS</b>					
Immunochematographic rapid test for <i>T. pallidum</i> IgG, IgM, IgA antibodies (3 <sup>rd</sup> generation)					
58042	Complete kit	20 tests	2...30 °C	Test device and diluent	
<b>HEXAGON TB</b>					
Immunochematographic rapid test for <i>M. tuberculosis</i> IgG, IgM, IgA antibodies					
58032	Complete kit	20 tests	4...30 °C	Test device and diluent	



## Infectious Diseases

Rapid Tests

96

REF	Format	Unit/Size	Storage	Specification	Sample
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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 x 100 tests	2...8 °C	Multiple	SERUM
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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 (controls not included)	8 x 100 tests	2...8 °C	Multiple	SERUM
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Whole Blood



Serum



Plasma EDTA



Plasma HEP



Plasma Citrate




Urine



REF	Format	Unit/Size	Storage	Specification	Sample
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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				
50221	<i>Salmonella paratyphi</i> AO				
50231	<i>Salmonella paratyphi</i> BH				
50241	<i>Salmonella paratyphi</i> BO				
50251	<i>Salmonella paratyphi</i> CH				
50261	<i>Salmonella paratyphi</i> CO				
50291	<i>Brucella abortus</i>				
50200	Control PC/NC	2 x 2 ml			

**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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**FERTITEX MONO**

Direct pregnancy latex slide test

60022	Complete kit	100 tests	2...8 °C		
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**HEXAGON hCG 1-Step<sup>Urine</sup>**

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<sup>Urine</sup>**

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 Marker

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 OBSCREEN

Guaiac test for occult blood screening

28220	Complete kit	30 x 3 tests	15...25 °C	2 ml blood / 100 g stool	
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### HEXAGON OBTI

Immunochemical 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

Immunochemical rapid test for prostate specific antigen (PSA)

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

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

Immunochemical 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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Whole Blood



Serum



Plasma EDTA



Plasma HEP




Faeces




## Allergy

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

REF	Format	Unit/Size	Storage	Specification	Sample
<b>HEXAGON IgE</b>					
Immunochemical rapid test for total IgE					
29012	Complete kit	20 tests	2...25 °C	Detection limit ~150 IU/l	

## 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.

REF	Format	Unit/Size	Storage	Specification	Sample
<b>SLE LATEX TEST</b>					
Latex slide test for non-diluted serum					
40030	Complete kit	50 tests	2...8 °C		

### HumaTex ASO

Latex slide test for non-diluted serum

40063	Complete kit	100 tests	2...8 °C	200 IU/l 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	
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	
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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# Urinalysis

HUMAN offers a line of urine test strips (for visual or automated reading) and a system for low to medium throughput laboratories. Test strips ranging from 1 parameter (glucose) up to 13 parameter strips (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 1 – 13 parameters
- Microalbumin and creatinine on 13 parameter strip

REF	Parameters	Unit/Size	Storage	Sample
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**COMBINA GLUCOSE**

Urine test strips

22092	Glucose	50 tests	2...30 °C	
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**COMBINA 3**

Urine test strips

22032	Glucose, pH, protein	50 tests	2...30 °C	
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**COMBINA 10 M**

Urine test strips

22102	Glucose, ketones, pH, protein, nitrite, specific gravity, bilirubin, urobilinogen, blood, leukocytes	50 tests	2...30 °C	
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**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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# Combilyzer System



REF	17600
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## Combilyzer<sup>13</sup>

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

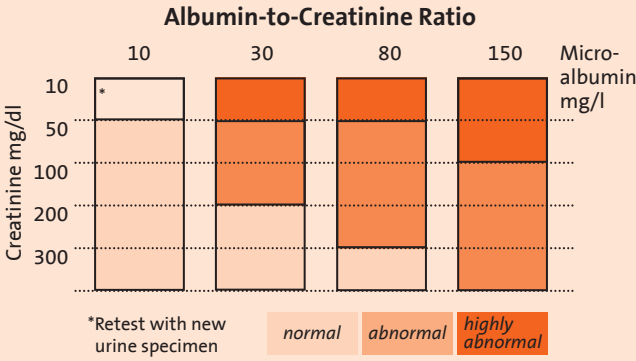
Comprehensive urinary profile including microalbumin and creatinine

