

CE



CY015

English

CYANElite 290

Application sheet



For a clear and precise diagnose

α-Amylase

CNPG3. Colorimetric. Kinetic

REF	HBE03
VOL	20 x 2 mL

REAGENT PREPARATION AND STABILITY

The Amylase reagent is ready to use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

After opening, the reagent is stable for 60 days when properly capped immediately after each opening and stored at 2-8 °C. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 405 nm $\geq 0,40$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances. Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma. Remove from cells as soon as possible. It is recommended to use heparin as anticoagulant. Stability: 1 month at 2-8 °C.

PROGRAM SETUP

Prog. Name:	AAMY	Incubation 2:	100	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	0,2439	U/L
Name:	AAMY HBE03	Serum dilution:	1:1		Max. conc.:	2200	U/L
Version:	2	Urine dilution:	1:1		Units 1:	U/L	
Group:	Pancreas	Diluent vol:	7	μL	Decimal digits:	3	
Reagent 1 ID:	AAMY	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle: ★	15	Wavelength 1:	405	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	28 - 90	U/L
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	28 - 90	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	28 - 90	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,4	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	6	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	300	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	1,317	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,2439 U/L (detection limit) to 2200 U/L (linearity limit). If the obtained results are greater than 2200 U/L, rerun is recommended using a 1:2 dilution.

NOTES

★	It is recommended to place AAMY in a 15 mL-reagent container.
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2025-03 (1.0) - Replaces all previous versions



Albumin

Bromocresol Green. Colorimetric

REF	HB0010
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready to use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 25 °C. Do not exceed the temperature of 25 °C during storage.

The reagent should be a clear, yellow-green solution. If turbidity or precipitation has occurred or if blank absorbance at 620 nm \geq 0,40, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma, free of hemolysis. Stability 1 month at 2 - 8 °C or 1 week at 15 - 25 °C.

PROGRAM SETUP

Prog. Name:	ALB	Incubation 2:	175	s	Blank OD Δ max:	NA	Abs
Type:	EP self blank	Reading:	25	s	Min. conc.:	0,038	g/dL
Name:	ALB HB0010	Serum dilution:	1:1		Max. conc.:	5,8	g/dL
Version:	3	Urine dilution:	1:1		Units 1:	g/dL	
Group:	Protein	Diluent vol:	5	μ L	Decimal digits:	3	
Reagent 1 ID:	ALB	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	620	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	3,5 - 5	g/dL
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	3,5 - 5	g/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	3,5 - 5	g/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,4	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	2	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	350	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,038 g/dL (detection limit) to 5,8 g/dL (linearity limit). If the obtained results are greater than 5,8 g/dL, rerun is recommended using a 1:2 dilution.

2026-03 (2.1) - Replaces all previous versions



REF	HBE12
VOL	60 + 15 mL

Alkaline Phosphatase

IFCC. Colorimetric. Kinetic

REAGENT PREPARATION AND STABILITY

Reagents are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C. Do not freeze the reagents.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 405 nm > 1,50, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or heparinized plasma.

Use non-hemolyzed serum, separated from the clot as soon as possible. Stability: 3 days at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	ALP	Incubation 2:	75	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	1,307	U/L
Name:	ALP HBE12	Serum dilution:	1:1		Max. conc.:	1400	U/L
Version:	4	Urine dilution:	1:1		Units 1:	U/L	
Group:	Liver	Diluent vol:	0	µL	Decimal digits:	3	
Reagent 1 ID:	ALP-1	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	405	nm	Max. curve deviation:	5	%
Reagent 2 ID:	ALP-2	Wavelength 2:	0	nm	Normal Min-Max Male:	26 - 117	U/L
Reag. 2 bottle:	15	Needle washing:	1		Normal Min-Max Female:	26 - 117	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	26 - 117	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	1,5	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	6	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	240	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	60	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	2,1	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 1,307 U/L (detection limit) to 1400 U/L (linearity limit). If the obtained results are greater than 1400 U/L, rerun is recommended using a 1:10 dilution.

NOTES

★	It is recommended to place ALP-2 in a 15 mL-reagent container.
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2025-03 (2.0) - Replaces all previous versions



Bilirubin Direct

DMSO. Colorimetric

REF	HB0260	HB0020
VOL	2 x 125 mL	1 x 125 mL

REAGENT PREPARATION AND STABILITY

All reagents are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-25 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred, if color development has occurred in reagent N, or if blank absorbance at 546 nm $\geq 0,10$ the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". Use the value indicated on the insert 'with sample blank'. 3 replicate measurements are recommended and pre-programmed for the BILD calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0.0000	0.0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma, free of hemolysis. Protect samples from direct light. Bilirubin is stable up to 4 days at 2-8 °C and 2 months at -20 °C.

PROGRAM SETUP

Prog. Name:	BILD	Incubation 2:	300	s	Blank OD Δ max:	NA	Abs
Type:	EP self blank	Reading:	25	s	Min. conc.:	0,06	mg/dL
Name:	BILD HB0260	Serum dilution:	1:1		Max. conc.:	20	mg/dL
Version:	3	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Liver	Diluent vol:	0	μL	Decimal digits:	3	
Reagent 1 ID:	BILD	Diluent ID:	NA		Target molecule:	Bilirubin direct	
Reag. 1 bottle:	35	Wavelength 1:	546	nm	Max. curve deviation:	5	%
Reagent 2 ID:	BILN	Wavelength 2:	0	nm	Normal Min-Max Male:	0,06 – 0,25	mg/dL
Reag. 2 bottle: ★	Tube	Needle washing:	3		Normal Min-Max Female:	0,06 – 0,25	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	0,06 – 0,25	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,1	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,1	Abs	Cycles:	0	
Type:	S + R1 / R2	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	40	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	300	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	10	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,06 mg/dL (detection limit) to 20 mg/dL (linearity limit). If the obtained results are greater than 20 mg/dL, rerun is recommended using a 1:2 dilution.

NOTES

★	It is recommended to use the BILN-reagent in a 2 mL reagent tube.
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2025-03 (2.0) - Replaces all previous versions

Bilirubin Total

DMSO. Colorimetric

REF	HB0270	HB0020
VOL	2 x 125 mL	1 x 125 mL

REAGENT PREPARATION AND STABILITY

All reagents are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-25 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred, if color development has occurred in reagent N, or if blank absorbance at 546 nm $\geq 0,10$ the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". Use the value indicated on the insert 'with sample blank'. 3 replicate measurements are recommended and pre-programmed for the BILT calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma, free of hemolysis. Protect samples from direct light. Bilirubin is stable up to 4 days at 2-8 °C and 2 months at -20 °C.

PROGRAM SETUP

Prog. Name:	BILT	Incubation 2:	300	s	Blank OD Δ max:	NA	Abs
Type:	Bichromatic	Reading:	125	s	Min. conc.:	0,1	mg/dL
Name:	BILT HB0270	Serum dilution:	1:1		Max. conc.:	20	mg/dL
Version:	3	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Liver	Diluent vol:	20	μL	Decimal digits:	3	
Reagent 1 ID:	BILT	Diluent ID:	NA		Target molecule:	Bilirubin total	
Reag. 1 bottle:	35	Wavelength 1:	546	nm	Max. curve deviation:	5	%
Reagent 2 ID:	BILN	Wavelength 2:	670	nm	Normal Min-Max Male:	0,2 – 1,1	mg/dL
Reag. 2 bottle:	★ Tube	Needle washing:	3		Normal Min-Max Female:	0,2 – 1,1	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	0,2 – 1,1	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,1	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,1	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	40	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	300	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	10	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,1 mg/dL (detection limit) to 20 mg/dL (linearity limit). If the obtained results are greater than 20 mg/dL, rerun is recommended using a 1:2 dilution.

