CE

CYPRESS DIAGNOSTICS

CY014

English

CYANVision

Application sheet



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Page	Test	Program Name	Version
1	α-Amylase	AAMY	2026-03 (2.1)
2	Albumin	ALB	2026-03 (3.1)
3	Alkaline Phosphatase	ALP	2026-03 (2.1)
4	Bilirubin Direct	BILD	2026-03 (3.2)
5	Bilirubin Total	BILT	2026-03 (3.2)
6+7	Bilirubin Scheme (Direct/Total)		
8	Calcium	CA	2026-03 (2.2)
9	Cholesterol	CHOL	2026-03 (2.2)
10	Creatine Kinase MB	CKMB	2026-03 (3.1)
11	Creatine Kinase NAC	CKNAC	2026-03 (3.1)
12	Chloride	CL	2026-03 (2.1)
13	Creatinine	CRE	2026-03 (2.2)
14	γ-GT	GGT	2026-03 (3.1)
15	Glucose	GLUC	2026-03 (2.2)
16	GOT (AST)	GOT	2026-03 (4.0)
17	GPT (ALT)	GPT	2026-03 (4.0)
18	HbA1c	HbA1c	2026-03 (3.1)
19	HDL Cholesterol (with HBC11)	HDL	2026-03 (3.1)
20	HDL Cholesterol (with HBC12)	HDLc	2026-03 (0.1)
21+22	HDL/LDL Scheme		
23	HDL Cholesterol	HDLn	2026-03 (0.0)
24+25	HDLn Scheme		
26	Hemoglobin	HGB	2026-03 (1.1)
27	Iron	IRON	2026-03 (3.1)
28	Lactate Dehydrogenase	LDH	2026-03 (2.1)
29	LDL Cholesterol (with HBC11)	LDL	2026-03 (3.1)
30	LDL Cholesterol (with HBC12)	LDLc	2026-03 (0.1)
31+32	HDL/LDL Scheme		
33	LDL Cholesterol	NA - Calculation	2026-08 (0.0)
34	Lipase	LIPASE	2026-03 (4.1)
35	Magnesium	MG	2026-03 (3.1)
36	Phosphorus	PHOSPH	2026-03 (3.1)
37	Potassium Prec	POT	2026-03 (3.1)
38	Sodium Prec	SOD	2026-03 (3.1)
39	Total Protein	TP	2026-03 (2.2)
40	Urine Total Protein	TPU	2026-03 (2.1)
41	Triglycerides	TRIG	2026-03 (3.1)
42	Uric Acid	UA	2026-03 (5.1)
43	Urea	UREAn	2026-03 (2.1)
44	DRIFT	DRIFT	2021-02 (1.0)

Version: 20260811 (7.1)

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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 ≥ 0,40, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials. 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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,0 mL Reagent
For Sample/(Calibrator) Note 2	20 µL Sample/(Calibrator) + 1,0 mL Reagent

Prepare, mix and measure **one sample at a time**. Aspirate the mixture in the instrument, **immediately** after addition of the working solution to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	AAMY		**Linearity Max:**	2200	U/L	**STD variable:**	No Note 2	
Prog. ID:	1		**Fit:**	95		**Standard Conc.:**	0,0000 Note 2	
Prog. Version:	2		**Direction:**	Up		**Calibration repeats:**	0	
Method ID:	1		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	A-Amylase		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	405	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	28	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	90	U/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	28	U/L
Aspiration Volume:	0800	µL	**Blank High:**	0,400 Note 1		**Normal High - Female**	90	U/L
Delay Time:	120	s	**Blank Mandatory:**	No		**Normal Low - Child**	28	U/L
Test Time:	090	s	**Factor:**	3954 Note 2		**Normal High - Child**	90	U/L
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	0,2439	U/L	**Num of STD:**	0 Note 2				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.1) - Replaces all previous versions

Albumin

Bromocresol Green. Colorimetric

REF	**HB0010**
VOL	2 x 125 mL
Standard	1 x 5 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 - 25 °C.
Once open, the standard is stable up to 3 months.
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 ≥ 0,40, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Reagent
For Standard Note 2	5 µL Standard + 1 mL Reagent
For Sample	5 µL Sample + 1 mL Reagent

You can prepare several samples simultaneously. Mix and incubate for 10 minutes at room temperature. After the incubation time, aspirate and measure the samples within 1 hour after preparation.

PROGRAM SETUP

Prog. Name:	ALB		**Linearity Max:**	5,8	g/dL	**STD variable:**	Yes Note 2	
Prog. ID:	2		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	2		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	2		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Albumin		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	620	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	3,5	g/dL
Prog. Unit:	g/dL		**Blank CV%:**	0		**Normal High - Male**	5	g/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	3,5	g/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,400 Note 1		**Normal High - Female**	5	g/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	3,5	g/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	5	g/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	0,038	g/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Alkaline Phosphatase

IFCC. Colorimetric. Kinetic

REF	**HBE12**
VOL	60 + 15 mL

REAGENT PREPARATION AND STABILITY

Mix 4 volumes of R1 (buffer) with 1 volume of R2 (substrate). The stability of the working reagent is 21 days at 2-8 °C or 5 days 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. 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. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials. 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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature.
Then, pipette into a test tube:

For Blank	1,00 mL Working reagent (R1 + R2)
For Sample/(Calibrator)Note 2	20 µL Sample/(Calibrator) + 1,00 mL Working reagent (R1 + R2)

Prepare, mix and measure **one sample at a time**. Aspirate the mixture in the instrument, **immediately** after addition of the working solution to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	ALP		**Linearity Max:**	1400	U/L	**STD variable:**	No	
Prog. ID:	3		**Fit:**	95		**Standard Conc.:**	0,0000	
Prog. Version:	2		**Direction:**	Up		**Calibration repeats:**	0	
Method ID:	3		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	ALPhosphat(IFCC)		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	405	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	26	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	117	U/L
Decimals:	3		**Blank Low:**	0,000Note 1		**Normal Low - Female**	26	U/L
Aspiration Volume:	0800	µL	**Blank High:**	1,500Note 1		**Normal High - Female**	117	U/L
Delay Time:	060	s	**Blank Mandatory:**	No		**Normal Low - Child**	26	U/L
Test Time:	090	s	**Factor:**	2764Note 2		**Normal High - Child**	117	U/L
Dilution factor:	1		**Calib. By factor:**	YesNote 2		**Method order:**	0	
Linearity Min:	1,307	U/L	**Num of STD:**	0				

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, dilute the sample 1:10 with saline solution, repeat the determination, and multiply the result by factor 10.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.1) - 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 or if color development has occurred in reagent N, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials. 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 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.

PROCEDURE Note 4

Make sure the reagents and samples are at room temperature. Protect samples from direct sunlight. Then, pipette into a test tube:

For Reagent Blank	750 µL Reagent D
For Reagent	25 µL Reagent N + 750 µL Reagent D
For Sample/Cal Blank	100 µL Sample/Calibrator + 750 µL Reagent D
For Sample/Cal	100 µL Sample/Calibrator + 25 µL Reagent N + 750 µL Reagent D

Thus, for every sample, you need to prepare 2 test tubes: one for measuring the sample blank (background coloration) and one for measuring the real sample coloration. Add Reagent N only to the second tube. Add Reagent D last, mix and incubate for exactly 5 minutes at room temperature. Aspirate the mixture in the instrument, exactly 5 minutes **after addition of the Reagent D**.

Use the illustrations on the next page for guidance to perform this test in a time-efficient way. Watch our Bilirubin video: https://diagnostics.be/product/hb0260

PROGRAM SETUP

Prog. Name:	BILD		**Linearity Max:**	20	mg/dL	**STD variable:**	No Note 2	
Prog. ID:	4		**Fit:**	0		**Standard Conc.:**	0,0000 Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	3	
Method ID:	4		**Working reagent:**	No		**CAL CV%:**	10	
Method Name:	Bilirubin direct		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	Yes Note 4		**Calib. Mandatory:**	No	
Main Filter:	546	nm	**VCF:**	0,97		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	0,06	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	0,25	mg/dL
Decimals:	3		**Blank Low:**	-0,100 Note 1		**Normal Low - Female**	0,06	mg/dL
Aspiration Volume:	0700	µL	**Blank High:**	0,100 Note 1		**Normal High - Female**	0,25	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	0,06	mg/dL
Test Time:	003	s	**Factor:**	19 Note 2		**Normal High - Child**	0,25	mg/dL
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	0,06	mg/dL	**Num of STD:**	0				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.
4. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank**"
     b. Secondly: Aspirate "**Reagent**"
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
5. Carefully aspirate the sample in the tube. In case of air bubbles, a flag will be shown and a rerun should be performed.

2026-03 (3.2) - 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 or if color development has occurred in reagent N, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02).** Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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 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.

PROCEDURE Note 4

Make sure the reagents and samples are at room temperature. Protect samples from direct sunlight. Then, pipette into a test tube:

For Reagent Blank	750 µL Reagent T
For Reagent	25 µL Reagent N + 750 µL Reagent T
For Sample/Cal Blank	100 µL Sample/Calibrator + 750 µL Reagent T
For Sample/Cal	100 µL Sample/Calibrator + 25 µL Reagent N + 750 µL Reagent T

Thus for every sample, you need to prepare 2 test tubes: one for measuring the sample blank (background coloration) and one for measuring the real sample coloration. Add Reagent N only to the second tube. Add Reagent T last, mix and incubate for exactly 5 minutes at room temperature. Aspirate the mixture in the instrument, exactly 5 minutes **after addition of the Reagent T.**
Use the illustrations on the next page for guidance to perform this test in a time-efficient way. Watch our Bilirubin video : https://diagnostics.be/product/hb0270

PROGRAM SETUP

Prog. Name:	BILT		**Linearity Max:**	20	mg/dL	**STD variable:**	No Note 2	
Prog. ID:	5		**Fit:**	0		**Standard Conc.:**	0,0000 Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	3	
Method ID:	5		**Working reagent:**	No		**CAL CV%:**	10	
Method Name:	Bilirubin total		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	Yes Note 4		**Calib. Mandatory:**	No	
Main Filter:	546	nm	**VCF:**	0,97		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	0,2	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	1,1	mg/dL
Decimals:	3		**Blank Low:**	-0,100 Note 1		**Normal Low - Female**	0,2	mg/dL
Aspiration Volume:	0700	µL	**Blank High:**	0,100 Note 1		**Normal High - Female**	1,1	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	0,2	mg/dL
Test Time:	003	s	**Factor:**	12 Note 2		**Normal High - Child**	1,1	mg/dL
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	0,1	mg/dL	**Num of STD:**	0				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

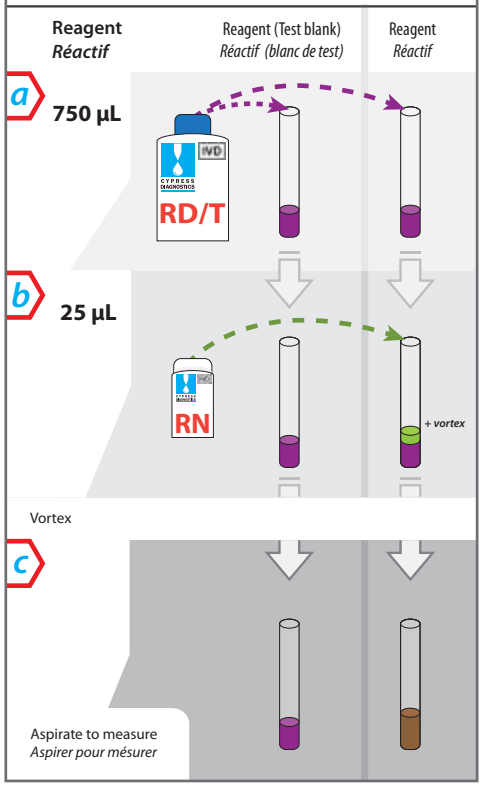
NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.
4. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank"**
     b. Secondly: Aspirate "**Reagent"**
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
5. Carefully aspirate the sample in the tube. In case of air bubbles, a flag will be shown and a rerun should be performed.

2026-03 (3.2) - Replaces all previous versions

Bilirubine Direct HB0260 | Bilirubine Total HB0270 | Bilirubine Total & Direct HB0020

Step 1 :
Blank reagent
Réactif blanc

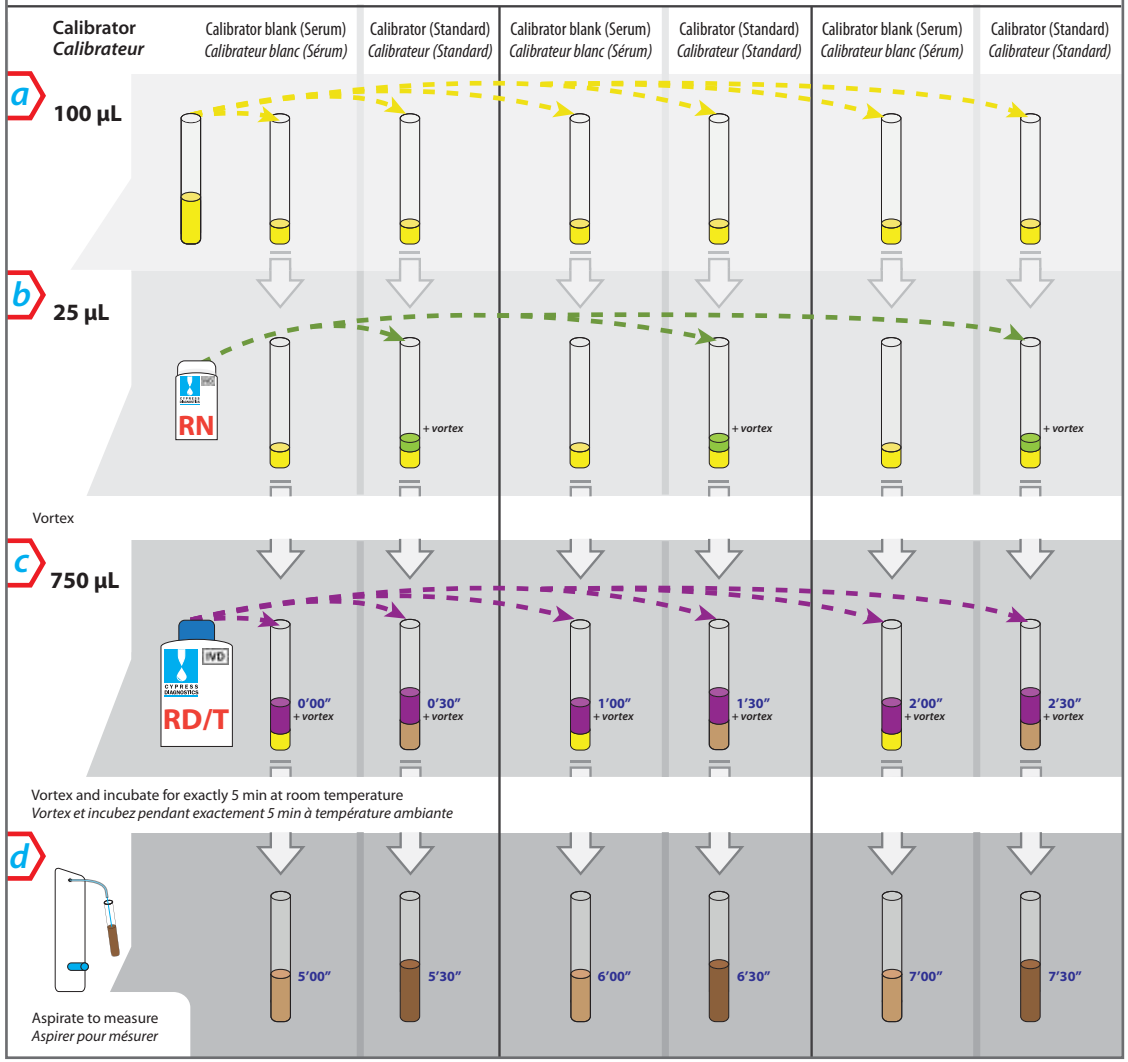


Application for **CYANVision**
More information on patient samples with a scheme is given in the kit.