- 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 Combilyzer<sup>13</sup>
- For visual and automated reading with Combilyzer<sup>13</sup>
- Semi-quantitative visual reading for all parameters at 60 seconds

### 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.





# 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, doctor's offices, education and research.







## HumaScopes with LED Illumination



REF 14400

### HumaScope Light<sup>LED</sup>

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<sup>LED</sup>

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<sup>LED</sup>

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<sup>LED</sup> Trinocular Complete set

- HumaScope Advanced<sup>LED</sup> (Binocular) + trinocular head



REF 14700

### HumaScope Premium<sup>LED</sup> 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<sup>LED</sup> 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<sup>LED</sup> Trinocular Complete set

- HumaScope Premium<sup>LED</sup> (Binocular) + trinocular head



HumaScope Fluo<sup>LED</sup>



Movie

REF	Features
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#### HumaScope Fluo<sup>LED</sup> 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 <sup>LED</sup>	HumaScope Classic <sup>LED</sup>
<b>Technical data</b>	REF 14400	REF 14500
<b>Light source</b>	LED 3.6 V, 0.3 W	LED 3.6 V, 0.3 W
<b>Head</b>	Binocular Compensation free 360° rotatable 30° inclination Left side diopter adjustments ±5	Binocular Compensation free 360° rotatable 30° inclination Left side diopter adjustments ±5
<b>Eyepiece</b>	Widefield, 10x / 18 mm Diopter adjustment	Widefield, 10x / 18 mm Diopter adjustment
<b>Objectives</b>	Achromatic 4x, 10x, 40x, 100x (Oil immersion) 40, 100x spring loaded	Semi-plan achromatic 4x, 10x, 40x, 100x (Oil immersion) 40, 100x spring loaded
<b>Revolver</b>	4-positions forward	4-positions reverse
<b>Stage</b>	Size: 115 x 125 mm x / y movement: 50 x 20 mm	Size: 125 x 135 mm x / y movement: 75 x 35 mm
<b>Focus system</b>	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
<b>Condenser</b>	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
<b>Power supply</b>	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 <sup>LED</sup>	HumaScope Premium <sup>LED</sup>	HumaScope Fluor <sup>LED</sup>
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 transmission 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

Microscopes

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REF 14900

### HumaScope Stereo Binocular stereo microscope

- Latest LED illumination technique
- With reflected and transmitted illumination
- Left/right diopter adjustment  $\pm 5$
- 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

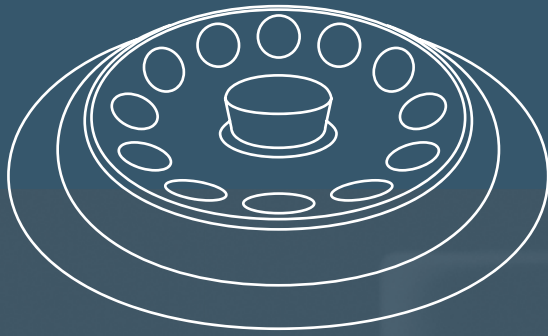
REF	Description	Fluo	Premium	Advanced	Classic	Light
14000/36	Objective semi plan 20x				X	
14000/37	Objective semi plan 40x				X	
14000/38	Objective semi plan 100x				X	
14000/39	Objective plan 4x			X	X	
14000/40	Objective plan 10x			X	X	
14000/41	Objective plan 20x			X	X	
14000/42	Objective plan 40x			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
14000/210	Digital camera (HDMI)*	X	X	X	X	X

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

\* The camera has a software embedded, can be directly connected with your display and controlled by USB mouse. The pictures can be saved to the SD storage device.