NOTES

★	It is recommended to use the BILN-reagent in a 2 mL reagent tube.
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2025-03 (2.0) - Replaces all previous versions



Calcium

Arsenazo III. Colorimetric. Monoreagent

REF	HB0030
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 620 nm $\geq 0,80$ the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended and pre-programmed for the CA calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma, separated from cells as rapidly as possible. Blood anticoagulants with oxalate, citrate or EDTA are not acceptable since these chemicals will strongly chelate calcium.

Stability of the samples: Calcium is stable 10 days at 2-8 °C.

PROGRAM SETUP

Prog. Name: CA	Incubation 2: 125 s	Blank OD Δ max: NA Abs
Type: EP self blank	Reading: 25 s	Min. conc.: 0,16 mg/dL
Name: CA HB0030	Serum dilution: 1:1	Max. conc.: 20 mg/dL
Version: 6	Urine dilution: 1:1	Units 1: mg/dL
Group: Electrolytes	Diluent vol: 0 μL	Decimal digits: 3
Reagent 1 ID: CA	Diluent ID: NA	Target molecule: Calcium
Reag. 1 bottle: 35 mL	Wavelength 1: 620 nm	Max. curve deviation: 5 %
Reagent 2 ID: NA	Wavelength 2: 0 nm	Normal Min-Max Male: 8,6 – 10,2 mg/dL
Reag. 2 bottle: NA	Needle washing: 1	Normal Min-Max Female: 8,6 – 10,2 mg/dL
Reagent 3 ID: NA	Needle wash ID: NA	Normal Min-Max Child: 8,4 – 11,0 mg/dL
Reag. 3 bottle: NA	Needle postwash: No	Incomp. Mode : Skip system
Mixing 1: Default	Blank OD min: -0,1 Abs	Method 1: NA
Mixing 2: 3	Blank OD max: 0,8 Abs	Cycles: 0
Type: R1 / S	Reaction slope: Positive	Method 2: NA
Sample vol: 7 μL	Calibration slope: NA	Cycles: 0
Reagent 1 vol: 350 μL	OD Range min: -9,999 Abs	Method 3: NA
Reagent 2 vol: 0 μL	OD Range max: 9,999 Abs	Cycles: 0
Reagent 3 vol: 0 μL	Linearity: NA %	Cal. Min. Factor: -99000000000
Incubation 1: 175 s	Subst. Deplet.: NA Abs	Cal. Max. Factor: -99000000000

MEASURING RANGE

This method is linear from 0,163 mg/dL (detection limit) to 20 mg/dL (linearity limit). If the obtained results are greater than 20 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (3.2) - Replaces all previous versions

Chloride

Thiocyanate. Colorimetric

REF	HB005
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

Reagent and standard are ready to use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 480 nm $\geq 0,15$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma, free of hemolysis and separated from cells as rapidly as possible. Anticoagulants such as oxalate or EDTA will interfere. Chloride is stable 1 week at room temperature (15 - 25 °C), 15 days in refrigerator (2 - 8 °C) and 1 month frozen (-20 °C).

PROGRAM SETUP

Prog. Name:	CL	Incubation 2:	200	s	Blank OD Δ max:	NA	Abs
Type:	EP self blank	Reading:	25	s	Min. conc.:	0,454	meq/L
Name:	CL HB005	Serum dilution:	1:1		Max. conc.:	190	meq/L
Version:	3	Urine dilution:	1:1		Units 1:	meq/L	
Group:	Electrolytes	Diluent vol:	5	μ L	Decimal digits:	3	
Reagent 1 ID:	CL	Diluent ID:	NA		Target molecule:	Chlorid	
Reag. 1 bottle:	35	Wavelength 1:	450	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	95 - 115	meq/L
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	95 - 115	meq/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	95 - 115	meq/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,10	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,15	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	4	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	330	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,454 mEq/L (detection limit) to 190 mEq/L (linearity limit). If the obtained results are greater than 190 mEq/L, rerun is recommended using a 1:2 dilution.

2025-04 (1.1) - Replaces all previous versions



Cholesterol

Enzymatic. Colorimetric test CHOD-POD

REF	HBL010
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready to use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm $\geq 0,26$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma. Stability of the sample for 7 days at 2-8 °C or 3 months at -20 °C.

PROGRAM SETUP

Prog. Name: CHOL	Incubation 2: 325 s	Blank OD Δ max: NA Abs
Type: EP self blank	Reading: 25 s	Min. conc.: 0,52 mg/dL
Name: CHOL HBL010	Serum dilution: 1:1	Max. conc.: 1000 mg/dL
Version: 3	Urine dilution: 1:1	Units 1: mg/dL
Group: Lipids	Diluent vol: 6 μL	Decimal digits: 3
Reagent 1 ID: CHOL	Diluent ID: NA	Target molecule: Cholesterol
Reag. 1 bottle: 35 mL	Wavelength 1: 505 nm	Max. curve deviation: 5 %
Reagent 2 ID: NA	Wavelength 2: 0 nm	Normal Min-Max Male: 120 – 200 mg/dL
Reag. 2 bottle: NA	Needle washing: 1	Normal Min-Max Female: 120 – 200 mg/dL
Reagent 3 ID: NA	Needle wash ID: NA	Normal Min-Max Child: 120 – 170 mg/dL
Reag. 3 bottle: NA	Needle postwash: No	Incomp. Mode : Skip system
Mixing 1: Default	Blank OD min: -0,01 Abs	Method 1: NA
Mixing 2: Default	Blank OD max: 0,26 Abs	Cycles: 0
Type: R1 / S	Reaction slope: Positive	Method 2: NA
Sample vol: 5 μL	Calibration slope: NA	Cycles: 0
Reagent 1 vol: 350 μL	OD Range min: -9,999 Abs	Method 3: NA
Reagent 2 vol: 0 μL	OD Range max: 9,999 Abs	Cycles: 0
Reagent 3 vol: 0 μL	Linearity: NA %	Cal. Min. Factor: -99000000000
Incubation 1: 175 s	Subst. Deplet.: NA Abs	Cal. Max. Factor: -99000000000

MEASURING RANGE

This method is linear from 0,521 mg/dL (detection limit) to 1000 mg/dL (linearity limit). If the obtained results are greater than 1000 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (2.1) - Replaces all previous versions

HDL Cholesterol

Enzymatic. Colorimetric

REF	HBL011
VOL	120 + 40 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready to use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagents are light sensitive. Do not leave bottles open. Do not freeze the reagents.

R1 and R2: once opened they are stable 60 days at 2-8 °C. The reagent should be a clear solution. If turbidity or precipitation has occurred, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **HDL/LDL calibrator (HBC11)** for calibration. The concentration is lot specific and given on the label of the calibrator. Insert the value in menu 'Lot management'. 3 replicate measurements are recommended and pre-programmed for the HDL calibration:

Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC11	1				3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibrator for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use the **HDL/LDL Control kit (HBC10)**. Insert the value mentioned on the label in menu "Lot management".

SAMPLES

Sample type: human serum or plasma (EDTA, citrate, Li Heparin). Fasting and non-fasting samples can be used.

PROGRAM SETUP

Prog. Name:	HDL	Incubation 2:	250	s	Blank OD Δ max:	NA	Abs
Type:	EP self blank	Reading:	25	s	Min. conc.:	1,06	mg/dL
Name:	HDL HBL011	Serum dilution:	1:1		Max. conc.:	184,8	mg/dL
Version:	3	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Lipids	Diluent vol:	20	µL	Decimal digits:	3	
Reagent 1 ID:	HDL-1	Diluent ID:	NA		Target molecule:	HDL Chol	
Reag. 1 bottle:	35	Wavelength 1:	578	nm	Max. curve deviation:	5	%
Reagent 2 ID:	HDL-2	Wavelength 2:	0	nm	Normal Min-Max Male:	59 – 70	mg/dL
Reag. 2 bottle:	15	Needle washing:	3		Normal Min-Max Female:	59 – 89	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	59 – 81	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,06	Abs	Cycles:	0	
Type:	S + R1 / R2	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	4	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	300	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	100	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	350	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 1,06 mg/dL (detection limit) to 184,8 mg/dL (linearity limit). If the obtained results are greater than 184,8 mg/dL, rerun is recommended using a 1:2 dilution.