Application sur **CYANVision**
Vous trouverez plus d'informations sur les échantillons de patients et un schéma dans le kit.

Step 2 :
Calibration (HBC03)
Étalonnage (HBC03)

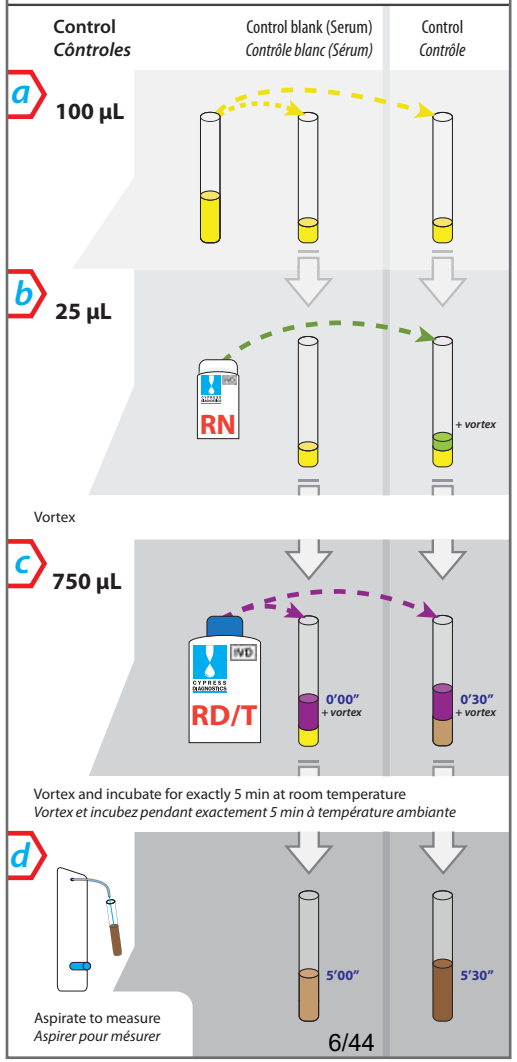
Prepare and measure CAL1
Préparez et mesurez le CAL 1



Step 3:
Quality Control
Côntroles de Qualité

Prepare and measure Normal Control (HBC01)
Then do the same for Pathological control (HBC02)

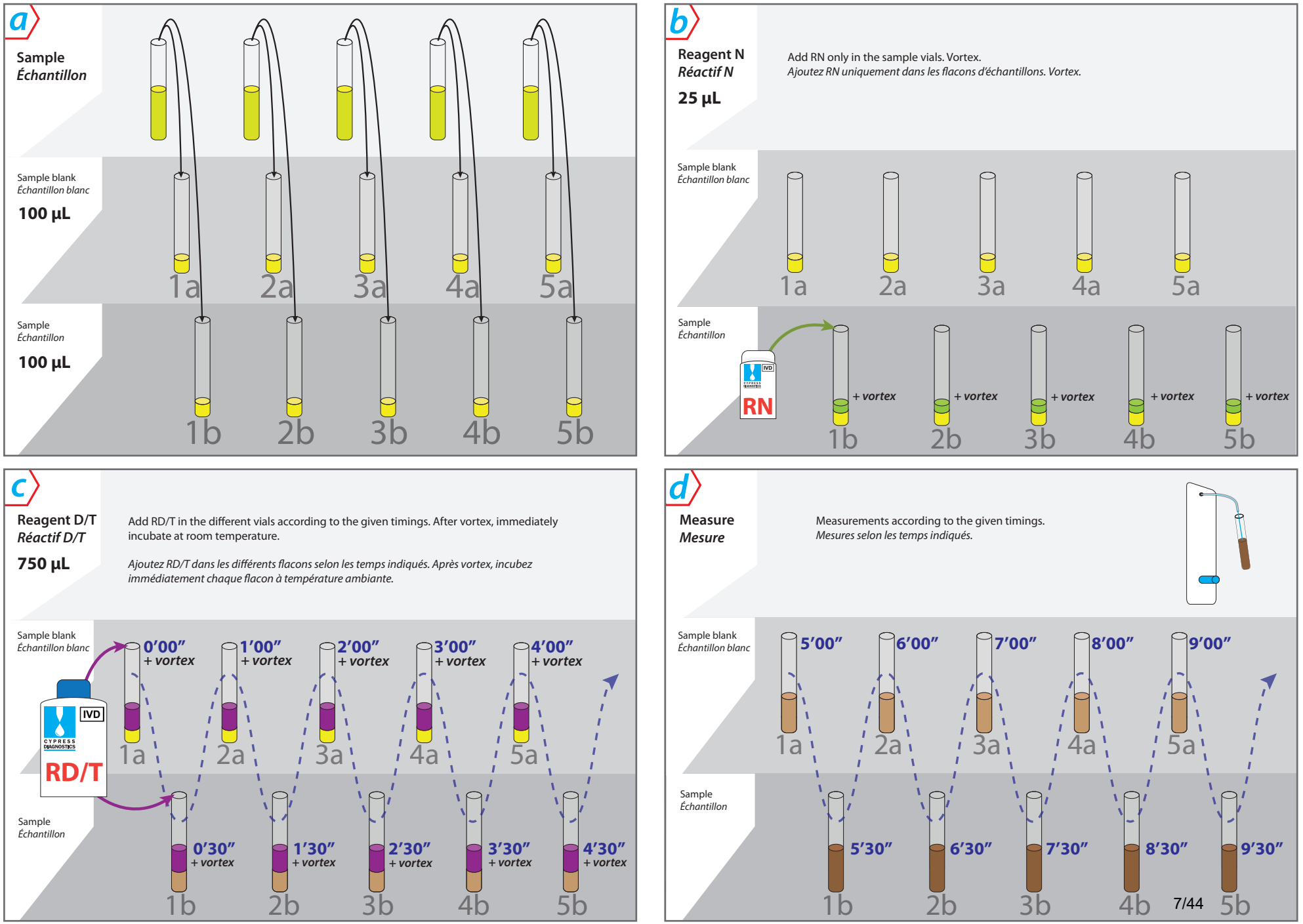
Préparez et mesurez la Contrôle Normal (HBC01)
Faites de même pour le Côntrole Pathologique (HBC02)



Bilirubine Direct HB0260 - Bilirubine Total HB0270
Bilirubine Total & Direct HB0020

Application on **CYANSmart | CYANVision** - For QC & Calibrators, apply the same principle. More information with a scheme is given in the application sheet.

Application sur ***CYANSmart | CYANVision*** *- Pour le contrôle de qualité et la calibration, appliquez le même principe. Vous trouverez plus d'informations et un schéma dans la fiche d'application.*



Calcium

Arsenazo III. Colorimetric. Monoreagent

REF	**HB0030**
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

The reagent and standard 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 620 nm ≥ 0,80 the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature.
Then, pipette into a test tube:

For Blank	1,0 mL Reagent
For Standard Note 2	20 µL Standard + 1,0 mL Reagent
For Sample	20 µL Sample + 1,0 mL Reagent

You can prepare several samples simultaneously. Mix and incubate for 2 minutes at 15 - 25 °C (room temperature). After the incubation time, aspirate and measure the samples within 1 hour after preparation.

PROGRAM SETUP

Prog. Name:	CA		**Linearity Max:**	20	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	6		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	6		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Calcium		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	620	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	3		**Normal Low - Male**	8,6	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	10		**Normal High - Male**	10,2	mg/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	8,6	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,800 Note 1		**Normal High - Female**	10,2	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	8,4	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	11	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	1	
Linearity Min:	0,163	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.2) - Replaces all previous versions

Cholesterol

Enzymatic. Colorimetric test
CHOD-POD

REF	HBL010
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

The 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm ≥ 0,26, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Reagent
For Standard Note 2	10 µL Standard + 1 mL Reagent
For Sample	10 µL Sample + 1 mL Reagent

You can prepare several samples simultaneously. Mix and incubate for 10 minutes at 37 °C or for 15 minutes at 15 - 25 °C (room temperature). After the incubation time, aspirate and measure the samples within 45 minutes after preparation.

PROGRAM SETUP

Prog. Name:	CHOL		**Linearity Max:**	1000	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	7		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	8		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Cholesterol		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	510	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	3		**Normal Low - Male**	120	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	10		**Normal High - Male**	200	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	120	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,260 Note 1		**Normal High - Female**	200	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	120	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	170	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	0,521	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.2) - Replaces all previous versions

Creatine Kinase MB

Immuno-inhibition. UV. Kinetic

REF	**HBEL05**
VOL	60 + 15 mL
CK (NAC & MB) Control	1 x Lyoph.-2 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 ≥ 1,20, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator (**HBC03**) for calibration.
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 the **CK (NAC&MB) control (HBC08**) included in the kit. Note 2 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the label of the control vial.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,00 mL Working reagent (R1 + R2)
For Sample/(Calibrator)	40 µL Sample/(Calibrator) + 1,00 mL Working reagent (R1 + R2)

Mix and incubate for **10 minutes at room temperature.** After the incubation time, aspirate and measure the sample.

PROGRAM SETUP

Prog. Name:	CKMB		**Linearity Max:**	1000	U/L	**STD variable:**	No	
Prog. ID:	8		**Fit:**	95		**Standard Conc.:**	0,0000	
Prog. Version:	3		**Direction:**	Up		**Calibration repeats:**	0	
Method ID:	11		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Creat KinaseMB		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	1,9	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	24	U/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	1,9	U/L
Aspiration Volume:	0800	µL	**Blank High:**	1,200 Note 1		**Normal High - Female**	24	U/L
Delay Time:	10	s	**Blank Mandatory:**	No		**Normal Low - Child**	1,9	U/L
Test Time:	300	s	**Factor:**	8255		**Normal High - Child**	24	U/L
Dilution factor:	1		**Calib. By factor:**	Yes		**Method order:**	0	
Linearity Min:	1,9	U/L	**Num of STD:**	0				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Creatine Kinase NAC

NAC Activated. UV. Kinetic

REF	HBEL03
VOL	60 + 15 mL

REAGENT PREPARATION AND STABILITY

Mix 4 volumes of reagent 1 with 1 volume of reagent 2. The stability of the working reagent is 2 weeks a 2 - 8 °C or 48 hours 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 blank absorbance at 340 nm ≥ 1,0 the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Also a **CK (NAC & MB) Control (HBC08)** is available. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,00 mL Working reagent (R1 + R2)
For Sample/(Calibrator) Note 2	20 µL Sample/(Calibrator) + 1,00 mL Working reagent (R1 + R2)

Prepare, mix and measure **one sample at a time**. Aspirate the mixture in the instrument, **immediately** after addition of the working solution to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks "Press PUSH Aspirate Sample".

PROGRAM SETUP

Prog. Name:	CKNAC		**Linearity Max:**	2000	U/L	**STD variable:**	No Note 2	
Prog. ID:	9		**Fit:**	95		**Standard Conc.:**	0,0000 Note 2	
Prog. Version:	2		**Direction:**	Up		**Calibration repeats:**	0	
Method ID:	12		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Creat KinaseNAC		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	46	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	195	U/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	34	U/L
Aspiration Volume:	0800	µL	**Blank High:**	1,000 Note 1		**Normal High - Female**	170	U/L
Delay Time:	120	s	**Blank Mandatory:**	No		**Normal Low - Child**	34	U/L
Test Time:	090	s	**Factor:**	8095 Note 2		**Normal High - Child**	170	U/L
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	2,12	U/L	**Num of STD:**	0				

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, dilute the sample 1:10 with saline solution, repeat the determination, and multiply the result by factor 10.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Chloride

Thiocyanate. Colorimetric

REF	**HB005**
VOL	2 x 125 mL
Standard	1 x 5 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 480 nm ≥ 0,15, the reagent should be discarded. Handle standard very carefully to prevent contamination. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02).** Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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).

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1,00 mL Reagent 1
For Standard Note 2	10 µL Standard + 1,00 mL Reagent 1
For Sample	10 µL Sample + 1,00 mL Reagent 1

You can prepare several samples simultaneously. Mix and incubate for 5 minutes at 37 °C or for 5 minutes at 15 - 25 °C (room temperature). After the incubation time, aspirate and measure the samples within 30 minutes after preparation.