# Laboratory Equipment

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

- Pipettes
- Mixer, shaker and roller
- 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
- CE marked IVD, 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 Starter kit / Digital adjustable pipettes

REF	
19550P	1 x 0.5 – 10 µl / 10 – 100 µl / 100 – 1000 µl

### 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



HumaPette PREMIUM Starter Kit



HumaPette PREMIUM 8-Channel



## Mixer



## 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 14570

## HumaRock

### Rocking shaker

- Tilt angle  $\pm 7^\circ$
- Up to 80 rpm
- Universal plug (EU, UK, US)
- Variety of plates
- Delivered without attachment

### Accessories HumaRock

REF	Description
14570/10	Universal attachment with 3 bars
14570/12	Lengthways roller attachment
14570/14	Bar universal attachment, black
14570/20	Work plate line immunoassay



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



	HuMax 4K	HuMax 5K	HuMax 14K
	6,000 rpm	4,100 rpm	14,000 rpm rotor <b>REF 17163</b> 4,100 rpm rotor <b>REF 17162</b> 4,100 rpm rotor <b>REF 17161</b>
	2,822 x g	2,450 x g rotor <b>REF 15301P</b> 2,819 x g rotor <b>REF 15301</b> 2,142 x g rotor <b>REF 15302P</b> 2,011 x g rotor <b>REF 15303</b>	18,405 x g rotor <b>REF 17163</b> 3,007 x g rotor <b>REF 17162</b> 3,045 x g rotor <b>REF 17161</b>
	12 x 15 ml	30 x 15 ml rotor <b>REF 15301P</b> 4 x 100 ml rotor <b>REF 15301</b> 16 x 15 ml rotor <b>REF 15302P</b> 2 x MTP rotor <b>REF 15303</b>	24 x 2 ml rotor <b>REF 17163</b> 30 x 15 ml rotor <b>REF 17162</b> 4 x 200 ml rotor <b>REF 17161</b>
	Fixed-angle rotor	Fixed-angle rotor <b>REF 15301P</b> Fixed-angle rotor <b>REF 15302P</b> Swing-out rotor <b>REF 15301</b> Swing-out MTP <b>REF 15303</b>	Fixed-angle rotor <b>REF 17162 &amp; REF 17163</b> Swing-out rotor <b>REF 17161</b>
	1.5/2 ml 7 ml 5 ml	Rotor <b>REF 15301P</b> 1.5/2 ml, 7 ml, 5 ml Rotor <b>REF 15302P</b> 1.5/2 ml, 7 ml, 5 ml Rotor <b>REF 15301</b> 100 ml, 50 ml conical, 4 x 15 ml 2 x 15 ml conical, 4 x 7 ml, 4 x 5 ml	Rotor <b>REF 17162</b> 1.5/2 ml, 7 ml, 5 ml Rotor <b>REF 17161</b> 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 <b>REF 17163</b> 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 <b>15302P/17162</b>	1 x 1.5/2 ml	Ø 11 x 70 mm
17156	Adapter for 4K standard <b>15302P/17162</b>	1 x 7 ml	Ø 13 x 115 mm
17157	Adapter for 4K standard <b>15302P/17162</b>	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 <b>15301</b>	1 x 100 ml	Ø 46.5 x 108 mm
15306	Set of 4 inserts for <b>15301</b>	1 x 50 ml conical	Ø 30 x 120 mm
15307	Set of 4 inserts for <b>15301</b>	4 x 15 ml	Ø 17 x 108.5 mm
15308	Set of 4 inserts for <b>15301</b>	2 x 15 ml conical	Ø 17 x 121 mm
15309	Set of 4 inserts for <b>15301</b>	4 x 7 ml	Ø 13 x 110 mm
15310	Set of 4 inserts for <b>15301</b>	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 <b>17161</b>	1 x 200 ml	Ø 57 mm
17161/2	Set of 4 buckets for <b>17161</b>	1 x 200 ml with sealing	Ø 57 mm
17161/3	Set of 4 PP bottles with cap for <b>17161/1</b> or <b>17161/2</b>	1 x 200 ml	Ø 56.5 mm
17161/4	Set of 4 inserts for <b>17161/1</b> Set of 4 inserts for <b>17161/2</b>	1 x 100 ml	Ø 45.0 x 125 mm Ø 45.0 x 119 mm
17161/5	Set of 4 inserts for <b>17161/1</b> Set of 4 inserts for <b>17161/2</b>	1 x 50 ml conical	Ø 30.0 x 131 mm Ø 30.0 x 125 mm
17161/6	Set of 4 inserts for <b>17161/1</b> Set of 4 inserts for <b>17161/2</b>	7 x 15 ml	Ø 17.0 x 126 mm Ø 17.0 x 120 mm
17161/7	Set of 4 inserts for <b>17161/1</b> Set of 4 inserts for <b>17161/2</b>	3 x 15 ml conical	Ø 17.0 x 134 mm Ø 17.0 x 128 mm
17161/8	Set of 4 inserts for <b>17161/1</b> Set of 4 inserts for <b>17161/2</b>	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 <b>17163</b>	500/800 µl	Ø 8.0 x 35 mm
17163/2	Adapter for <b>17163</b>	200 µl PCR	Ø 6.5 x 37 mm
17163/3	Adapter for <b>17163</b>	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 ( <b>15502</b> )	200 µl	
15504	Adapter for fixed-angle rotor ( <b>15502</b> )	500 µl	
15450/10	Set of 12 adapters	7 - 10 ml	Ø 13 mm
15450/11	Set of 12 adapter inserts for <b>15450/10</b> (short tube)	1.5 - 5 ml	Ø 13 mm
15150/12	Set of 8 adapter for <b>15150/10</b>	8 x 0.2 ml	
15150/13	Set of 8 adapter for <b>15150/10</b>	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