2025-03 (3.0) - Replaces all previous versions



**NEW REAGENT
NEW METHOD**



CY015 CYANElite 290

Application sheet

HDL Cholesterol

Enzymatic. Colorimetric

REF	HBL0110
VOL	120 + 40 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready to use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use bi-level **HDLc/LDLc Calibrator (HBC12) for calibration**. The concentration is lot specific and given on the value sheets, delivered together with the calibrator. Insert the value in menu "**Lot management**". 3 replicate measurements are recommended and pre-programmed for the HDL calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	<input type="text" value="CAL HDL/LDL LVL1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="3"/>
2	<input type="text" value="CAL HDL/LDL LVL2"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="3"/>

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. Use Biochemistry **Normal and Pathological Controls (HBC01, HBC02)** for quality control. The concentration is lot specific and given on the value sheets, delivered together with the control. Insert the value in menu "Lot management". Measure at least one replicate per control. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

SAMPLES

Sample type: human serum. Fasting and non-fasting samples can be used. Lipemic/turbid and icteric samples should be avoided.

PROGRAM SETUP

Prog. Name:	HDLn	Incubation 2:	300	s	Blank OD Δ max:	NA	Abs
Type:	EP self blank	Reading:	25	s	Min. conc.:	25,3	mg/dL
Name:	HDL HBL0110	Serum dilution:	1:1		Max. conc.:	118	mg/dL
Version:	1	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Lipids	Diluent vol:	0	µL	Decimal digits:	3	
Reagent 1 ID:	HDLn-1	Diluent ID:	NA		Target molecule:	HDL Chol	
Reag. 1 bottle:	35	Wavelength 1:	546	nm	Max. curve deviation:	5	%
Reagent 2 ID:	HDLn-2	Wavelength 2:	0	nm	Normal Min-Max Male:	59 – 70	mg/dL
Reag. 2 bottle:	15	Needle washing:	3		Normal Min-Max Female:	59 – 89	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	59 – 81	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,010	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,060	Abs	Cycles:	0	
Type:	S + R1 / R2	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	13	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	325	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	108	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	350	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 25.3 mg/dL (detection limit) to 118 mg/dL (linearity limit). If the obtained results are greater than 118 mg/dL, rerun is recommended using a 1:2 dilution.

2026-04 (1.0)



LDL Cholesterol

Enzymatic. Colorimetric.

REF	HBL012
VOL	120 + 40 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready to use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagents are light sensitive. Do not leave bottles open. Do not freeze the reagents.

R1 and R2: once opened they are stable for 60 days at 2-8 °C. The reagents should be a clear solution. If turbidity or precipitation has occurred, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **HDL/LDL calibrator (HBC11)** for calibration. The concentration is lot specific and given on the label of the calibrator.

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibrator for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use the **HDL/LDL Control kit (HBC10)**. Insert the value mentioned on the label in menu "Lot management".

SAMPLES

Sample type: human serum or plasma (EDTA, citrate).

Fasting and non-fasting samples can be used. Do not use plasma containing heparin as anticoagulant.

PROGRAM SETUP

Prog. Name:	LDL	Incubation 2:	250	s	Blank OD Δ max:	NA	Abs
Type:	EP self blank	Reading:	25	s	Min. conc.:	1,7	mg/dL
Name:	LDL HBL012	Serum dilution:	1:1		Max. conc.:	250	mg/dL
Version:	3	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Lipids	Diluent vol:	20	µL	Decimal digits:	3	
Reagent 1 ID:	LDL-1	Diluent ID:	NA		Target molecule:	LDL Chol	
Reag. 1 bottle:	35	Wavelength 1:	578	nm	Max. curve deviation:	5	%
Reagent 2 ID:	LDL-2	Wavelength 2:	0	nm	Normal Min-Max Male:	50 – 100	mg/dL
Reag. 2 bottle:	15	Needle washing:	3		Normal Min-Max Female:	62 – 100	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	46 – 100	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,06	Abs	Cycles:	0	
Type:	S + R1 / R2	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	4	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	300	OD Range min:	-9,999	Abs	Method 3:	NA	
Reagent 2 vol:	100	OD Range max:	9,999	Abs	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	350	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 1,64 mg/dL (detection limit) to 250 mg/dL (linearity limit). If the obtained results are greater than 250 mg/dL, rerun is recommended using a 1:2 dilution.

2025-03 (2.0) - Replaces all previous versions



Creatine Kinase MB

Immuno-inhibition. UV. Kinetic

REF	HBELO5
VOL	60 + 15 mL

REAGENT PREPARATION AND STABILITY

Working reagent: mix 4 volumes of R1 with 1 volume of R2. After mixing, allow to stand for 30 minutes prior to use. The stability of the working reagent is 7 days at 2-8 °C or 12 hours at room temperature (15-25 °C).

Control: dissolve the contents in 2 mL of distilled water. Cap vial and mix gently to dissolve the contents. Stability: 8 hours at 15-25 °C, 5 days at 2-8 °C or 1 month at -20 °C. Bring at room temperature for about 30 min before use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm \geq 1,20, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Calibration by means of a **Factor** (12900).

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use the **CK (NAC&MB) control (HBC08)** included in the kit. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum free of hemolysis, or heparin plasma.

Stability: 7 days at 2 - 8 °C, protected from light. CK-MB activity decreases a 10% after 24 hours at 4 °C or 1 hour at 25 °C. Use fresh samples.

PROGRAM SETUP

Prog. Name:	CKMB	Incubation 2:	0	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	1,9	U/L
Name:	HBELO5	Serum dilution:	1:1		Max. conc.:	1000	U/L
Version:	3	Urine dilution:	1:1		Units 1:	U/L	
Group:	Heart	Diluent vol:	0	μL	Decimal digits:	3	
Reagent 1 ID:	CKMB-W	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	340	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	1,9 - 24	U/L
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	1,9 - 24	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	1,9 - 24	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	NA	Blank OD max:	1,2	Abs	Cycles:	0	
Type:	R1 + S / -	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	7	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	330	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	500	Subst. Deplet.:	1,207	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 1,9 U/L (detection limit) to 1000 U/L (linearity limit). If the obtained results are greater than 1000 U/L, rerun is recommended using a 1:2 dilution.

2025-03 (2.0) - Replaces all previous versions



Creatine Kinase NAC

NAC Activated. UV. Kinetic

REF	HBEL03
VOL	60 + 15 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm $\geq 1,0$ the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Also a CK (**NAC & MB**) Control (**HBC08**) is available. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum free of hemolysis, or heparin plasma Stability: 7 days at 2 - 8 °C, protected from light. The creatinine kinase activity decreases 10% after 1 day at 2 - 5 °C or after 1 hour at 15 - 25 °C. Use fresh samples.

PROGRAM SETUP

Prog. Name:	CKNAC	Incubation 2:	225	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	2,12	U/L
Name:	HBEL03	Serum dilution:	1:1		Max. conc.:	2000	U/L
Version:	2	Urine dilution:	1:1		Units 1:	U/L	
Group:	Heart	Diluent vol:	7	μ L	Decimal digits:	3	
Reagent 1 ID:	CKNA-1	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	340	nm	Max. curve deviation:	5	%
Reagent 2 ID:	CKNA-2	Wavelength 2:	0	nm	Normal Min-Max Male:	46 - 195	U/L
Reag. 2 bottle: ★	15	Needle washing:	1		Normal Min-Max Female:	34 - 170	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	34 - 170	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	1,0	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	6	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	240	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	60	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	1,364	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 2,12 U/L (detection limit) to 2000 U/L (linearity limit). If the obtained results are greater than 2000 U/L, rerun is recommended using a 1:10 dilution.