PROGRAM SETUP

Prog. Name:	CL		**Linearity Max:**	190	mEq/L	**STD variable:**	Yes Note 2	
Prog. ID:	10		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	7		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Chloride		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	450	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	95	mEq/L
Prog. Unit:	mEq/L		**Blank CV%:**	0		**Normal High - Male**	115	mEq/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	95	mEq/L
Aspiration Volume:	0800	µL	**Blank High:**	0,150 Note 1		**Normal High - Female**	115	mEq/L
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	95	mEq/L
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	115	mEq/L
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	2	
Linearity Min:	0,454	mEq/L	**Num of STD:**	1				

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, dilute the sample 1:2 with distilled water, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.1) - Replaces all previous versions

Creatinine

Jaffé. Colorimetric. Kinetic without deproteinization

REF	HB0080
VOL	2 x 125 mL
Standard	1 x 5 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm ≥ 1,80, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,00 mL Working reagent
For Standard Note 2	100 µL Standard + 1,00 mL Working reagent
For Sample	100 µL Sample + 1,00 mL Working reagent

Prepare, mix and measure **one sample at a time.** Aspirate the mixture in the instrument, **immediately** after addition of the working solution to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	CRE		**Linearity Max:**	15	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	11		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Up		**Calibration repeats:**	0	
Method ID:	13		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Creatinine		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Two Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	510	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	0,7	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	1,4	mg/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	0,6	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	1,800 Note 1		**Normal High - Female**	1,1	mg/dL
Delay Time:	030	s	**Blank Mandatory:**	No		**Normal Low - Child**	0,6	mg/dL
Test Time:	060	s	**Factor:**	0		**Normal High - Child**	1,1	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	0,115	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.2) - Replaces all previous versions

γ-GT

Carboxy substrate. Colorimetric. Kinetic

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

REAGENT PREPARATION AND STABILITY

Mix 4 volumes of R1 (Buffer) with 1 volume of R2 (Substrate). The stability of this working reagent is 21 days at 2-8 °C or 5 days 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 blank absorbance at 405 nm ≥ 1,80, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.

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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,00 mL Working reagent (R1 + R2)
For Sample/(Calibrator) Note 2	100 µL Sample/(Calibrator) + 1,00 mL Working reagent (R1 + R2)

Prepare, mix and measure **one sample at a time.** Aspirate the mixture in the instrument, **immediately** after addition of the working reagent to the sample/(calibrator). Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	GGT		**Linearity Max:**	300	U/L	**STD variable:**	No	
Prog. ID:	13		**Fit:**	95		**Standard Conc.:**	0,0000	
Prog. Version:	2		**Direction:**	Up		**Calibration repeats:**	0	
Method ID:	14		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	G-GT		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	405	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	11	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	50	U/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	7	U/L
Aspiration Volume:	0800	µL	**Blank High:**	1,800 Note 1		**Normal High - Female**	32	U/L
Delay Time:	060	s	**Blank Mandatory:**	No		**Normal Low - Child**	7	U/L
Test Time:	090	s	**Factor:**	1190 Note 2		**Normal High - Child**	32	U/L
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	2	U/L	**Num of STD:**	0				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - **Replaces all previous versions**

Glucose

Enzymatic. Colorimetric
GOD-PAP

REF	**HBL04**
VOL	2 x 125 mL
Standard	1 x 5 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm ≥ 0,32, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1,00 mL Reagent
For Standard Note 2	10 µL Standard + 1,00 mL Reagent
For Sample	10 µL Sample + 1,00 mL Reagent

You can prepare several samples simultaneously. Mix and incubate for 10 minutes at 37 °C or for 15 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 40 minutes after preparation.

PROGRAM SETUP

Prog. Name:	GLUC		**Linearity Max:**	420	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	14		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	3	
Method ID:	15		**Working reagent:**	No		**CAL CV%:**	10	
Method Name:	Glucose		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	510	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	620	nm	**Blank substraction:**	Yes		**SampleTypeRefValue:**	Plasma	
Bichromatic Factor:	0,19		**Num of Blank:**	1		**Normal Low - Male**	74	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	100	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	74	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,320 Note 1		**Normal High - Female**	100	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	Yes		**Normal Low - Child**	60	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	100	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	14,1	mg/dL	**Num of STD:**	1 Note 2				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.2) - 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

Mix 4 volumes of R1 (buffer) with 1 volume of R2 (substrate). The stability of the working reagent is 24 hours at 15 - 25 °C or 14 days at 2 - 8 °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 blank absorbance at 340 nm < 1,00, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,00 mL Working reagent (R1 + R2)
For Sample/(Calibrator) Note 2	100 µL Sample/(Calibrator) + 1,00 mL Working reagent (R1 + R2)

Prepare, mix and measure **one sample at a time.** Aspirate the mixture in the instrument, **immediately** after addition of the working reagent to the sample/(calibrator). Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	GOT		**Linearity Max:**	260	U/L	**STD variable:**	No	
Prog. ID:	15		**Fit:**	95		**Standard Conc.:**	0,0000	
Prog. Version:	2		**Direction:**	Down		**Calibration repeats:**	0	
Method ID:	17		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	GOT (ast)		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	3,1	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	38	U/L
Decimals:	3		**Blank Low:**	1,000 Note 1		**Normal Low - Female**	3,1	U/L
Aspiration Volume:	0800	µL	**Blank High:**	3,500 Note 1		**Normal High - Female**	38	U/L
Delay Time:	060	s	**Blank Mandatory:**	No		**Normal Low - Child**	3,1	U/L
Test Time:	090	s	**Factor:**	-1750 Note 2		**Normal High - Child**	31	U/L
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	3,12	U/L	**Num of STD:**	0				

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, dilute the sample 1:5 with saline solution, repeat the determination, and multiply the result by factor 5.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (4.0) - Replaces all previous versions

GPT (ALT)

NADH. UV. Kinetic. According to IFCC

REF	HBEL020
VOL	1 x 240 + 1 x 60 mL

REAGENT PREPARATION AND STABILITY

Mix 4 volumes of R1 (Buffer) with 1 volume of R2 (Substrate). The stability of the working reagent is 24 hours at 15-25 °C or 4 weeks at 2-8 °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 blank absorbance at 340 nm < 1,00, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank Note 1	1,00 mL Working reagent (R1 + R2)
For Sample/(Calibrator) Note 2	100 µL Sample/(Calibrator) + 1,00 mL Working reagent (R1 + R2)

Prepare, mix and measure **one sample at a time**. Aspirate the mixture in the instrument, **immediately** after addition of the working reagent to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	GPT		**Linearity Max:**	260	U/L	**STD variable:**	No	
Prog. ID:	16		**Fit:**	95		**Standard Conc.:**	0,0000	
Prog. Version:	2		**Direction:**	Down		**Calibration repeats:**	0	
Method ID:	18		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	GPT (alt)		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	3	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	40	U/L
Decimals:	3		**Blank Low:**	1,000 Note 1		**Normal Low - Female**	3	U/L
Aspiration Volume:	0800	µL	**Blank High:**	3,500 Note 1		**Normal High - Female**	32	U/L
Delay Time:	060	s	**Blank Mandatory:**	No		**Normal Low - Child**	3	U/L
Test Time:	090	s	**Factor:**	-1750 Note 2		**Normal High - Child**	32	U/L
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	3	U/L	**Num of STD:**	0				

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, dilute the sample 1:5 with saline solution, repeat the determination, and multiply the result by factor 5.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (4.0) - Replaces all previous versions

HbA1c Turbi

Turbidimetric

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.
Reagent 1 and 2 are stable for at least one month after opening when stored at 2 - 8 °C. 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 set (HT001S).** Program the values mentioned on the vials in the method programming. Use saline solution (9 g/L NaCl) or distilled water as STD 1, with value 0,001.[Note 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. **HbA1c Control (HT001C) is available.** [Note 3]
The control values can be found on the label of the control vial. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The controls require pretreatment (hemolysate preparation) after being reconstituted. 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.

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.
To determine HbA1c, a hemolysate must be prepared for each sample as well as for the HbA1c Calibrator (Level 1 to 4) and HbA1c Control:
1. Dispense 1 mL of Reagent 3 into labelled test tubes (glass or plastic). Also provide test tubes for the calibrator and control.
2. Add 20 µL of well mixed whole blood (sample, calibrator, control) in the appropriate labelled test tube. Mix.
3. Allow to stand for 5 minutes or until complete lysis is evident. Hemolysates may be stored up to 10 days at 2 - 8 °C.

PROCEDURE

Make sure the reagents and samples are at room temperature. Mix reagents gently and pipette into a test tube:

For Blank	540 µL Reagent 1
For Calibrators/Sample	15 µL Calibrator/Sample (hemolyzed) + 540 µL Reagent 1
Mix and incubate for **exactly 5 minutes at 37** °C. Then add:	
For Blank	180 µL Reagent 2
For Calibrators/Sample	180 µL Reagent 2
Mix and incubate for **exactly 5 minutes at 37** °C. Then aspirate to measure.	

You can prepare several samples simultaneously, as long as you respect the incubation times indicated.

PROGRAM SETUP

Prog. Name:	HbA1c		**Fit:**	0		**Standard Conc. 2:**	(=CAL1)[Note 2]	%
Prog. ID:	17		**Direction:**	Not applicable		**Standard Conc. 3:**	(=CAL2)[Note 2]	%
Prog. Version:	3		**Working reagent:**	No		**Standard Conc. 4:**	(=CAL3)[Note 2]	%
Method ID:	20		**Blank Type:**	Reagent		**Standard Conc. 5:**	(=CAL4)[Note 2]	%
Method Name:	HbA1c		**Sample Blank:**	No		**Calibration repeats:**	0	
Method Type:	End Point		**VCF:**	1		**CAL CV%:**	0	
Main Filter:	670	nm	**Blank substraction:**	Yes		**Temp flowcell:**	37	°C
Sub Filter:	None		**Num of Blank:**	1		**Calib. Mandatory:**	No	
Bichromatic Factor:	0		**Blank CV%:**	0		**Control Mandatory:**	No	
Prog. Unit:	%		**Blank Low:**	0,000[Note 1]		**SampleTypeRefValue:**	Blood	
Decimals:	3		**Blank High:**	2,000[Note 1]		**Normal Low - Male**	2	%
Aspiration Volume:	0500	µL	**Blank Mandatory:**	No		**Normal High - Male**	6	%
Delay Time:	001	s	**Factor:**	0		**Normal Low - Female**	2	%
Test Time:	003	s	**Calib. By factor:**	No		**Normal High - Female**	6	%
Dilution factor:	1		**Num of STD:**	5[Note 2]		**Normal Low - Child**	2	%
Linearity Min:	2,0	%	**STD variable:**	Yes[Note 2]		**Normal High - Child**	6	%
Linearity Max:	16,0	%	**Standard Conc. 1:**	0,0010[Note 2]	%	**Method order:**	0	

MEASURING RANGE

This method is linear from 2,0 % (detection limit) to 16,0 % (linearity limit).

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Enter the concentration values shown on the calibrator vials. STD1 corresponds with a saline solution of 9 g/L or distilled water, STD 2 corresponds to calibrator 1; STD 3 to calibrator 2; STD 4 to calibrator 3 and STD 5 to calibrator 4.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

HDL Cholesterol

REF	**HBL011**
VOL	120 + 40 mL

Enzymatic. Colorimetric
Calibration with HBC11

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. Note 1

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. Use the **HDL/LDL Control kit (HBC10).** Note 4 Prepare and measure these controls the same as samples. 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 or plasma (EDTA, citrate, Li Heparin). Fasting and non-fasting samples can be used.

PROCEDURE Note 2,3

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank	10 µL Distilled water + 750 µL R1
For Reagent	10 µL Distilled water + 750 µL R1
For Sample/Calibrator Blank	10 µL Sample/Calibrator + 750 µL R1
For Sample/Calibrator	10 µL Sample/Calibrator + 750 µL R1
Mix and incubate for **exactly 5 minutes at 37 °C.** Then add:	
For Reagent Blank	-
For Reagent	250 µL R2
For Sample/Calibrator Blank	-
For Sample/Calibrator	250 µL R2
Mix and incubate for **exactly 5 minutes at 37 °**C. Then aspirate to measure.	

Thus, for every sample, you need to prepare 2 test tubes: one for the Calibrator/Sample Blank, to measure the background coloration caused by the sample, and one for the Calibrator/Sample to measure the coloration caused by the reaction. After mixing Calibrator/Sample and R1, incubate at 37 °C for exactly 5 minutes. Then add R2 only to the Calibrator/Sample tube, mix and incubate for another 5 minutes at 37 °C. Then aspirate the mixtures in the analyser to measure exactly 10 minutes after adding R1. You can prepare several samples simultaneously, as long as you respect the incubation times indicated. **Use the illustrations on the next page for guidance to perform this test in a time-efficient way.**

PROGRAM SETUP

Prog. Name:	HDL		**Linearity Max:**	184,8	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	18		**Fit:**	0		**Standard Conc.:**	Value: see vial Note 2	
Prog. Version:	2		**Direction:**	Not applicable		**Calibration repeats:**	2	
Method ID:	9		**Working reagent:**	No		**CAL CV%:**	10%	
Method Name:	Cholesterol HDL		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	Yes Note 3		**Calib. Mandatory:**	No	
Main Filter:	578	nm	**VCF:**	0,75		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	59	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	70	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	59	mg/dL
Aspiration Volume:	0550	µL	**Blank High:**	1,000 Note 1		**Normal High - Female**	89	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	59	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	81	mg/dL
Dilution factor:	1		**Calib. By factor:**	No Note 2		**Method order:**	0	
Linearity Min:	1,06	mg/dL	**Num of STD:**	1 Note 2				

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, dilute the sample 1:2 with NaCl 9 g/L, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Use the HDL/LDL calibrator **(HBC11)** for calibration. Enter the concentration values shown on the calibrator vials (**HBC11**).
3. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank"**
     b. Secondly: Aspirate "**Reagent"**
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
4. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

HDL Cholesterol

REF	HBL011
VOL	120 + 40 mL

Enzymatic. Colorimetric
Calibration with HBC12

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. [Note 1]

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.
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. [Note 4] Prepare and measure these controls the same as samples. 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 or plasma (EDTA, citrate, Li Heparin). Fasting and non-fasting samples can be used.