Diabetes today 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 worlds' 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 e.g. in a diabetes center, doctors office or if the blood analysis is done in a specialized laboratory. HUMAN's Diabetes DX products fulfill every need with highest quality and precision in combination with rapid results and easy handling.

The HumaSens2.0 glucose meter measures blood glucose rapidly and is also cleared for self-testing.

HumaMeter A1c, HumaNex 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
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**GLUCOSE** liquicolor

Enzymatic colorimetric test, GOD-PAP method

10121	Complete kit	1000 ml	2...8 °C	
10260		4 x 100 ml		



**GLUCOSE** liquiUV<sup>mono</sup>

Hexokinase method, monoreagent

10786	Complete kit	1 x 1000 ml	2...8 °C	
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**MICROALBUMIN**

Immunoturbidimetric test


11120	Reagent kit	1 x 5 ml	2...8 °C	
11124	Standard 	2 x 1 ml		

### Clinical Chemistry System Reagents

REF	Format	Unit/Size	Storage	Sample
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**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 102.



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. The numerous improvements of HumaSens2.0, such as really fast measurement with very little blood or a strip ejector minimizing infection risk and make it the best HumaSens system.



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
-----	--------	----------

#### 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	2 x 25 pcs
17562/10**	Glucose Control	2 x 2 ml

\* Usable for HumaSens2.0, HumaSens2.0<sup>plus</sup>, HumaSens, HumaSens<sup>plus</sup>

\*\* Usable with Glucose test strips 17562 only for HumaSens2.0, HumaSens2.0<sup>plus</sup>, HumaSens, HumaSens<sup>plus</sup>



## HbA1c Measurement

### Clinical Chemistry Multipurpose Reagents

REF	Format	Unit/Size	Storage	Sample
<b>HbA1c liquidirect</b> Immunoassay, direct method referenced to IFCC method				
10770	Reagent kit	40 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		

### 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		

### Clinical Chemistry System Reagents

REF	Format	Unit/Size	Storage	Sample
<b>HbA1c liquidirect</b> Immunoassay, direct method referenced to IFCC method				
10770600	Reagent kit	1 x 135 tests	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		

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 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

### Consumables

REF	Description
16082	Printer paper roll (320 labels)

### System Reagents

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



## HbA1c Measurement

The HumaNex A1c is the ideal analyzer for an automated high throughput determination of HbA1c and is therefore ideal for laboratories, larger clinics and diabetes centers. HumaNex A1c enables a quick, fully automated and reliable quality analysis of HbA1c in whole or diluted blood.