NOTES

★	It is recommended to use CKNA-2 in a 15 mL-reagent container.
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2025-03 (1.0) - Replaces all previous versions

Creatinine

Jaffé. Colorimetric. Kinetic without deproteinization

REF	HB0080
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

Mix proportionally 1:1 R1 Picric Reagent and R2 Alkaline Reagent. The working reagent is **stable for 10 days at 15 - 25 °C**. All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 25 °C. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm $\geq 1,80$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or heparinized plasma. Creatinine is stable 24 hours at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	CRE	Incubation 2:	75	s	Blank OD Δ max:	0	Abs/min
Type:	Fixed time	Reading:	125	s	Min. conc.:	0,115	mg/dL
Name:	HBEL0080	Serum dilution:	1:1		Max. conc.:	15	mg/dL
Version:	2	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Kidney	Diluent vol:	0	μ L	Decimal digits:	3	
Reagent 1 ID:	CREwr	Diluent ID:	NA		Target molecule:	Creatinine	
Reag. 1 bottle:	35	Wavelength 1:	505	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	0,7 - 1,4	mg/dL
Reag. 2 bottle:	NA	Needle washing:	3		Normal Min-Max Female:	0,6 - 1,1	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	0,6 - 1,1	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	3	Blank OD max:	1,8	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	30	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	300	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,115 mg/dL (detection limit) to 15 mg/dL (linearity limit). If the obtained results are greater than 15 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (1.1) - Replaces all previous versions

γ-GT

Carboxy substrate. Colorimetric. Kinetic

REF	HBEL06	HBEL061
VOL	240 + 60 mL	60 +15 mL

REAGENT PREPARATION AND STABILITY

GGT Reagent1 and Reagent 2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 405 nm ≥ 1,80, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum γ-GT is stable for at least 3 days at 2 - 8 °C, 8 hours at 15 - 25 °C and 1 month at -20 °C.

PROGRAM SETUP

Prog. Name: GGT	Incubation 2: 75 s	Blank OD Δ max: 0 Abs/min
Type: Kinetic	Reading: 100 s	Min. conc.: 2 U/L
Name: GGT HBEL06	Serum dilution: 1:1	Max. conc.: 300 U/L
Version: 2	Urine dilution: 1:1	Units 1: U/L
Group: Liver	Diluent vol: 0 μL	Decimal digits: 3
Reagent 1 ID: GGT-1	Diluent ID: NA	Target molecule: NA
Reag. 1 bottle: 35 mL	Wavelength 1: 405 nm	Max. curve deviation: 5 %
Reagent 2 ID: GGT-2	Wavelength 2: 0 nm	Normal Min-Max Male: 11 – 50 U/L
Reag. 2 bottle: ★ 15 mL	Needle washing: 1	Normal Min-Max Female: 7 – 32 U/L
Reagent 3 ID: NA	Needle wash ID: NA	Normal Min-Max Child: 7 – 32 U/L
Reag. 3 bottle: NA	Needle postwash: No	Incomp. Mode : Skip system
Mixing 1: Default	Blank OD min: 0 Abs	Method 1: NA
Mixing 2: Default	Blank OD max: 1,8 Abs	Cycles: 0
Type: R1 + R2 / S	Reaction slope: Positive	Method 2: NA
Sample vol: 27 μL	Calibration slope: NA	Cycles: 0
Reagent 1 vol: 220 μL	OD Range min: -9,999 Abs/min	Method 3: NA
Reagent 2 vol: 55 μL	OD Range max: 9,999 Abs/min	Cycles: 0
Reagent 3 vol: 0 μL	Linearity: 0 %	Cal. Min. Factor: -99000000000
Incubation 1: 175 s	Subst. Deplet.: 2,2 Abs	Cal. Max. Factor: -99000000000

MEASURING RANGE

This method is linear from 2 U/L (detection limit) to 300 U/L (linearity limit). If the obtained results are greater than 300 U/L, rerun is recommended using a 1:2 dilution.

NOTES

★	It is recommended to use GGT-2 in a 15 mL-reagent container.
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2025-03 (2.0) - Replaces all previous versions

Glucose

Enzymatic. Colorimetric GOD-POD

REF	HBL04
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm $\geq 0,32$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended and pre-programmed for the GLUC calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human fluoride plasma, free of hemolysis and turbidity. Plasma should be isolated in blood tubes containing sodium fluoride (NaF) to inhibit glycolysis. In fluoride plasma, the glucose concentration is stable for up to 3 days at room temperature. For fasting glucose determination, fasting for at least 12 hours is recommended before sample collection.

PROGRAM SETUP

Prog. Name:	GLUC	Incubation 2:	425	s	Blank OD Δ max:	0	Abs/min
Type:	EP self blank	Reading:	25	s	Min. conc.:	14,1	mg/dL
Name:	GLUC HBL04	Serum dilution:	1:1		Max. conc.:	420	mg/dL
Version:	4	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Metabolism	Diluent vol:	0	μL	Decimal digits:	3	
Reagent 1 ID:	GLUC	Diluent ID:	NA		Target molecule:	Glucose	
Reag. 1 bottle:	35	Wavelength 1:	505	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	74 – 100	mg/dL
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	74 – 100	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	60 – 100	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,32	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	4	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	330	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 14,1 mg/dL (limit of quantitation) to 420 mg/dL (linearity limit). If the obtained results are greater than 420 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (2.1) - Replaces all previous versions



GOT (AST)

NADH. UV. Kinetic. According to IFCC

REF	HBEL010
VOL	1 x 240 + 1 x 60 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm < 1,00, the reagent should be discarded.

CALIBRATION & QUALITY CONTROLS

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances. Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma. Stability 2 days at 2 - 8 °C. Fasting of at least 12 hours is recommended before sample collection.

PROGRAM SETUP

Prog. Name:	GOT	Incubation 2:	100	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	3,12	U/L
Name:	HBEL010	Serum dilution:	1:1		Max. conc.:	260	U/L
Version:	2	Urine dilution:	1:1		Units 1:	U/L	
Group:	Liver	Diluent vol:	0	μL	Decimal digits:	3	
Reagent 1 ID:	GOT-1	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	340	nm	Max. curve deviation:	5	%
Reagent 2 ID:	GOT-2	Wavelength 2:	0	nm	Normal Min-Max Male:	3,1 – 38	U/L
Reag. 2 bottle:	★ 15	Needle washing:	1		Normal Min-Max Female:	3,1 – 31	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	3,1 – 31	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	1,00	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	1,80	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Negative		Method 2:	NA	
Sample vol:	30	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	240	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	60	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	0,757	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 3.12 U/L (detection limit) to 260 U/L (linearity limit). If the obtained results are greater than 260 U/L, rerun is recommended using a 1:5 dilution.

NOTES

★	It is recommended to use GOT-2 in a 15 mL-reagent container.
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2026-03 (2.0) - Replaces all previous versions



GPT (ALT)

REF	HBEL020
VOL	1 x 240 + 1 x 60 mL

NADH. UV. Kinetic. According to IFCC

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm < 1,00, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma. Stability 1 day at 2-8 °C. Fasting of at least 12 hours is recommended before sample collection.

PROGRAM SETUP

Prog. Name:	GPT	Incubation 2:	100	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	3,00	U/L
Name:	HBEL020	Serum dilution:	1:1		Max. conc.:	260	U/L
Version:	2	Urine dilution:	1:1		Units 1:	U/L	
Group:	Liver	Diluent vol:	0	µL	Decimal digits:	3	
Reagent 1 ID:	GPT-1	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	340	nm	Max. curve deviation:	5	%
Reagent 2 ID:	GPT-2	Wavelength 2:	0	nm	Normal Min-Max Male:	3 – 40	U/L
Reag. 2 bottle:	★15	Needle washing:	1		Normal Min-Max Female:	3 – 32	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	3 – 32	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	1,00	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	2,00	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Negative		Method 2:	NA	
Sample vol:	30	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	240	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	60	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	0,762	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 3 U/L (detection limit) to 260 U/L (linearity limit). If the obtained results are greater than 260 U/L, rerun is recommended using a 1:5 dilution.