PROCEDURE [Note 2,3]

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank	10 µL Distilled water + 750 µL R1
For Reagent	10 µL Distilled water + 750 µL R1
For Sample/Calibrator Blank	10 µL Sample/Calibrator + 750 µL R1
For Sample/Calibrator	10 µL Sample/Calibrator + 750 µL R1
Mix and incubate for **exactly 5 minutes at 37 °C.** Then add:	
For Reagent Blank	-
For Reagent	250 µL R2
For Sample/Calibrator Blank	-
For Sample/Calibrator	250 µL R2
Mix and incubate for **exactly 5 minutes at 37 °**C. Then aspirate to measure.	

Thus, for every sample, you need to prepare 2 test tubes: one for the Calibrator/Sample Blank, to measure the background coloration caused by the sample, and one for the Calibrator/Sample to measure the coloration caused by the reaction. After mixing Calibrator/Sample and R1, incubate at 37 °C for exactly 5 minutes. Then add R2 only to the Calibrator/Sample tube, mix and incubate for another 5 minutes at 37 °C. Then aspirate the mixtures in the analyser to measure exactly 10 minutes after adding R1. You can prepare several samples simultaneously, as long as you respect the incubation times indicated. **Use the illustrations on the next page for guidance to perform this test in a time-efficient way.**

PROGRAM SETUP

Prog. Name:	HDLc		**Linearity Max:**	184,8	mg/dL	**STD variable:**	Yes[Note 2]	
Prog. ID:	34		**Fit:**	0		**Standard Conc. 1:**	value: see insert[Note 2]	
Prog. Version:	2		**Direction:**	Not applicable		**Standard Conc. 2:**	value: see insert[Note 2]	
Method ID:	33		**Working reagent:**	No		**Calibration repeats:**	2	
Method Name:	Cholesterol HDLc		**Blank Type:**	Reagent		**CAL CV%:**	10%	
Method Type:	End Point		**Sample Blank:**	Yes[Note 3]		**Temp flowcell:**	37	°C
Main Filter:	578	nm	**VCF:**	0,75		**Calib. Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**Control Mandatory:**	No	
Bichromatic Factor:	0		**Num of Blank:**	1		**SampleTypeRefValue:**	Serum	
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal Low - Male**	59	mg/dL
Decimals:	3		**Blank Low:**	-0,010[Note 1]		**Normal High - Male**	70	mg/dL
Aspiration Volume:	0550	µL	**Blank High:**	1,000[Note 1]		**Normal Low - Female**	59	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal High - Female**	89	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal Low - Child**	59	mg/dL
Dilution factor:	1		**Calib. By factor:**	No[Note 2]		**Normal High - Child**	81	mg/dL
Linearity Min:	1,06	mg/dL	**Num of STD:**	2[Note 2]		**Method order:**	0	

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, dilute the sample 1:2 with NaCl 9 g/L, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Use **HDLc/LDLc Calibrator (HBC12)** for calibration. Enter the concentration values as mentioned on the value sheets provided with **HBC12**.
3. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank"**
     b. Secondly: Aspirate "**Reagent"**
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
4. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

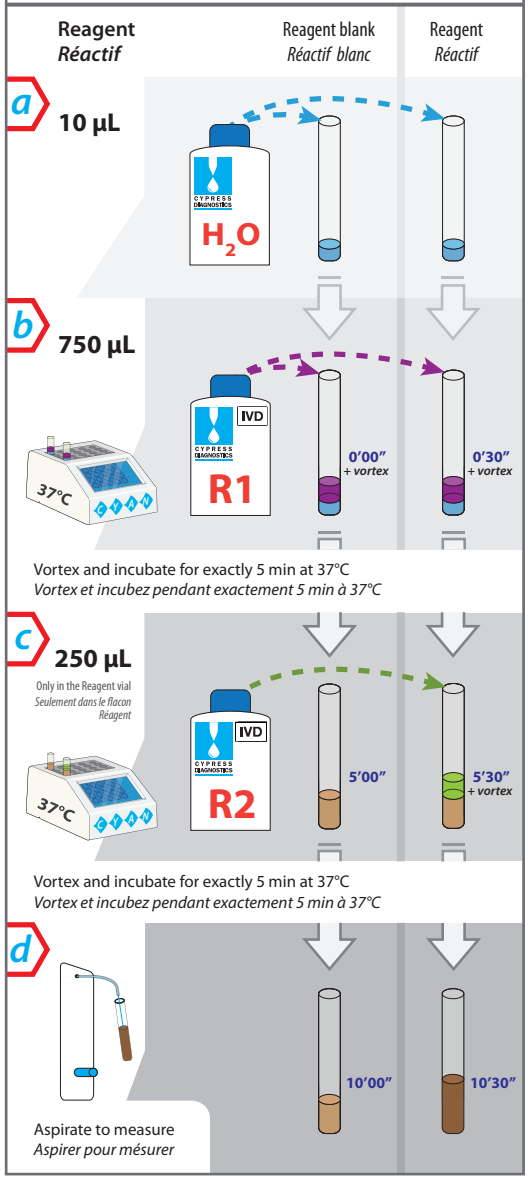
2026-03 (0.1) - Replaces all previous versions

HDL Cholesterol HBL011 - LDL Cholesterol HBL012

Application for **CYANVision**
*Application sur **CYANVision***

More information on patient samples, see the kit.
Plus d'informations sur les échantillons de patients, voir trousse.

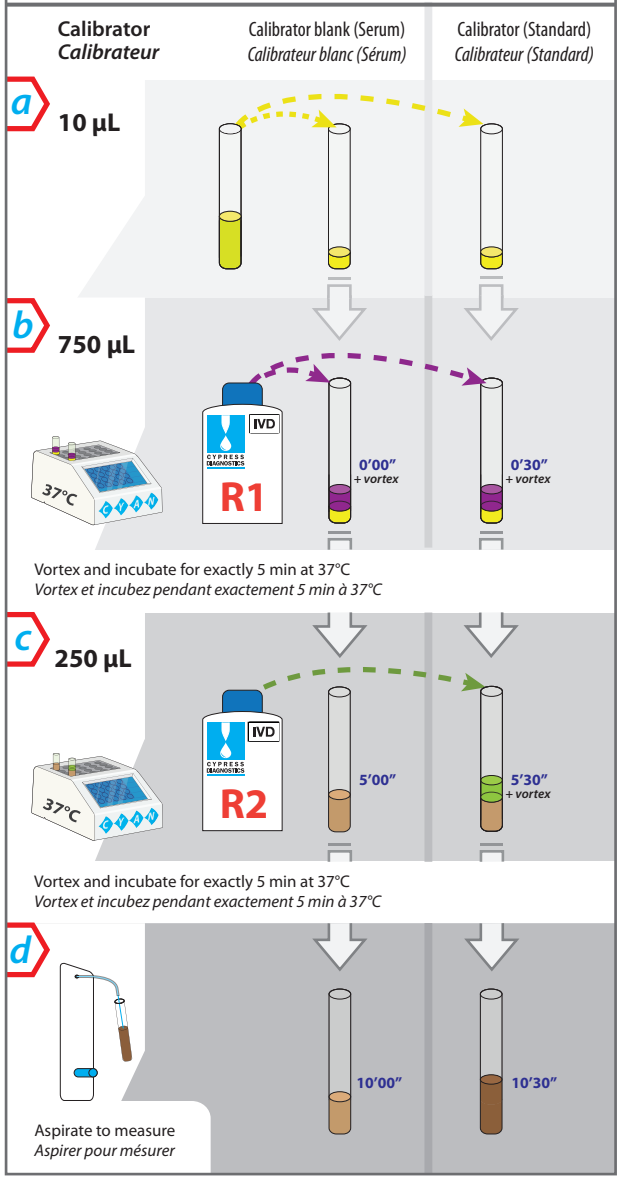
Step 1: Blank reagent / *Réactif blanc*



Step 2 : Calibration - Étalonnage

Method HDL or LDL - use CAL HBC11*1
Méthode HDL ou LDL - utiliser CAL HBC11*1
Prepare and measure | *Préparer et mesurez*

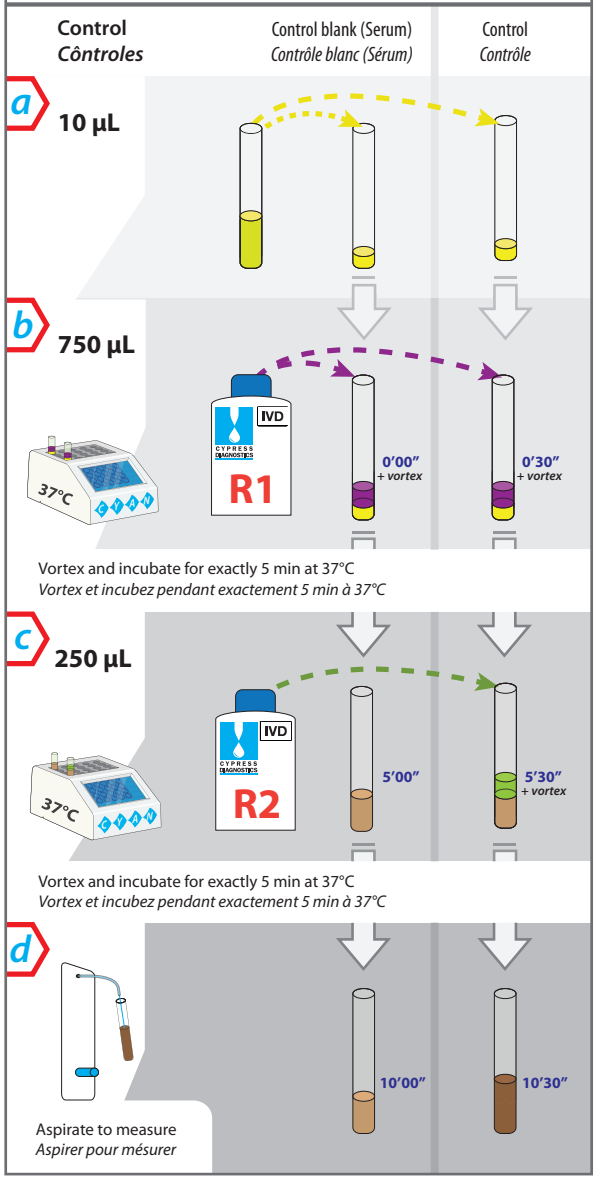
Method HDLc or LDLc - use CAL HBC12*2
Méthode HDLc ou LDLc - utiliser le CAL HBC12*2
Prepare and measure CAL1. Then do the same for CAL2
Préparez et mesurez le CAL1 Faites de même pour CAL2



Step 3: Quality Control - Contrôles de Qualité

Method HDL or LDL - use control HBC10*1
Méthode HDL ou LDL - utiliser le contrôle HBC10*1
Prepare and measure | *Préparer et mesurez*

Method HDLc or LDLc - use control HBC01 and HBC02*2
Méthode HDLc ou LDLc - utiliser contrôles HBC01 et HBC02*2
Prepare and measure | *Préparer et mesurez*

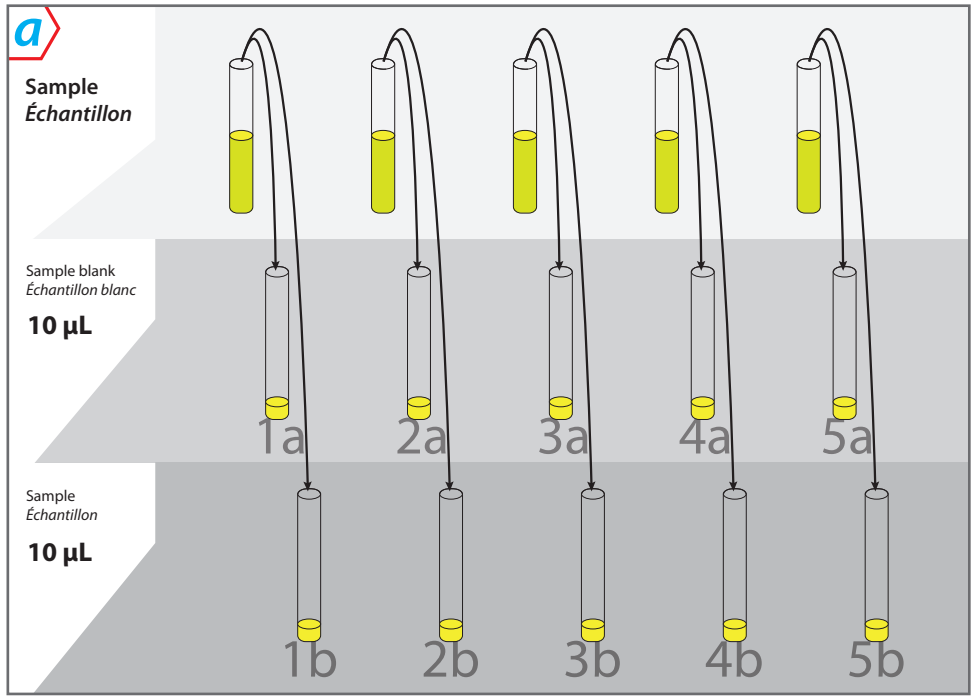


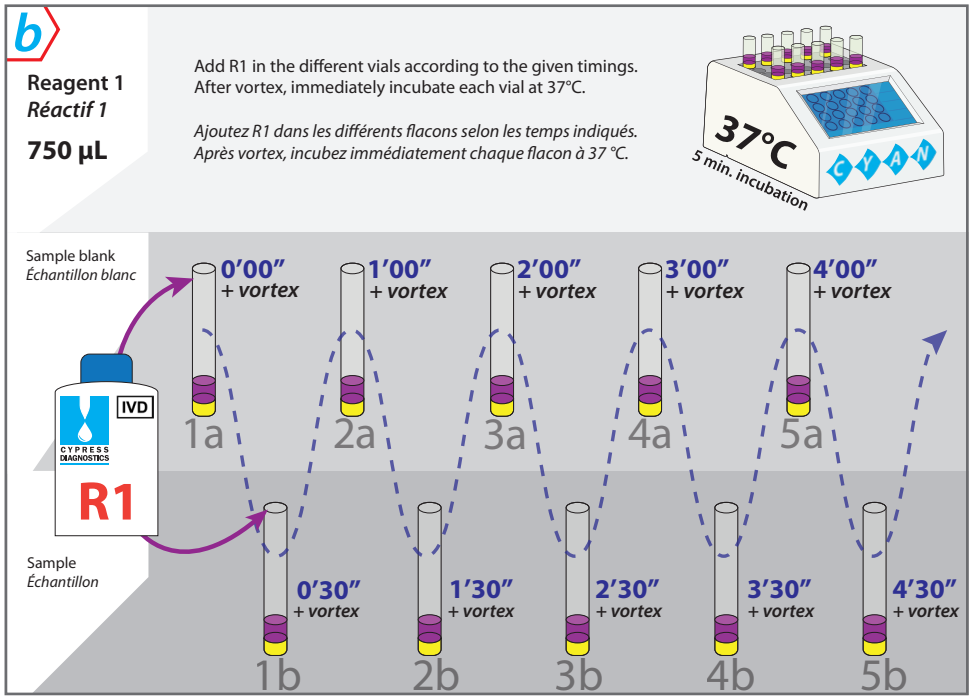
*1 HDL or LDL method: combine the 1-level 'HDL/LDL Calibrator' (HBC11) with the 'HDL/LDL control' kit HBC10 (level 1 & level 2) | *Méthode HDL ou LDL : combiner le « Calibrateur HDL/LDL » (HBC11) de niveau 1 avec le kit « Contrôle HDL/LDL » HBC10 (niveaux 1 et 2)*