**NGSP & IFCC CERTIFIED**

REF

16180



### HumaNex A1c







Medium and large-scale measurement of glycated hemoglobin HbA1c chemistry system including UPS

- Gold standard HPLC technology
- HbA1c analysis in less than 3 minutes
- Measuring range 4 % to 17 % HbA1c
- Simple touchscreen operation
- Fully automated with an onboard capacity of 50 samples
- Less than 3 % CV
- Sample identification via integrated barcode reader
- Sample volume:  
10 µl diluent mode / 1.5 ml whole blood mode



HumaNex A1c

#### System Reagents

REF	Description	Unit/Size	Specification	Storage	Sample
16185	HumaMeter A1c Reagent kit	50 tests	HPLC column, reagents, RFID card and filters for 800 tests; 6 rolls printer paper; 100 vials	4...30 °C	 
16187	HumaNex A1c Calibrator kit	2 levels: each 1 x 4 ml	Lyophilized mixed serum with added glycated hemoglobin and stabilizer	2...8 °C	 
16189	HumaNex A1c Control kit	2 levels: each 1 x 4 ml	Lyophilized mixed serum with added glycated hemoglobin and stabilizer	2...8 °C	 

Whole Blood  
(EDTA-Tube)Diluted  
Whole Blood



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

NGSP & IFCC CERTIFIED



NEW

REF 16190

## HumaNex A1c Variant

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

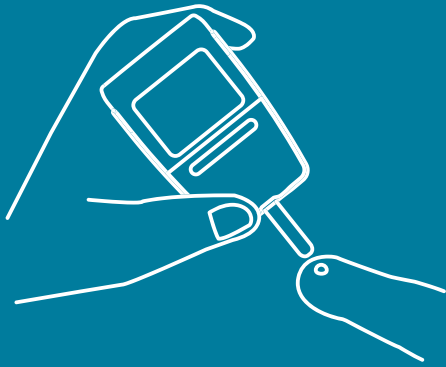
- Gold standard HPLC technology
- Ultra-sharp chromatographic resolution
- Detect common Hb variants (HbE, HbS, HbC, HbD)
- Measuring range 3 % to 18 % NGSP
- Less than 1.2 % CV
- Intuitive, touch-controlled software
- Fully automated with an onboard capacity of 10 samples
- Sample identification via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



HumaNex A1c Variant

### System Reagents

REF	Description	Unit/Size	Specification	Storage	Sample
16195	HumaNex A1c Variant Reagent kit	200 tests	Reagents for 200 tests	10...30 °C	WB DB
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	WB DB
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	WB DB
16190/10	HumaNex A1c Variant Column	1,600 tests	Column for 1600 tests including 4 filters, long stability	10...30 °C	WB DB



## 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<sup>plus</sup> 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  $\mu$ l (GLU), 1  $\mu$ l (UA) or 10  $\mu$ 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 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. The numerous improvements of HumaSens2.0, such as really fast measurement with very little blood or a strip ejector minimizing infection risk and make it the best HumaSens system.



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
-----	--------	----------

#### 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	2 x 25 pcs
17562/10**	Glucose Control	2 x 2 ml

\* Usable for HumaSens2.0, HumaSens2.0<sup>plus</sup>, HumaSens, HumaSens<sup>plus</sup>

\*\* Usable with Glucose test strips 17562 only for HumaSens2.0, HumaSens2.0<sup>plus</sup>, HumaSens, HumaSens<sup>plus</sup>



## Multi-Parameter Monitoring

The HumaSens2.0<sup>plus</sup> 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 for vital markers.

**AUTO STRIP IDENTIFICATION**



### HumaSens2.0<sup>plus</sup>

Multi-parameter monitoring

Glucose, uric acid and total cholesterol



HumaSens2.0<sup>plus</sup>

	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
-----	--------	----------

#### HumaSens2.0<sup>plus</sup>

#### Multi-parameter monitoring system

REF	Format	Contents
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)

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	2 x 25 pcs
17562/10**	Glucose Control	2 x 2 ml
17566	Uric Acid Test Strips	1 x 25 pcs
17566/10	Uric Acid Control Solution	2 x 2 ml
17567	Total Cholesterol Test Strips	2 x 10 pcs
17567/10	Total Cholesterol Control Solution	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 in 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. In addition, since the onset of the Corona pandemic, HUMAN offers a respective solution for the detection of SARS-CoV-2 infections.