NOTES

★	It is recommended to use GPT-2 in a 15 mL-reagent container.
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2026-03 (2.0) - Replaces all previous versions



Hemoglobin

Drabkin. Colorimetric.

REF	HB011
VOL	4 x 5 mL

REAGENT PREPARATION AND STABILITY

Working reagent :

- 4,9 mL distilled water + 2 drops of reagent and mix.

Or:

- 245 mL distilled water + 5 mL of reagent and mix.

The working reagent (HGBWR) is stable for 2 months at 2 –8 °C, protected from the sunlight.

Hemoglobin Calibrator (HBS02) is ready to use. Homogenize the calibrator by gentle shaking before use.

All the components of the kit and the hemoglobin calibrator (HBS02) are stable at 2-8 °C up to the date of expiration as specified, when stored tightly closed, protected from light and contaminations prevented during their use. The reagent should be a clear solution. The reagent should be discarded if turbidity or precipitation has occurred or if the blank absorbance is out of range.

CALIBRATION & QUALITY CONTROL

Use the **Hemoglobin Calibrator (HBS02)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

SAMPLES

Sample type: human capillary or venous blood. Use anticoagulants like EDTA, heparin or oxalate. Stability: 7 days at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	HGB	Incubation 2:	175	s	Blank OD Δ max:	0	Abs/min
Type:	EP self blank	Reading:	25	s	Min. conc.:	0,1	g/dL
Name:	HGB HB011	Serum dilution:	1:1		Max. conc.:	20	g/dL
Version:	2	Urine dilution:	1:1		Units 1:	g/dL	
Group:	Metabolism	Diluent vol:	10	μL	Decimal digits:	3	
Reagent 1 ID:	HGB-WR	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	546	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	14 – 18	g/dL
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	12 – 16	g/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	12 – 16	g/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,01	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	3	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	350	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,1 g/dL (detection limit) to 20 g/dL (linearity limit). If the obtained results are greater than 20 g/dL, rerun is recommended using a 1:2 dilution.

2025-03 (1.0) - Replaces all previous versions



Iron

Ferrozine. Colorimetric

REF	HB012
VOL	4 x 50 mL

REAGENT PREPARATION AND STABILITY

R3 is ready to use.

Add the contents of one tube R2 reductant to the contents of one bottle R1 buffer. Cap and mix gently to dissolve content. This **working reagent** is stable for 3 months at 2-8 °C or 1 month at room temperature (15-25 °C).

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if the reagent blank absorbance at 562 nm \geq 0,020, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended and pre-programmed for the IRON calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0.0000	0.0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or heparinized plasma. Hemolysis interferes with the test. Separate from the cells as rapidly as possible. The iron is stable up to 7 days stored at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	Iron	Incubation 2:	275	s	Blank OD Δ max:	0	Abs/min
Type:	EP self blank	Reading:	25	s	Min. conc.:	0,85	μ g/dL
Name:	Iron HB012	Serum dilution:	1:1		Max. conc.:	1000	μ g/dL
Version:	3	Urine dilution:	1:1		Units 1:	μ g/dL	
Group:	Metabolism	Diluent vol:	0	μ L	Decimal digits:	3	
Reagent 1 ID:	IRON-W	Diluent ID:	NA		Target molecule:	Iron (FeT)	
Reag. 1 bottle:	35	Wavelength 1:	578	nm	Max. curve deviation:	5	%
Reagent 2 ID:	IRON-3	Wavelength 2:	0	nm	Normal Min-Max Male:	65 - 175	μ g/dL
Reag. 2 bottle:	15	Needle washing:	1		Normal Min-Max Female:	40 - 150	μ g/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	40 - 150	μ g/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	CL	
Mixing 2:	Default	Blank OD max:	0,02	Abs	Cycles:	4	
Type:	S + R1 / R2	Reaction slope:	Positive		Method 2:	UREA	
Sample vol:	56	Calibration slope:	NA		Cycles:	4	
Reagent 1 vol:	280	OD Range min:	-9,999	Abs/min	Method 3:	ALB	
Reagent 2 vol:	14	OD Range max:	9,999	Abs/min	Cycles:	4	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,85 μ g/dL (detection limit) to 1000 μ g/dL (linearity limit). If the obtained results are greater than 1000 μ g/dL, rerun is recommended using a 1:2 dilution.

2025-03 (2.0) - Replaces all previous versions



Lactate Dehydrogenase

Pyruvate DGKC. UV. Kinetic.

REF	HBEL04	HBEL041
VOL	240 + 60 mL	60 + 15 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm < 1,00, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum, separated from the cells as rapidly as possible. Do not use oxalates as anticoagulants since they inhibit the enzyme. Do not use hemolyzed samples. LDH in the serum is stable for 2 days at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	LDH	Incubation 2:	225	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	100	s	Min. conc.:	3,42	U/L
Name:	LDH HBEL04	Serum dilution:	1:1		Max. conc.:	1600	U/L
Version:	2	Urine dilution:	1:1		Units 1:	U/L	
Group:	Heart	Diluent vol:	6	μL	Decimal digits:	3	
Reagent 1 ID:	LDH-1	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	340	nm	Max. curve deviation:	5	%
Reagent 2 ID:	LDH-2	Wavelength 2:	0	nm	Normal Min-Max Male:	230 – 460	U/L
Reag. 2 bottle:	★15	Needle washing:	1		Normal Min-Max Female:	230 – 460	U/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	230 – 460	U/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	1,00	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	2,00	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Negative		Method 2:	NA	
Sample vol:	5	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	240	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	60	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	0,760	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 3,42 U/L (detection limit) to 1600 U/L (linearity limit). If the obtained results are greater than 1600 U/L, rerun is recommended using a 1:10 dilution.

NOTES

★	It is recommended to use LDH-2 in a 15 mL-reagent container.
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2025-03 (1.0) - Replaces all previous versions

Lipase

Enzymatic. Colorimetric. Kinetic

REF	HBE09
VOL	1 x 40 mL

REAGENT PREPARATION AND STABILITY

R1 and R2: ready to use. **Stability after opening 90 days at 2-8 °C.**

R2: mix gently before use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C. In some storage conditions (lower than the one indicated) a precipitate may appear in the vial that will not influence the reagent performance. However, it is recommended to re-suspend the product with a slight rotation.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 580 nm $\geq 1,4$, the reagent should be discarded. R2 is a turbid orange-colored micro-emulsion, discard if turning to red.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended **and** pre-programmed for the LIPASE calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma. Plasma: with sodium citrate, EDTA or heparin.

Stability: 2 days at 2 - 8 °C.