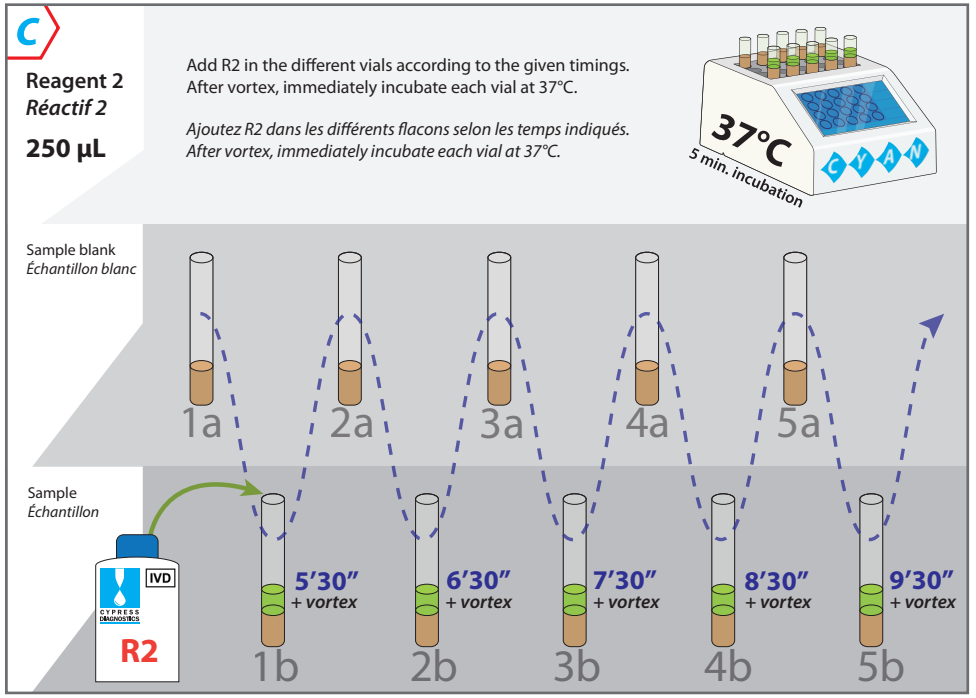
*2 HDLc or LDLc method: combine the bi-level 'HDLc/LDLc Calibrator' (HBC12) with the 'Normal and Patholgical controls' (HBC01 and HBC02) | *Méthode HDLc ou LDLc : combiner le « Calibrateur HDLc/LDLc » à deux niveaux (HBC12) avec les « Contrôles normaux et pathologiques » (HBC01 et HBC02)*

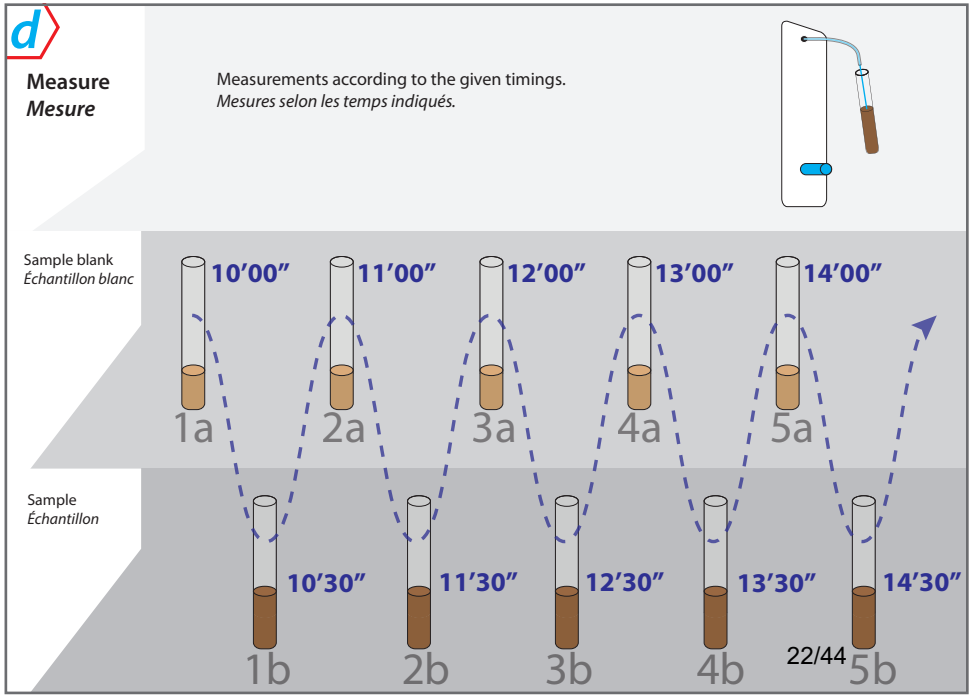
Application on **CYANVision | CYANSmart** - For QC & Calibrators, apply the same principle. More information with a scheme is given in the application sheet.

Application sur **CYANVision | CYANSmart** - *Pour le contrôle de qualité et la calibration, appliquez le même principe. Vous trouverez plus d'informations et un schéma dans la fiche d'application.*









NEW REAGENT
NEW METHOD

CYPRESS DIAGNOSTICS

CY014 CYANVision

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. Note 1

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.
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).** Note 4 Prepare and measure these controls the same as samples. 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.

PROCEDURE Note 2,3

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank	30 µL Distilled water + 750 µL R1
For Reagent	30 µL Distilled water + 750 µL R1
For Sample/Calibrator Blank	30 µL Sample/Calibrator + 750 µL R1
For Sample/Calibrator	30 µL Sample/Calibrator + 750 µL R1
Mix and incubate for **exactly 5 minutes at 37 °C.** Then add:	
For Reagent Blank	-
For Reagent	250 µL R2
For Sample/Calibrator Blank	-
For Sample/Calibrator	250 µL R2
Mix and incubate for **exactly 5 minutes at 37 °**C. Then aspirate to measure.	

Thus, for every sample, you need to prepare 2 test tubes: one for the Sample/Calibrator Blank, to measure the background coloration caused by the sample, and one for the Sample/Calibrator to measure the coloration caused by the reaction**.** After mixing Sample/Calibrator and R1, incubate at 37 °C for exactly 5 minutes. Then add R2 only to the Sample/Calibrator tube, mix and incubate for another 5 minutes at 37 °C. Then aspirate the mixtures in the analyser to measure exactly 10 minutes after adding R1. **You can prepare several samples simultaneously, as long as you respect the incubation times indicated. Use the illustrations on the next page for guidance to perform this test in a time-efficient way.**

PROGRAM SETUP

Prog. Name:	HDLn		**Linearity Max:**	118	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	36		**Fit:**	0		**Standard Conc. 1:**	Value: see insert Note 2	
Prog. Version:	1		**Direction:**	Not applicable		**Standard Conc. 2:**	Value: see insert Note 2	
Method ID:	35		**Working reagent:**	No		**Calibration repeats:**	2	
Method Name:	Cholesterol HDLn		**Blank Type:**	Reagent		**CAL CV%:**	10	
Method Type:	End point		**Sample Blank:**	Yes Note 3		**Temp flowcell:**	37	°C
Main Filter:	546	nm	**VCF:**	0.75		**Calib. Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**Control Mandatory:**	No	
Bichromatic Factor:	0		**Num of Blank:**	1		**SampleTypeRefValue:**	Serum	
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal Low - Male**	59	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal High - Male**	70	mg/dL
Aspiration Volume:	550	µL	**Blank High:**	1,000 Note 1		**Normal Low - Female**	59	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal High - Female**	89	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal Low - Child**	59	mg/dL
Dilution factor:	1		**Calib. By factor:**	No Note 2		**Normal High - Child**	81	mg/dL
Linearity Min:	25,3	mg/dL	**Num of STD:**	2 Note 2		**Method order:**	0	

MEASURING RANGE

This method is linear from 25.3 mg/dL (limit of quantitation) to 118 mg/dL (linearity limit). If the obtained results are greater than 118 mg/dL, dilute the sample 1:2 with NaCl 9 g/L, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. 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.
3. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank"**
     b. Secondly: Aspirate "**Reagent"**
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate **Standard/**Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
4. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

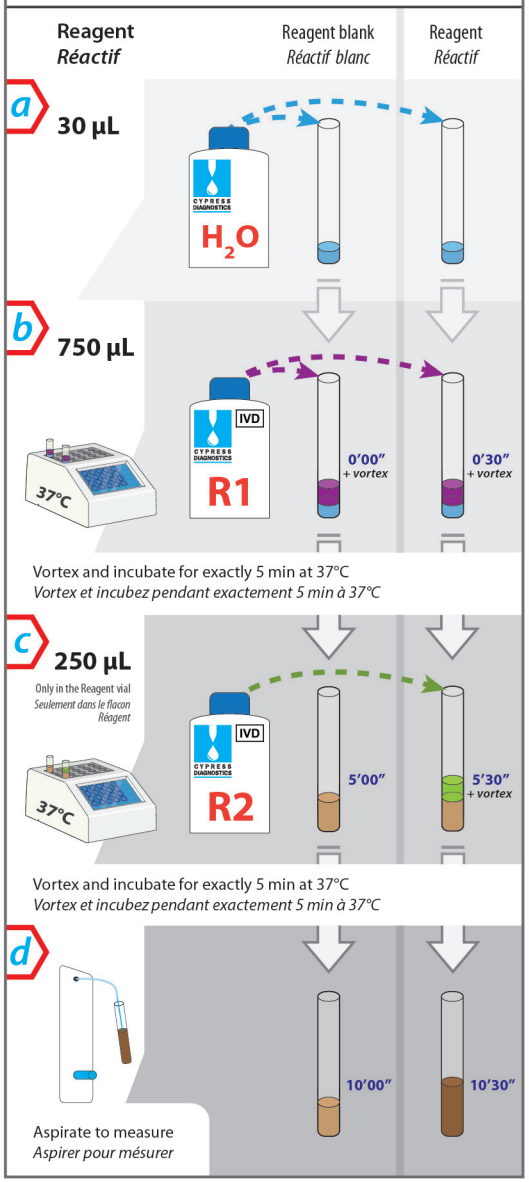
2026-03 (0.0)

HDL Cholesterol HBL0110

Application for **CYANVision** HDLn
More information on patient samples with a scheme is given in the kit.

*Application sur **CYANVision** HDLn*
Vous trouverez plus d'informations sur les échantillons de patients et un schéma dans le kit.