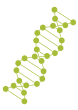
TB-LAMP



Malaria-LAMP



SARS-CoV-2-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 lysed 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
<b>Loopamp™ PURE DNA Extraction Kit</b> Manual nucleic acid purification				
970000	Complete kit	90 tests	2...30 °C	

## Viral RNA Extraction

REF	Format	Unit/Size	Storage	Sample
<b>Loopamp™ Viral RNA Extraction Kit</b> A designated extraction reagent for easy extraction of SARS-CoV-2 virus from throat, nasopharyngeal swab and saliva.				
<b>NEW</b> LMC801	Complete kit	1 x 48 tests	2...30 °C	

## LAMP MTBC Assay Accessory

REF	Format	Unit/Size	Storage	Sample
<b>Pipette-60 Set</b> 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	





## 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



SARS-CoV-2-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	
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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	
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	
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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	
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### Loopamp™ SARS-CoV-2 Detection Kit\*

Nucleic acid amplification method by Loop-mediated Isothermal amplification (LAMP) for the qualitative in vitro detection of nucleic acids from SARS-CoV-2

<b>NEW</b>	LMC403	Complete kit	1 x 48 tests	2...8 °C	
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\*Feasible with HumaTurb C+A. As an alternative a PCR thermal cycler or a heating block and UV light can be used.



## 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.

#### 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

#### HumaLoop T

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



REF 962000

#### HumaLoop M

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

##### Accessories

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



TB-LAMP



Detect TB.  
Accurately. Easily



Malaria-LAMP







## 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 and LIS connectivity
- Built-in printer

#### Accessories

REF	Description
18965/100	<b>Solar Panel (100W)</b> Mobile solar panel for charging the battery system
18965/220	<b>Portable Battery System (220V, 300W)</b> 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

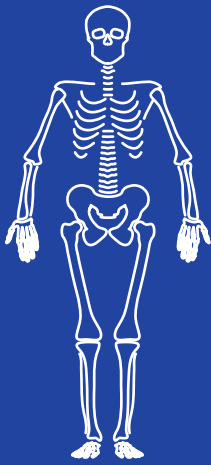


MANDATORY

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 with the integration of IMTEC GmbH and its well-established, successful product line, offers innovative test systems for the diagnosis of autoimmune and rheumatic diseases.

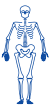
In our competence centre for autoimmune diagnostics in Magdeburg, an expert team of scientists and technicians develops and produces a broad range of high-quality autoimmune diagnostic products comprising ELISA and line immunoassays (LIA).

An expanding portfolio and the growing interest in our products worldwide are proof of our consistent reliability and success.

The IMTEC product line is CE marked and distributed worldwide by our qualified partners.







## Autoimmune DX

HUMAN provides a broad range of high quality autoimmune diagnostic products comprising ELISA and line immuno assays (LIA). Due to the volume of the autoimmune diagnostic portfolio, HUMAN offers a separate Autoimmune DX product catalog. You can also find more information on our website.