PROGRAM SETUP

Prog. Name: LIPASE	Incubation 2: 225 s	Blank OD Δ max: 0 Abs/min
Type: Kinetic	Reading: 150 s	Min. conc.: 5 U/L
Name: HBE09	Serum dilution: 1:1	Max. conc.: 250 U/L
Version: 3	Urine dilution: 1:1	Units 1: U/L
Group: Pancreas	Diluent vol: 4 μL	Decimal digits: 3
Reagent 1 ID: LIPA-1	Diluent ID: NA	Target molecule: NA
Reag. 1 bottle: 15 mL	Wavelength 1: 578 nm	Max. curve deviation: 5 %
Reagent 2 ID: LIPA-2	Wavelength 2: 0 nm	Normal Min-Max Male: 5 – 38 U/L
Reag. 2 bottle: ★ Tube mL	Needle washing: 3	Normal Min-Max Female: 5 – 38 U/L
Reagent 3 ID: NA	Needle wash ID: NA	Normal Min-Max Child: 5 – 38 U/L
Reag. 3 bottle: NA	Needle postwash: No	Incomp. Mode : Skip system
Mixing 1: Default	Blank OD min: 0 Abs	Method 1: TRIG
Mixing 2: Default	Blank OD max: 1,4 Abs	Cycles: 4
Type: R1 + R2 / S	Reaction slope: Positive	Method 2: NA
Sample vol: 3 μL	Calibration slope: NA	Cycles: 0
Reagent 1 vol: 270 μL	OD Range min: -9,999 Abs/min	Method 3: NA
Reagent 2 vol: 70 μL	OD Range max: 9,999 Abs/min	Cycles: 0
Reagent 3 vol: 0 μL	Linearity: 0 %	Cal. Min. Factor: -99000000000
Incubation 1: 175 s	Subst. Deplet.: 1,775 Abs	Cal. Max. Factor: -99000000000

MEASURING RANGE

This method is linear from 5 U/L (detection limit) to 250 U/L (linearity limit). If the obtained results are greater than 250 U/L, rerun is recommended using a 1:2 dilution.

NOTES

★ It is recommended to use LIPA-1 in a 15 mL-reagent container and LIPA-2 in a 2 mL-reagent tube.

2025-03 (3.0) - Replaces all previous versions

Magnesium

Xylidyl Blue - EGTA. Colorimetric

REF	HB0320
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 25 °C.

The reagent should be a clear blue solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm $\geq 1,5$ the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended and pre-programmed for the MG calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or heparinized plasma, free of hemolysis and separated from cells as rapidly as possible. Do not use oxalates, citrate or EDTA as anticoagulant. Stability: 5 days at 4 - 8 °C.

PROGRAM SETUP

Prog. Name: MG	Incubation 2: 125 s	Blank OD Δ max: 0 Abs/min
Type: EP self blank	Reading: 25 s	Min. conc.: 0,05 mg/dL
Name: MG HB0320	Serum dilution: 1:1	Max. conc.: 6,60 mg/dL
Version: 4	Urine dilution: 1:1	Units 1: mg/dL
Group: Electrolytes	Diluent vol: 0 μL	Decimal digits: 3
Reagent 1 ID: MG	Diluent ID: NA	Target molecule: Magnesium
Reag. 1 bottle: 35 mL	Wavelength 1: 505 nm	Max. curve deviation: 5 %
Reagent 2 ID: NA	Wavelength 2: 0 nm	Normal Min-Max Male: 1,6 - 2,5 mg/dL
Reag. 2 bottle: NA	Needle washing: 3	Normal Min-Max Female: 1,6 - 2,5 mg/dL
Reagent 3 ID: NA	Needle wash ID: NA	Normal Min-Max Child: 1,6 - 2,5 mg/dL
Reag. 3 bottle: NA	Needle postwash: No	Incomp. Mode : Skip system
Mixing 1: Default	Blank OD min: -0,1 Abs	Method 1: NA
Mixing 2: Default	Blank OD max: 1,5 Abs	Cycles: 0
Type: R1 / S	Reaction slope: Positive	Method 2: NA
Sample vol: 4 μL	Calibration slope: NA	Cycles: 0
Reagent 1 vol: 350 μL	OD Range min: -9,999 Abs/min	Method 3: NA
Reagent 2 vol: 0 μL	OD Range max: 9,999 Abs/min	Cycles: 0
Reagent 3 vol: 0 μL	Linearity: NA %	Cal. Min. Factor: -99000000000
Incubation 1: 175 s	Subst. Deplet.: NA Abs	Cal. Max. Factor: -99000000000

MEASURING RANGE

This method is linear from 0,05 mg/dL (detection limit) to 6,6 mg/dL (linearity limit). If the obtained results are greater than 6,6 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (2.2) - Replaces all previous versions

Phosphorus

Phosphomolybdate. UV.

REF	HB014
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm \geq 0,54, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended and pre-programmed for the PHOSPH calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma, free of hemolysis and separated from cells as rapidly as possible.

Stability: 7 days at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	PHOSPH	Incubation 2:	75	s	Blank OD Δ max:	0	Abs/min
Type:	EP self blank	Reading:	25	s	Min. conc.:	0	mg/dL
Name:	HB014	Serum dilution:	1:1		Max. conc.:	35	mg/dL
Version:	3	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Electrolytes	Diluent vol:	5	μL	Decimal digits:	3	
Reagent 1 ID:	PHOS	Diluent ID:	NA		Target molecule:	Phosphorus	
Reag. 1 bottle:	35	Wavelength 1:	340	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	2,5 – 5	mg/dL
Reag. 2 bottle:	NA	Needle washing:	3		Normal Min-Max Female:	2,5 – 5	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	4 – 7	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,10	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,54	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	3	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	350	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0 mg/dL (detection limit) to 35 mg/dL (linearity limit). If the obtained results are greater than 35 mg/dL, rerun is recommended using a 1:2 dilution.

2025-04 (1.1) - Replaces all previous versions



REF	HB0340
VOL	40 + 20 mL
Standard 1	1 x 3 mL
Standard 2	1 x 3 mL

Sodium Enzy

Enzymatic. Colorimetric.

REAGENT PREPARATION AND STABILITY

All reagents are ready to use. Allow standards to equilibrate to room temperature for 30 minutes before use. Gently swirl a few times before first use. Take care to avoid the formation of bubbles.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

Handle standard very carefully to prevent contamination. Do not freeze the reagents. The above conditions are valid if the vials are opened just only for the time to take the reagent, closed immediately with their cap and stored at the indicated storage temperature.

CALIBRATION & QUALITY CONTROL

Use the **standards** included in the kit. Insert the value mentioned on the vials of the standards in menu "Lot management". 2 replicate measurements are recommended and pre-programmed for the SOD calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1 Sodium Standard 1		1	00000000	0,0000	0,0000	2	
2 Sodium Standard 2		1	00000000	0,0000	0,0000	2	

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls Specific (HBC01-S, HBC02-S)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum

PROGRAM SETUP

Prog. Name:	SOD	Incubation 2:	0	s	Blank OD Δ max:	0	Abs/min
Type:	Kinetic	Reading:	75	s	Min. conc.:	80	meq/L
Name:	HB0340	Serum dilution:	1:1		Max. conc.:	180	meq/L
Version:	2	Urine dilution:	1:1		Units 1:	meq/L	
Group:	Electrolytes	Diluent vol:	0	μL	Decimal digits:	3	
Reagent 1 ID:	SOD1	Diluent ID:	NA		Target molecule:	Sodium (Na)	
Reag. 1 bottle:	15	Wavelength 1:	405	nm	Max. curve deviation:	5	%
Reagent 2 ID:	SOD2	Wavelength 2:	0	nm	Normal Min-Max Male:	135 – 155	meq/L
Reag. 2 bottle:	Tube	Needle washing:	3		Normal Min-Max Female:	135 – 155	meq/L
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	135 – 155	meq/L
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	SOD	
Mixing 2:	NA	Blank OD max:	1	Abs	Cycles:	4	
Type:	S + R1 + R2 /-	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	9	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	225	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	115	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	0	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	200	Subst. Deplet.:	0	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 80 mEq/L (detection limit) to 180 mEq/L (linearity limit). If the obtained results are greater than 180 mEq/L, rerun is recommended.

2025-03 (1.0) - Replaces all previous versions



Total Protein

Biuret. Colorimetric

REF	HB0190
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

The reagent is ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 546 nm $\geq 0,22$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or heparinized plasma. Stability: 1 month at 2-8 °C.