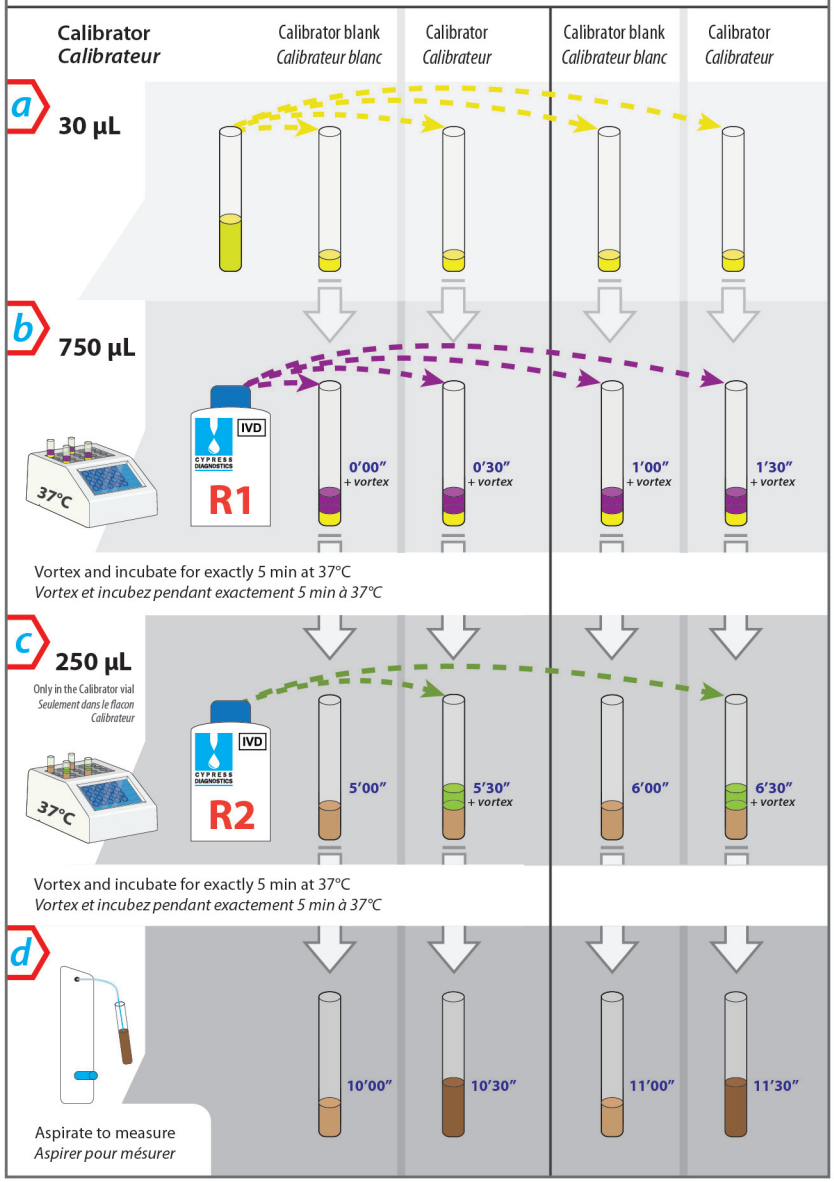
Step 1: Blank reagent / *Réactif blanc*



Step 2 : Calibration - Étalonnage (HBC12)

Prepare and measure CAL1 two times (= REP 1 + REP 2)
Then do the same for CAL2

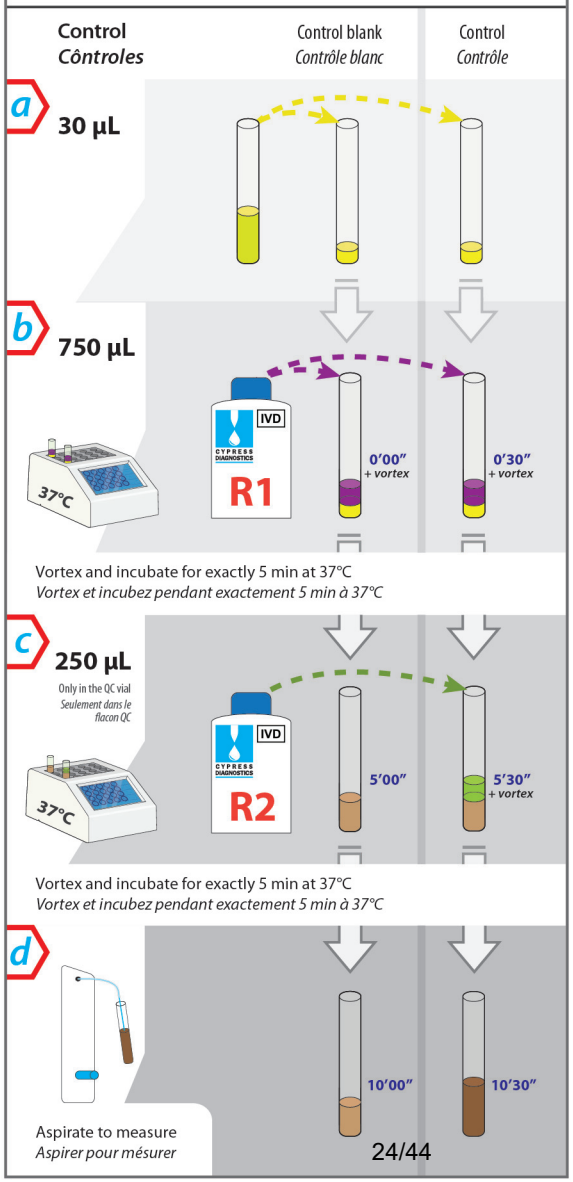
Préparer et mesurez le CAL 1 deux fois (=REP 1 + REP 2)
Faites de même pour CAL 2



Step 3: Quality Control - Cônroles de Qualité

Prepare and measure Normal Control (HBC01)
Then do the same for Pathological control (HBC02)

Préparez et mesurez la Contôle Normal (HBC01)
Faites de même pour le Côntrole Pathologique (HBC02)



Application on **CYANVision** - For QC & Calibrators, apply the same principle. More information with a scheme is given in the application sheet.

Application sur ***CYANVision*** *- Pour le contrôle de qualité et la calibration, appliquez le même principe. Vous trouverez plus d'informations et un schéma dans la fiche d'application.*

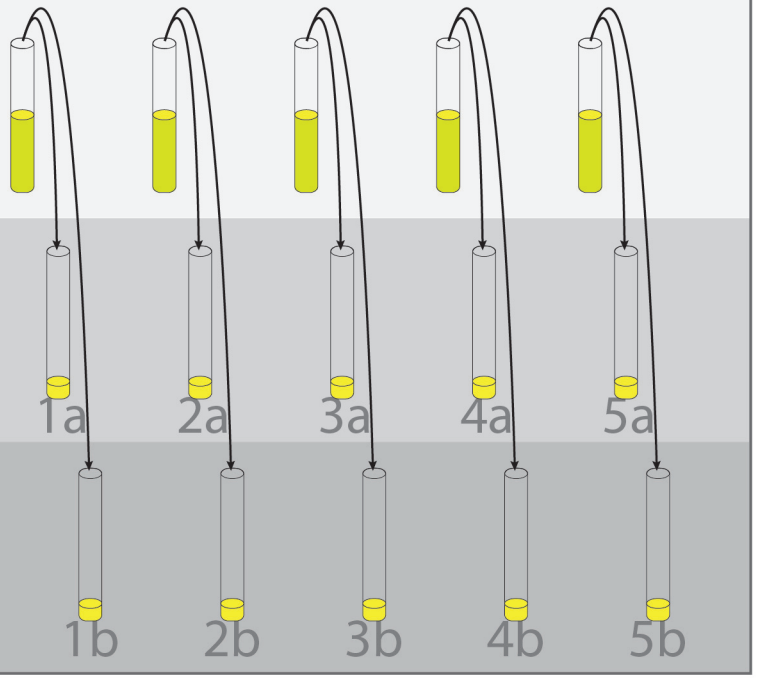
HDL Cholesterol HBL0110

a

Sample
Échantillon

Sample blank
Échantillon blanc
30 µL

Sample
Échantillon
30 µL

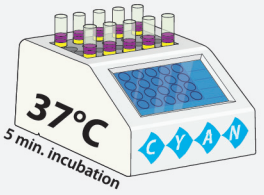


b

Reagent 1
Réactif 1
750 µL

Add R1 in the different vials according to the given timings.
After vortex, immediately incubate each vial at 37°C.

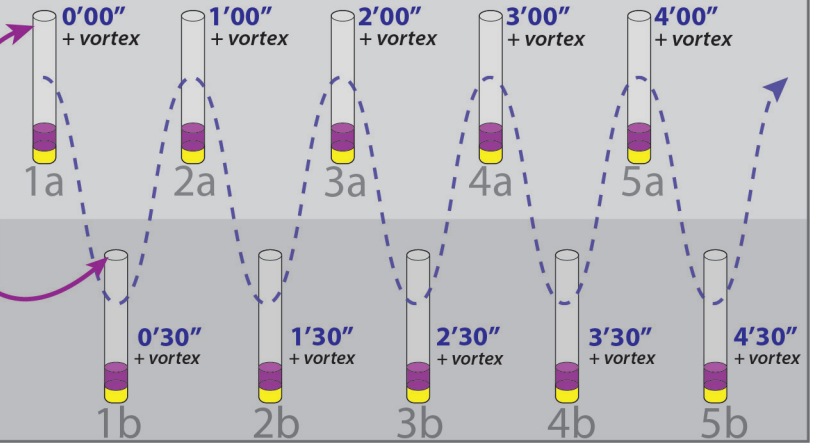
Ajoutez R1 dans les différents flacons selon les temps indiqués.
Après vortex, incubez immédiatement chaque flacon à 37 °C.



Sample blank
Échantillon blanc



Sample
Échantillon

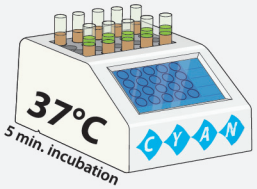


c

Reagent 2
Réactif 2
250 µL

Add R2 in the different vials according to the given timings.
After vortex, immediately incubate each vial at 37°C.

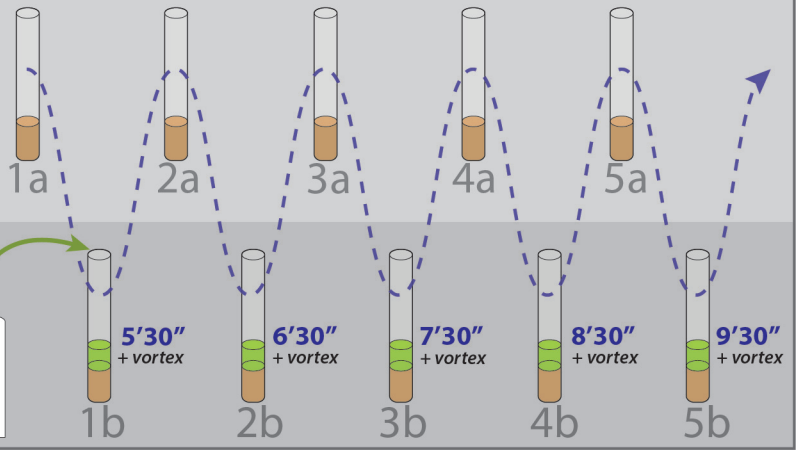
Ajoutez R2 dans les différents flacons selon les temps indiqués.
After vortex, immediately incubate each vial at 37°C.



Sample blank
Échantillon blanc

Sample
Échantillon

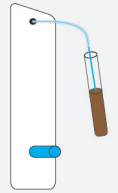




d

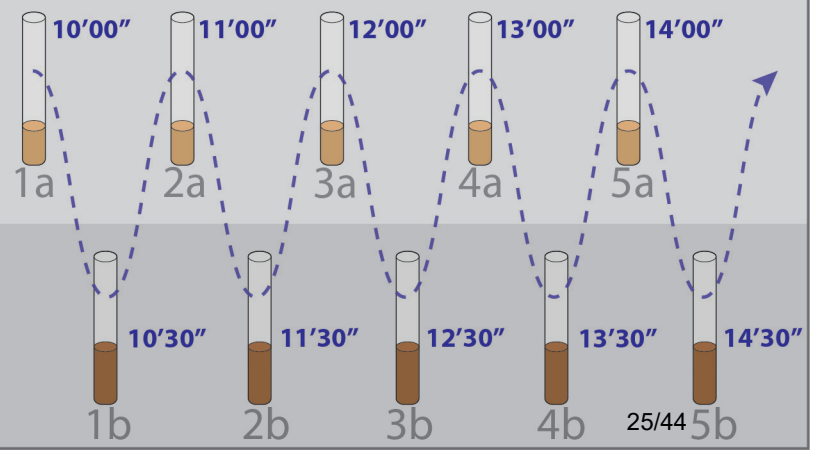
Measure
Mesure

Measurements according to the given timings.
Mesures selon les temps indiqués.



Sample blank
Échantillon blanc

Sample
Échantillon



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 diluted reagent (working reagent) is stable 2 months at 2-8 °C, protected from sunlight.

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 540 nm ≥ 0,01, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Use the **Hemoglobin Calibrator (HBS02)**. Note 2
Hemoglobin Calibrator **(HBS02)** is ready to use. Hemoglobin Calibrator **(HBS02)** is stable at 2-8 °C up to the date of expiration as specified, when stored tightly closed, protected from light and contaminations, prevented during its use.

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. Measure at least one replicate per control. 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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	2,5 mL Working Reagent
For Calibrator	10 µL Calibrator + 2,5 mL Working Reagent
For Sample	10 µL Sample + 2,5 mL Working Reagent

Mix and incubate for 3 minutes at 15-25 °C. Then aspirate to measure. You can prepare several samples simultaneously, as long as you respect the incubation times indicated.

PROGRAM SETUP

Prog. Name:	HGB		**Linearity Max:**	20	g/dL	**STD variable:**	No Note 2	
Prog. ID:	19		**Fit:**	0		**Standard Conc.:**	15,0000 Note 2	
Prog. Version:	2		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	19		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Haemoglobin		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	546	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Blood	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	14	g/dL
Prog. Unit:	g/dL		**Blank CV%:**	0		**Normal High - Male**	18	g/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	12	g/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,010 Note 1		**Normal High - Female**	16	g/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	12	g/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	16	g/dL
Dilution factor:	1		**Calib. By factor:**	No Note 2		**Method order:**	0	
Linearity Min:	0,1	g/dL	**Num of STD:**	1 Note 2				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Use the **Hemoglobin Calibrator (HBS02).** Enter the concentration value shown on the calibrator vial.

2026-03 (1.1) - Replaces all previous versions

Iron

Ferrozine. Colorimetric

REF	HB012
VOL	4 x 50 mL
Standard	1 x 10 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. Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if the reagent blank absorbance at 562 nm ≥ 0,020, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls (**HBC01, HBC02**). Note 3

Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials. 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 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.

PROCEDURE Note 2,4

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank	200 µL Distilled water + 1 mL Working reagent
For Reagent	200 µL Distilled water + 1 mL Working reagent + 1 drop R3
For Standard Blank	200 µL Standard + 1 mL Working reagent
For Sample Blank	200 µL Sample + 1 mL Working reagent
For Standard	200 µL Standard + 1 mL Working reagent + 1 drop R3
For Sample	200 µL Sample + 1 mL Working reagent + 1 drop R3

Mix and incubate for 10 minutes at 15-25 °C. After the incubation time, aspirate and measure all the samples within 30 min after preparation.

Thus, **for every sample, you need to prepare 2 test tubes:** one for measuring the sample blank (background coloration) and one for measuring the real sample coloration.