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



Autoimmune DX

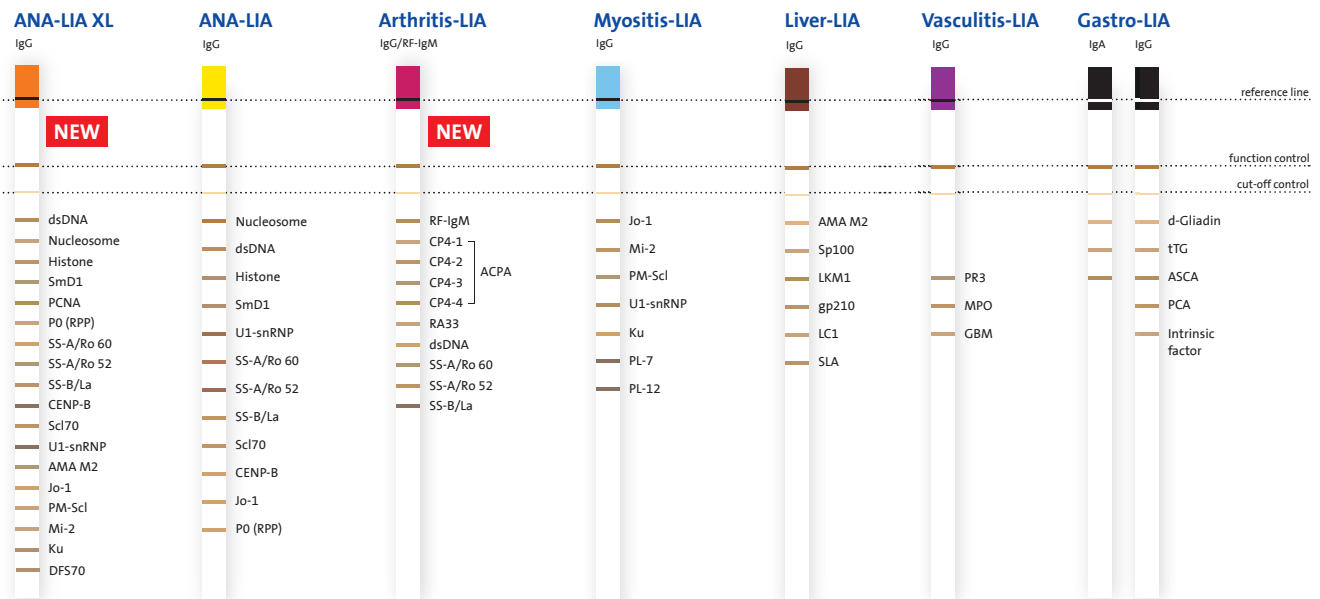


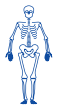
Autoimmune DX Catalog

## LIA Technology

Autoimmune diseases are characterized by autoantibody patterns 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.

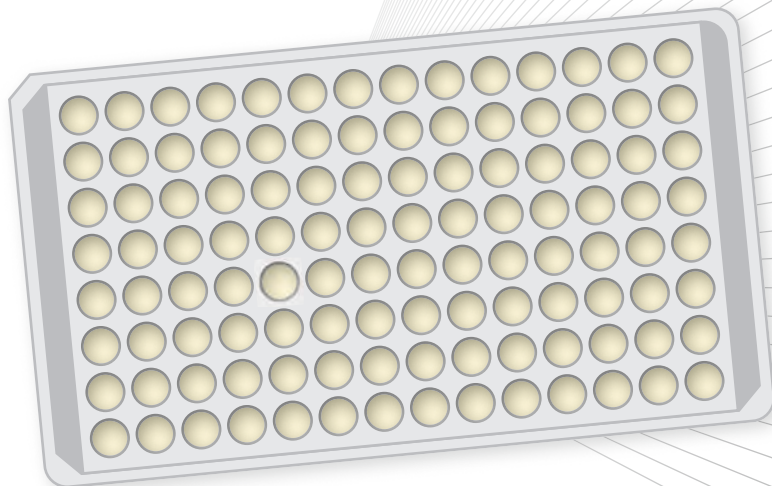
Bound autoantibodies are visualized by using specific HRP-conjugated secondary antibodies that specifically target human autoantibodies and a LIA specific substrate. Positive samples for autoantibodies can be easily detected by comparing the pattern of brown lines to the standardized line (cut-off) that 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 61 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 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
- beta<sub>2</sub>-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
- P0 (RPP)
- PCNA
- Phosphatidic acid
- Phosphatidylethanolamine
- Phosphatidylinositol
- Phosphatidylserine
- PM-Scl
- PR3
- Prothrombin
- RA33
- RF
- Salmonella
- Scl70
- SLA
- SmD1
- Sp100
- SS-A/Ro 52
- SS-A/Ro 60
- SS-B/La
- T3
- T4
- Thyroglobulin
- Tissue transglutaminase
- TPO
- TSH-receptor
- U1-snRNP



## Brands and Symbols

## Index

## 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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# Info

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