PROGRAM SETUP

Prog. Name:	TP	Incubation 2:	425	s	Blank OD Δ max:	0	Abs/min
Type:	EP self blank	Reading:	25	s	Min. conc.:	0,008	g/dL
Name:	TP HB0190	Serum dilution:	1:1		Max. conc.:	15	g/dL
Version:	3	Urine dilution:	1:1		Units 1:	g/dL	
Group:	Protein	Diluent vol:	0	μ L	Decimal digits:	3	
Reagent 1 ID:	TP	Diluent ID:	NA		Target molecule:	NA	
Reag. 1 bottle:	35	Wavelength 1:	546	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	6,6 – 8,3	g/dL
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	6,6 – 8,3	g/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	6,6 – 8,3	g/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,22	Abs	Cycles:	0	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	8	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	320	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,008 g/dL (detection limit) to 15 g/dL (linearity limit). If the obtained results are greater than 15 g/dL, rerun is recommended using a 1:2 dilution.

2026-03 (1.2) - Replaces all previous versions



Triglycerides

Enzymatic. Colorimetric. GPO-POD

REF	HBL060
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

All the reagents are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm $\geq 0,23$, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management".

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma. The stability of the sample: 5 days at 2-8 °C.

PROGRAM SETUP

Prog. Name:	TRIG	Incubation 2:	325	s	Blank OD Δ max:	0	Abs/min
Type:	EP self blank	Reading:	25	s	Min. conc.:	1,01	mg/dL
Name:	TRIG HBL060	Serum dilution:	1:1		Max. conc.:	1000	mg/dL
Version:	3	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Lipids	Diluent vol:	5	μ L	Decimal digits:	3	
Reagent 1 ID:	TRIG	Diluent ID:	NA		Target molecule:	Triglycerides	
Reag. 1 bottle:	35	Wavelength 1:	505	nm	Max. curve deviation:	5	%
Reagent 2 ID:	NA	Wavelength 2:	0	nm	Normal Min-Max Male:	40 – 160	mg/dL
Reag. 2 bottle:	NA	Needle washing:	1		Normal Min-Max Female:	35 – 135	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	35 – 135	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,10	Abs	Method 1:	LIPASE	
Mixing 2:	Default	Blank OD max:	0,23	Abs	Cycles:	4	
Type:	R1 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	4	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	330	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	0	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 1,01 mg/dL (detection limit) to 1000 mg/dL (linearity limit). If the obtained results are greater than 1000 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (2.1) - Replaces all previous versions



Urea

Urease-GLDH. UV. Kinetic

REF	HBL030
VOL	240 + 60 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C.

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm \leq 0,90 AU, the reagent should be discarded.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". 3 replicate measurements are recommended and pre-programmed for the UREA calibration:

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	HBC03		1	00000000	0,0000	0,0000	3

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management".

SAMPLES

Sample type: human serum or plasma: do not use ammonium salts or fluoride as anticoagulants.

Stability of samples: 7 days at 4 - 25 °C.

PROGRAM SETUP

Prog. Name: UREA	Incubation 2: 75 s	Blank OD Δ max: 0 Abs/min
Type: Fixed time	Reading: 75 s	Min. conc.: 3,16 mg/dL
Name: HBL030	Serum dilution: 1:1	Max. conc.: 206 mg/dL
Version: 4	Urine dilution: 1:1	Units 1: mg/dL
Group: Kidney	Diluent vol: 5 μL	Decimal digits: 3
Reagent 1 ID: UREA-1	Diluent ID: NA	Target molecule: Urea (UreaUV)
Reag. 1 bottle: 35 mL	Wavelength 1: 340 nm	Max. curve deviation: 5 %
Reagent 2 ID: UREA-2	Wavelength 2: 0 nm	Normal Min-Max Male: 15 - 45 mg/dL
Reag. 2 bottle: ★ 15 mL	Needle washing: 1	Normal Min-Max Female: 15 - 45 mg/dL
Reagent 3 ID: NA	Needle wash ID: NA	Normal Min-Max Child: 15 - 45 mg/dL
Reag. 3 bottle: NA	Needle postwash: No	Incomp. Mode : Skip system
Mixing 1: Default	Blank OD min: 0,90 Abs	Method 1: NA
Mixing 2: Default	Blank OD max: 1,90 Abs	Cycles: 0
Type: R1 + R2 / S	Reaction slope: Negative	Method 2: NA
Sample vol: 4 μL	Calibration slope: NA	Cycles: 0
Reagent 1 vol: 265 μL	OD Range min: -9,999 Abs/min	Method 3: NA
Reagent 2 vol: 70 μL	OD Range max: 9,999 Abs/min	Cycles: 0
Reagent 3 vol: 0 μL	Linearity: NA %	Cal. Min. Factor: -99000000000
Incubation 1: 175 s	Subst. Deplet.: NA Abs	Cal. Max. Factor: -99000000000

MEASURING RANGE

This method is linear from 3,16 mg/dL (detection limit) to 206 mg/dL (linearity limit). If the obtained results are greater than 206 mg/dL, rerun is recommended using a 1:2 dilution.

NOTES

★	It is recommended to use UREA-2 in a 15 mL-reagent container.
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2026-03 (3.1) - Replaces all previous versions

Uric Acid

Enzymatic. Colorimetric URICASE-POD

REF	HBL020
VOL	2 x 125 mL

REAGENT PREPARATION AND STABILITY

R1 and R2 are ready for use.

All the components of the kit are **stable up to the date of expiration** as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2-8 °C.

The reagents should be clear solutions. The reagent should be discarded if turbidity or precipitation has occurred or if the blank absorbance is out of range.

CALIBRATION & QUALITY CONTROL

Use the **Biochemistry Calibrator (HBC03)**. Insert the value mentioned on the insert in menu "Lot management". Fill the values for bichromatic methods.

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibration for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances.

Use **Biochemistry Normal and Pathological Controls (HBC01, HBC02)**. Insert the value mentioned on the insert in menu "Lot management". Fill the values for bichromatic methods.

SAMPLES

Sample type: human serum or plasma. Stability 3-5 days at 2-8 °C or 6 months at -20 °C.

PROGRAM SETUP

Prog. Name:	UA	Incubation 2:	350	s	Blank OD Δ max:	0	Abs/min
Type:	Bichromatic	Reading:	25	s	Min. conc.:	0,15	mg/dL
Name:	UA HBL020	Serum dilution:	1:1		Max. conc.:	25	mg/dL
Version:	4	Urine dilution:	1:1		Units 1:	mg/dL	
Group:	Kidney	Diluent vol:	9	μL	Decimal digits:	3	
Reagent 1 ID:	UA-1	Diluent ID:	NA		Target molecule:	UAp	
Reag. 1 bottle:	35	Wavelength 1:	505	nm	Max. curve deviation:	5	%
Reagent 2 ID:	UA-2	Wavelength 2:	670	nm	Normal Min-Max Male:	3,6 – 7,7	mg/dL
Reag. 2 bottle:	35	Needle washing:	1		Normal Min-Max Female:	2,5 – 6,8	mg/dL
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	2,5 – 6,8	mg/dL
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	-0,01	Abs	Method 1:	NA	
Mixing 2:	Default	Blank OD max:	0,12	Abs	Cycles:	0	
Type:	R1 + R2 / S	Reaction slope:	Positive		Method 2:	NA	
Sample vol:	8	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	160	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	160	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	175	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 0,15 mg/dL (detection limit) to 25 mg/dL (linearity limit). If the obtained results are greater than 25 mg/dL, rerun is recommended using a 1:2 dilution.

2026-03 (2.1) - Replaces all previous versions

HbA1c Turbi

Turbidimetric

Check the lot number of the washing solution (CY015-WS)! ^{5Notes}

REF	HT001
VOL	30 + 10 mL

REAGENT PREPARATION AND STABILITY

Reagent 1, 2 and 3 are ready to use. Latex may sediment. Mix reagents gently before use.