PROGRAM SETUP

Prog. Name:	IRON		**Linearity Max:**	1000	µg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	20		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	21		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Iron		**Blank Type:**	Reagent Note 4		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	Yes Note 4		**Calib. Mandatory:**	No	
Main Filter:	578	nm	**VCF:**	0,96		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	65	µg/dL
Prog. Unit:	µg/dL		**Blank CV%:**	0		**Normal High - Male**	175	µg/dL
Decimals:	3		**Blank Low:**	-0,020 Note 1		**Normal Low - Female**	40	µg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,020 Note 1		**Normal High - Female**	150	µg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	40	µg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	150	µg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	3	
Linearity Min:	0,85	µg/dL	**Num of STD:**	1				

MEASURING RANGE

This method is linear from 0,85 µg/dL (detection limit) to 1000 µg/dL (linearity limit). If the obtained results are greater than 1000 µg/dL, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.
4. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank**"
     b. Secondly: Aspirate "**Reagent**"
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample

2026-03 (3.1) - Replaces all previous versions

Lactate Dehydrogenase

Pyruvate DGKC. UV. Kinetic.

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

REAGENT PREPARATION AND STABILITY

Mix 4 volumes of R1 (buffer) with 1 volume of R2 (substrate). The stability of working reagent is 15 days at 2-8 °C or 5 days 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 blank absorbance at 340 nm < 1,00, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

Calibration by means of a Factor. Preprogrammed factors can only be used when quality controls are within the defined ranges. Otherwise, use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**.Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.

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.

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.

PROCEDURE Note 2

Make sure the reagents and samples are at room temperature.

Then, pipette into a test tube:

For Blank	0,9 mL Working reagent (R1 + R2)
For Sample/(Calibrator)	15 µL Sample/(Calibrator) + 0,9 mL Working reagent (R1 + R2)

Prepare, mix and measure one sample at a time. Aspirate the mixture in the instrument, immediately after addition of the working solution to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample

PROGRAM SETUP

Prog. Name:	LDH		**Linearity Max:**	1600	U/L	**STD variable:**	No Note 2	
Prog. ID:	21		**Fit:**	95		**Standard Conc.:**	0,0000 Note 2	
Prog. Version:	2		**Direction:**	Down		**Calibration repeats:**	0	
Method ID:	22		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	LDH		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	230	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	460	U/L
Decimals:	3		**Blank Low:**	1,000 Note 1		**Normal Low - Female**	230	U/L
Aspiration Volume:	0700	µL	**Blank High:**	3,500 Note 1		**Normal High - Female**	460	U/L
Delay Time:	060	s	**Blank Mandatory:**	No		**Normal Low - Child**	230	U/L
Test Time:	090	s	**Factor:**	-9690 Note 2		**Normal High - Child**	460	U/L
Dilution factor:	1		**Calib. By factor:**	Yes Note 2		**Method order:**	0	
Linearity Min:	3,42	U/L	**Num of STD:**	0 Note 2				

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, dilute the sample 1:10 with saline solution, repeat the determination, and multiply the result by factor 10.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.1) - Replaces all previous versions

CYPRESS DIAGNOSTICS

CY014 CYANVision

Application sheet

LDL Cholesterol

Enzymatic. Colorimetric.

Calibration with HBC11

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. Note 1

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. Use the **HDL/LDL Control kit (HBC10).** Note 4 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the label of the control vial (HBC10). 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 or plasma (EDTA, citrate). Fasting and non-fasting samples can be used. Do not use plasma containing heparin as anticoagulant.

PROCEDURE Note 2,3

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank	10 µL Distilled water + 750 µL R1
For Reagent	10 µL Distilled water + 750 µL R1
For Sample/Calibrator Blank	10 µL Sample/Calibrator + 750 µL R1
For Sample/Calibrator	10 µL Sample/Calibrator + 750 µL R1
Mix and incubate for **exactly 5 minutes at 37 °C.** Then add:	
For Reagent Blank	-
For Reagent	250 µL R2
For Sample/Calibrator Blank	-
For Sample/Calibrator	250 µL R2
Mix and incubate for **exactly 5 minutes at 37 °**C. Then aspirate to measure.	

Thus for every sample, you need to prepare 2 test tubes: one for the Calibrator/Sample Blank, to measure the background coloration caused by the sample, and one for the Calibrator/Sample to measure the coloration caused by the reaction. After mixing Calibrator/Sample and R1, incubate at 37 °C for exactly 5 minutes. Then add R2 only to the Calibrator/Sample tube, mix and incubate for another 5 minutes at 37 °C. Then aspirate the mixtures in the analyser to measure exactly 10 minutes after adding R1. You can prepare several samples simultaneously as long as you respect the times mentioned. Use the **illustrations on the next page for guidance to perform this test in a time-efficient way.**

PROGRAM SETUP

Prog. Name:	LDL		**Linearity Max:**	250	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	22		**Fit:**	0		**Standard Conc.:**	Value: see vial Note 2	
Prog. Version:	2		**Direction:**	Not applicable		**Calibration repeats:**	2	
Method ID:	10		**Working reagent:**	No		**CAL CV%:**	10%	
Method Name:	Cholesterol LDL		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	Yes Note 3		**Calib. Mandatory:**	No	
Main Filter:	578	nm	**VCF:**	0,75		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	50	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	100	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	62	mg/dL
Aspiration Volume:	0550	µL	**Blank High:**	1,000 Note 1		**Normal High - Female**	100	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	46	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	100	mg/dL
Dilution factor:	1		**Calib. By factor:**	No Note 2		**Method order:**	0	
Linearity Min:	1,64	mg/dL	**Num of STD:**	1 Note 2				

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, dilute the sample 1:2 with NaCl 9 g/L, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Use the HDL/LDL calibrator **(HBC11)** for calibration. Enter the concentration values shown on the calibrator vials (**HBC11**).
3. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank"**
     b. Secondly: Aspirate "**Reagent"**
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
4. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

LDL Cholesterol

Enzymatic. Colorimetric.
Calibration with HBC12

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. Note 1

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.
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. Note 4 Prepare and measure these controls the same as samples. 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 or plasma (EDTA, citrate). Fasting and non-fasting samples can be used. Do not use plasma containing heparin as anticoagulant.

PROCEDURE Note 2,3

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank	10 µL Distilled water + 750 µL R1
For Reagent	10 µL Distilled water + 750 µL R1
For Sample/Calibrator Blank	10 µL Sample/Calibrator + 750 µL R1
For Sample/Calibrator	10 µL Sample/Calibrator + 750 µL R1
Mix and incubate for **exactly 5 minutes at 37 °C.** Then add:	
For Reagent Blank	-
For Reagent	250 µL R2
For Sample/Calibrator Blank	-
For Sample/Calibrator	250 µL R2
Mix and incubate for **exactly 5 minutes at 37 °**C. Then aspirate to measure.	

Thus for every sample, you need to prepare 2 test tubes: one for the Calibrator/Sample Blank, to measure the background coloration caused by the sample, and one for the Calibrator/Sample to measure the coloration caused by the reaction. After mixing Calibrator/Sample and R1, incubate at 37 °C for exactly 5 minutes. Then add R2 only to the Calibrator/Sample tube, mix and incubate for another 5 minutes at 37 °C. Then aspirate the mixtures in the analyser to measure exactly 10 minutes after adding R1. You can prepare several samples simultaneously as long as you respect the times mentioned. Use the **illustrations on the next page for guidance to perform this test in a time-efficient way.**

PROGRAM SETUP

Prog. Name:	LDLc		**Linearity Max:**	250	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	35		**Fit:**	0		**Standard Conc. 1:**	value: see insert Note 2	
Prog. Version:	2		**Direction:**	Not applicable		**Standard Conc. 2:**	value: see insert Note 2	
Method ID:	34		**Working reagent:**	No		**Calibration repeats:**	2	
Method Name:	Cholesterol LDLc		**Blank Type:**	Reagent		**CAL CV%:**	10%	
Method Type:	End Point		**Sample Blank:**	Yes Note 3		**Temp flowcell:**	37	°C
Main Filter:	578	nm	**VCF:**	0,75		**Calib. Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**Control Mandatory:**	No	
Bichromatic Factor:	0		**Num of Blank:**	1		**SampleTypeRefValue:**	Serum	
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal Low - Male**	50	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal High - Male**	100	mg/dL
Aspiration Volume:	0550	µL	**Blank High:**	1,000 Note 1		**Normal Low - Female**	62	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal High - Female**	100	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal Low - Child**	46	mg/dL
Dilution factor:	1		**Calib. By factor:**	No Note 2		**Normal High - Child**	100	mg/dL
Linearity Min:	1,64	mg/dL	**Num of STD:**	2 Note 2		**Method order:**	0	

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, dilute the sample 1:2 with NaCl 9 g/L, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Use **HDLc/LDLc Calibrator (HBC12)** for calibration. Enter the concentration values as mentioned on the value sheets provided with **HBC12**.
3. This program requires a Sample Blank! Pay attention, this determines the calculation of the results, not the blank aspiration!
   - Aspirate distilled water to adjust the instrument to zero (AD value)
   - In the Blank menu,
     a. First: Aspirate "**Reagent Blank"**
     b. Secondly: Aspirate "**Reagent"**
     Reagent blank is required for each new reagent lot.
   - In the Standard/Sample menu,
     a. First: Aspirate Standard/Calibrator/Sample blank
     b. Secondly: Aspirate Standard/Calibrator/Sample
4. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

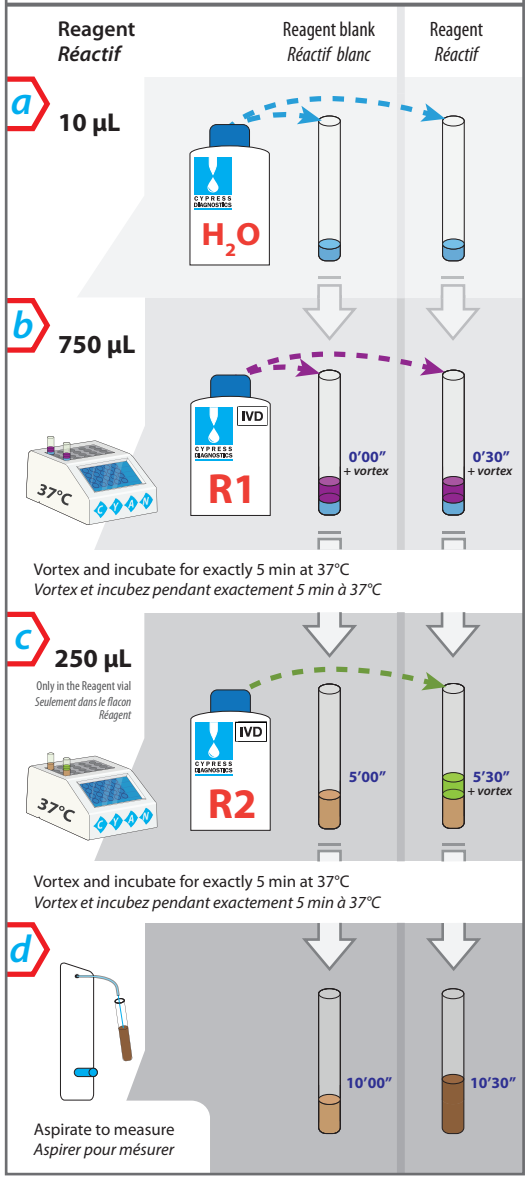
2026-03 (0.1) - Replaces all previous versions

HDL Cholesterol HBL011 - LDL Cholesterol HBL012

Application for **CYANVision**
*Application sur **CYANVision***

More information on patient samples, see the kit.
Plus d'informations sur les échantillons de patients, voir trousse.

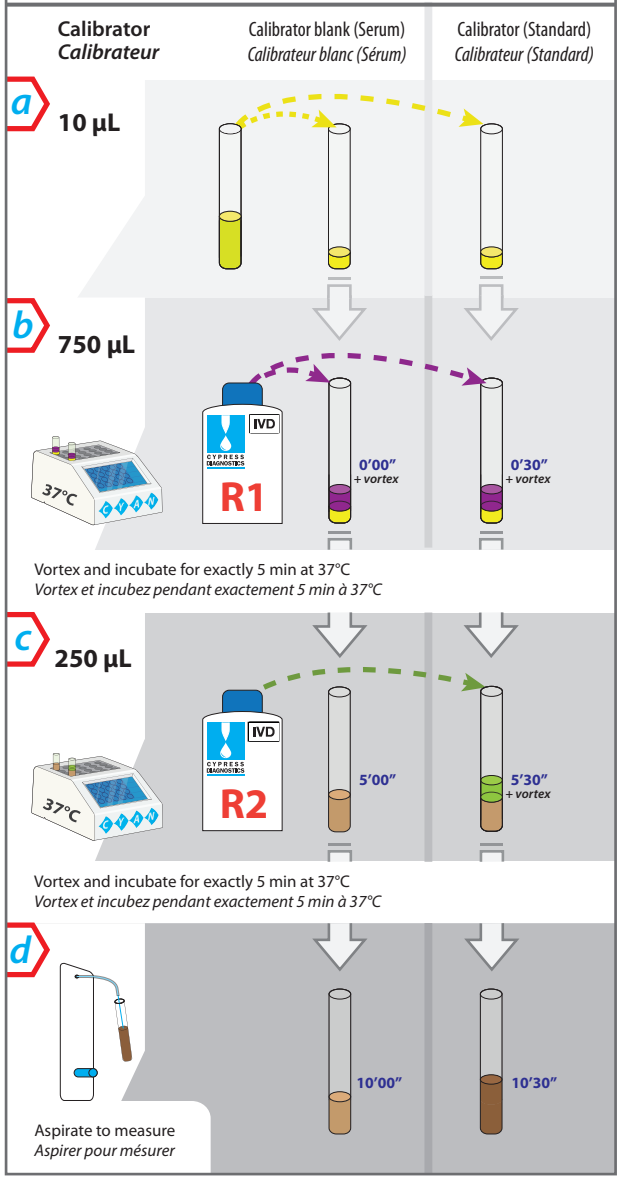
Step 1: Blank reagent / *Réactif blanc*



Step 2 : Calibration - Étalonnage

Method HDL or LDL - use CAL HBC11*1
Méthode HDL ou LDL - utiliser CAL HBC11*1
Prepare and measure | *Préparer et mesurez*