All the components of the kit are stable up to the date of expiration as specified on the label, when stored tightly closed, protected from light and contaminations prevented during their use. Storage temperature for this kit is 2 - 8 °C Reagents should not be left inside the analyzer after use. They must be refrigerated at 2 - 8 °C. Reagent 1 and 2 are stable for at least one month after opening when stored at 2 - 8 °C and contaminations prevented during their use.

Reagent deterioration: alterations in the physical appearance of the reagents or values of control materials outside of the manufacturer's acceptable range may be an indication of reagent instability.

CALIBRATION & QUALITY CONTROL

Use the **HbA1c-calibrator (HT001S)**. Pay attention: program a 5-point calibration with a saline solution (9 g/L NaCl) or distilled water as Calibrator 1 (Ref.1 = 0.001). For Ref.2-Ref.5, program the value mentioned on the vials in menu "Lot management".

Calibrators	Single	Calibrator	Dilution rate	Lot	Primary concent	Final concent	Reps.
1	BLANK		1		0.0000	0.0000	1
2	HbA1c CAL1		1	00000	0.0000	0.0000	1
3	HbA1c CAL2		1	00000	0.0000	0.0000	1
4	HbA1c CAL3		1	00000	0.0000	0.0000	1
5	HbA1c CAL4		1	00000	0.0000	0.0000	1

Quality Control is recommended for the qualification of the reagents and to monitor the performance of assay procedures. Next to legal requirements, we recommend to perform Quality Control on a daily basis and after each calibration. If control values are found outside the defined range, check the instrument, reagents and calibrator for problems. Do not continue testing as the results will be invalid. Each laboratory should establish its own QC scheme and corrective actions if controls do not meet the acceptable tolerances. Use the **HbA1c control (HT001C)**. Program the value mentioned on the vials in menu "Lot management".

SAMPLES

Sample type: human blood. Special preparation of the patients is unnecessary. Fasting samples are not required. No special additives or preservatives other than anticoagulants are required. Collect venous blood with EDTA using aseptic technique. HbA1c in whole blood collected with EDTA is stable for one week at 2 - 8 °C.

Hemolysis: To determine HbA1c, a hemolysate must be prepared for each sample as well as for the HbA1c Calibrator (Level 2 to 4) and HbA1c Control. The Hemolysate must be positioned on the analyzer.

- Dispense 1 mL of Reagent 3 into labelled test tubes (glass or plastic). Also provide test tubes for the calibrator and control.
- Add 20 µL of well mixed whole blood (sample, calibrator, control) in the appropriate labelled test tube. Mix.
- Allow to stand for 5 minutes or until complete lysis is evident. Hemolysates may be stored up to 10 days at 2 - 8 °C.

PROGRAM SETUP

Prog. Name:	HbA1c	Incubation 2:	0	s	Blank OD Δ max:	0	Abs/min
Type:	Fixed time	Reading:	275	s	Min. conc.:	2	% HbA1c
Name:	HT001	Serum dilution:	1:1		Max. conc.:	16	% HbA1c
Version:	6	Urine dilution:	1:1		Units 1:	% HbA1c	
Group:	Metabolism	Diluent vol:	0	µL	Decimal digits:	3	
Reagent 1 ID:	HBA1	Diluent ID:	NA		Target molecule:	Urea (UreaUV)	
Reag. 1 bottle:	35	Wavelength 1:	620	nm	Max. curve deviation:	5	%
Reagent 2 ID:	HBA2	Wavelength 2:	0	nm	Normal Min-Max Male:	2 - 6	% HbA1c
Reag. 2 bottle:	15	Needle washing:	1		Normal Min-Max Female:	2 - 6	% HbA1c
Reagent 3 ID:	NA	Needle wash ID:	NA		Normal Min-Max Child:	2 - 6	% HbA1c
Reag. 3 bottle:	NA	Needle postwash:	No		Incomp. Mode :	Skip system	
Mixing 1:	Default	Blank OD min:	0	Abs	Method 1:	NA	
Mixing 2:	3	Blank OD max:	2	Abs	Cycles:	0	
Type:	S + R1 / R2	Reaction slope:	NA		Method 2:	NA	
Sample vol:	7	Calibration slope:	NA		Cycles:	0	
Reagent 1 vol:	240	OD Range min:	-9,999	Abs/min	Method 3:	NA	
Reagent 2 vol:	80	OD Range max:	9,999	Abs/min	Cycles:	0	
Reagent 3 vol:	0	Linearity:	NA	%	Cal. Min. Factor:	-99000000000	
Incubation 1:	350	Subst. Deplet.:	NA	Abs	Cal. Max. Factor:	-99000000000	

MEASURING RANGE

This method is linear from 2 % (detection limit) to 16 % (linearity limit).

NOTES

For this method, use washing solution (CY015-WS) from Lot 2301086465 onwards. Lot numbers with format 'E244xxx' will interfere with the reaction

2025-03 (2.0) - Replaces all previous versions



CYANElite 290 | CY015



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Biochemistry reagents, calibrators and controls



α-Amylase HBE03	CK (NAC & MB) Control HBC08	HDL Cholesterol HBL011	Normal Control HBC01 HBC01-S
Albumin HB0010 HB0010M	Creatine Kinase MB HBE05	HDL/LDL Calibrator HBC11	Pathological Control HBC02 HBC02-S
Alkaline Phosphatase HBE12	Creatine Kinase NAC HBE03	HDL/LDL Control HBC10	Phosphorus HB014
Bilirubin Direct HB0260	Creatinine HB0080 HB0080M	Hemoglobin HB011	Quality Set HBC123
Bilirubin Total HB0270	Glucose HBL04 HBL04M	Hemoglobin Calibrator HBS02	Sodium Enzy HB0340
Bilirubin Total & Direct HB0020	GOT (AST) HBE010 HBE010M	Iron HB012	Total Protein HB0190 HB0190M
Calcium HB0030 HB0030M	GPT (ALT) HBE020 HBE020M	Lactate Dehydrogenase HBE04 HBE041	Triglycerides HBL060 HBL060M
Calibrator HBC03 HBC03-S	HbA1c Calibrator (4 levels) HT001S	LDL Cholesterol HBL012	Urea HBL030 HBL030M
Chloride HB005	HbA1c Control (2 levels) HT001C	Lipase HBE09	Uric Acid HBL020 HBL020M
Cholesterol HBL010 HBL010M	HbA1c Turbi HT001	Magnesium HB0320 HB0320M	γ-GT HBE06 HBE061



240 + 60 mL packaging

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With 29 years of experience, Cypress Diagnostics is the company to turn to for quality chemistry analyzers and kits. Thanks to all these years of experience, we know the tricks of the trade.



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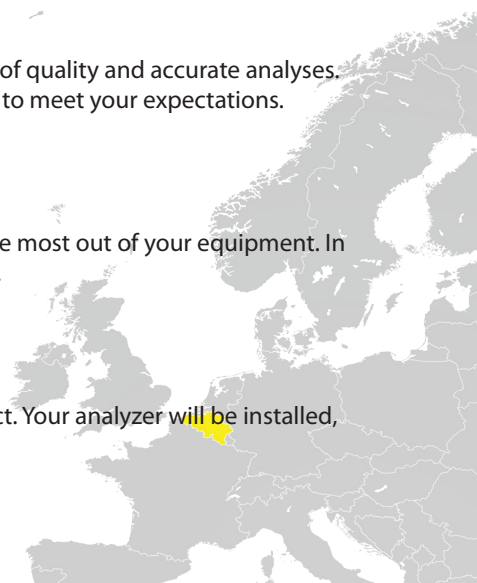
Return on investment

After installing your analyzer, our experts will advise you and help you get the most out of your equipment. In the event of a problem, we help you immediately through our local partners.



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Your Distributor

CYANelite 290 EN
 Revision date: 2024-07-18

Disclaimer: this information is indicative and subject to change without prior notice. Use the documentation included with the products. If in doubt, contact cypress@diagnostics.be