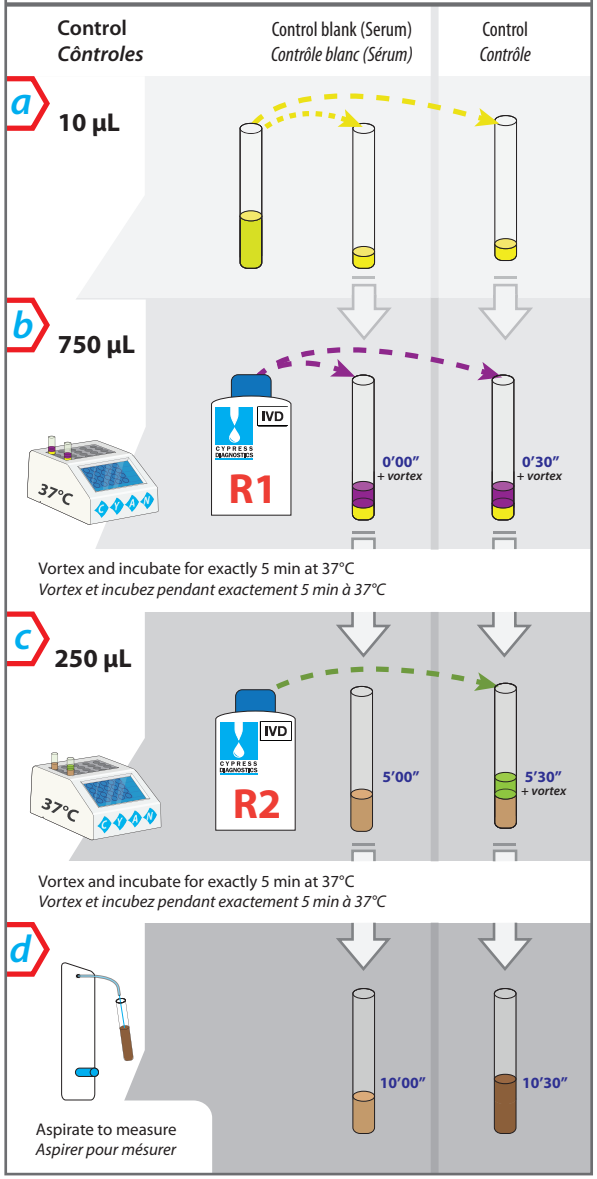
Method HDLc or LDLc - use CAL HBC12*2
Méthode HDLc ou LDLc - utiliser le CAL HBC12*2
Prepare and measure CAL1. Then do the same for CAL2
Préparez et mesurez le CAL1 Faites de même pour CAL2



Step 3: Quality Control - Contrôles de Qualité

Method HDL or LDL - use control HBC10*1
Méthode HDL ou LDL - utiliser le contrôle HBC10*1
Prepare and measure | *Préparer et mesurez*

Method HDLc or LDLc - use control HBC01 and HBC02*2
Méthode HDLc ou LDLc - utiliser contrôles HBC01 et HBC02*2
Prepare and measure | *Préparer et mesurez*

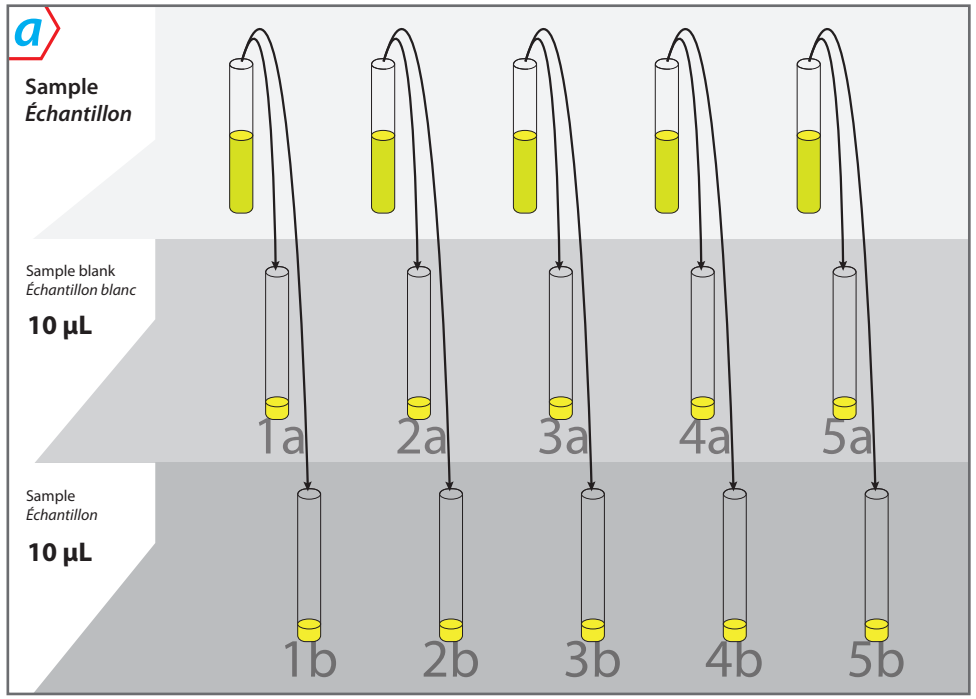


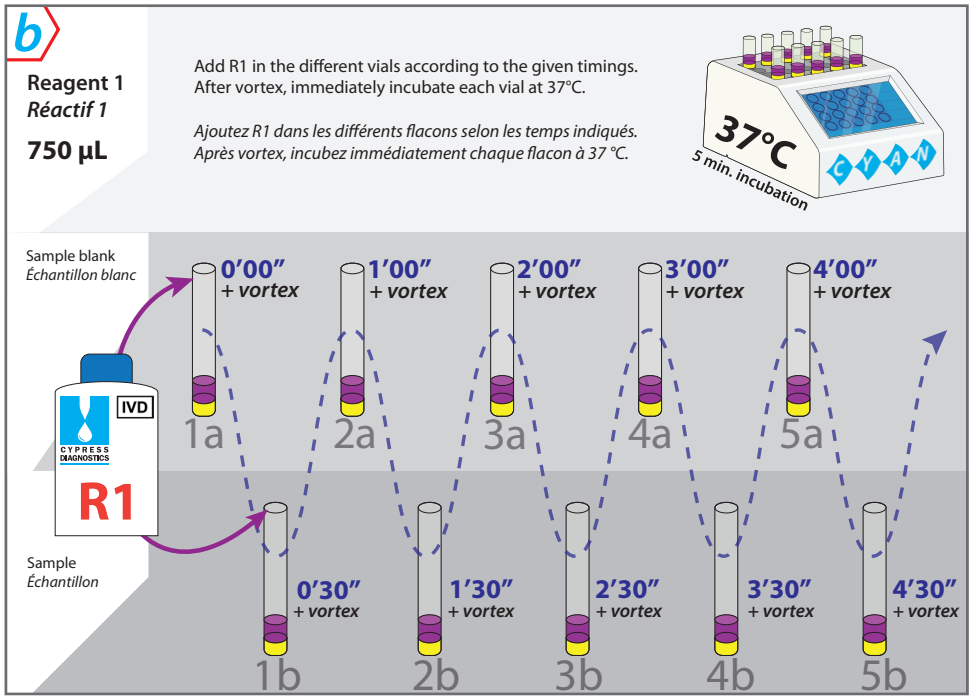
*1 HDL or LDL method: combine the 1-level 'HDL/LDL Calibrator' (HBC11) with the 'HDL/LDL control' kit HBC10 (level 1 & level 2) | *Méthode HDL ou LDL : combiner le « Calibrateur HDL/LDL » (HBC11) de niveau 1 avec le kit « Contrôle HDL/LDL » HBC10 (niveaux 1 et 2)*

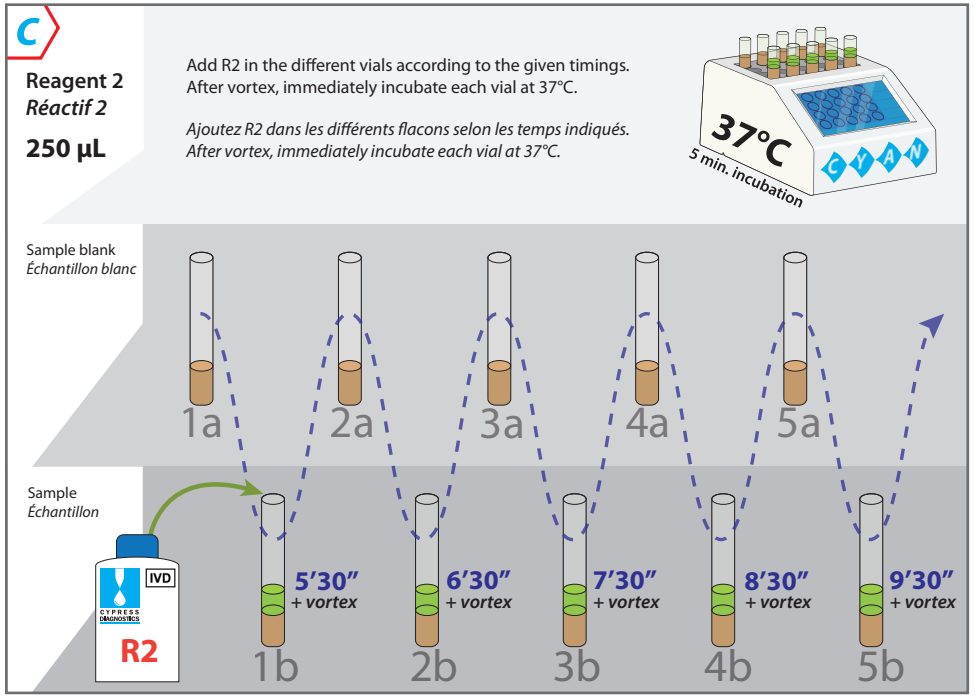
*2 HDLc or LDLc method: combine the bi-level 'HDLc/LDLc Calibrator' (HBC12) with the 'Normal and Patholgical controls' (HBC01 and HBC02) | *Méthode HDLc ou LDLc : combiner le « Calibrateur HDLc/LDLc » à deux niveaux (HBC12) avec les « Contrôles normaux et pathologiques » (HBC01 et HBC02)*

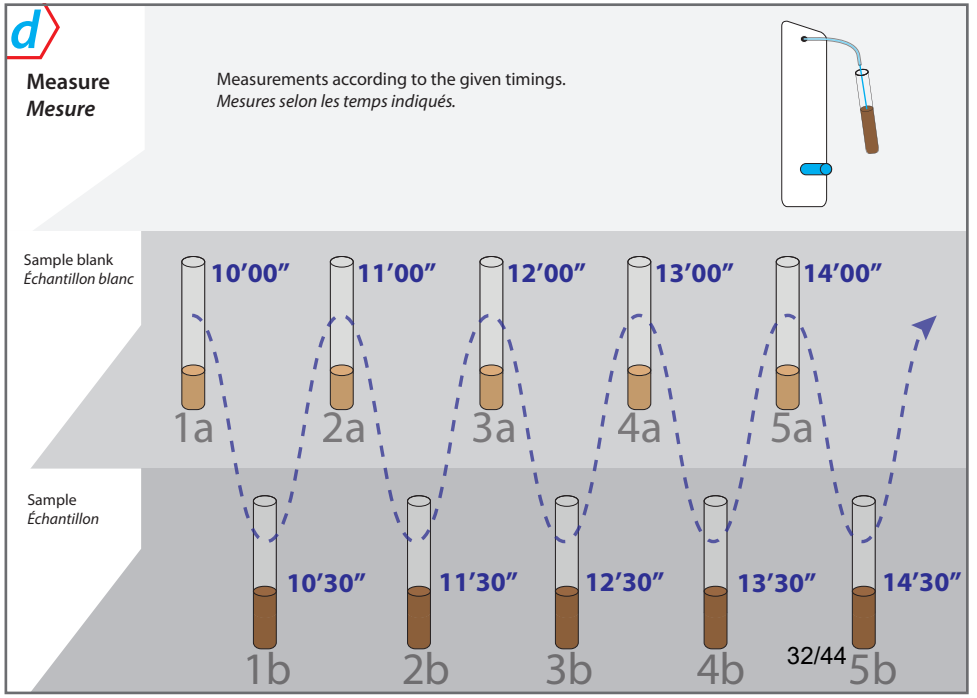
Application on **CYANVision | CYANSmart** - For QC & Calibrators, apply the same principle. More information with a scheme is given in the application sheet.

Application sur **CYANVision | CYANSmart** - *Pour le contrôle de qualité et la calibration, appliquez le même principe. Vous trouverez plus d'informations et un schéma dans la fiche d'application.*









LDL Cholesterol

Calculation

CALCULATION

LDL Cholesterol calculation following the Modified Sampson-NIH method:

- To obtain the result for LDL Cholesterol **in mg/dL**:

$$LDL\ Cholesterol = \ (CHOL - HDLn) - \frac{TRIG}{8.37} - TRIG\ x\ \frac{(CHOL - HDLn)}{2640} + \frac{TRIG^2}{17400}$$

- To obtain the result for LDL Cholesterol **in mmol/L**:

$$LDL\ Cholesterol = \ (CHOL - HDLn) - \frac{TRIG}{3.65} - TRIG\ x\ \frac{(CHOL - HDLn)}{29.81} + \frac{TRIG^2}{85.77}$$

For your convenience, use the online calculation tool:
https://diagnostics.be/calculated-ldl-cholesterol-concentration

Watch how to use the calculation tool here:
https://vimeo.com/1216345560

PROGRAM SETUP

Run the CHOL, HDLn and TRIG methods (according to each method-specific application sheet) to obtain the required formula input values.

NOTES

1. This formula is only compatible with the **HDLn** method which uses the **HBL0110 reagent** kit. You cannot use the HDL nor the HDLc method, which require the use of the old reagent kit HBL011.
2. The formula is compatible with TRIG levels up to 1000 mg/dL (11,3 mmol/L).

2026-08 (0.0)

Lipase

Enzymatic. Colorimetric. Kinetic

REF	**HBE09**
VOL	1 x 40 mL
Calibrator	1 x Lyoph. - 3 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. Note 1

The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 580 nm ≥ 1,4, the reagent should be discarded. R2 is a turbid orange-colored micro-emulsion, discard if turning to red. Note 2

Calibrator:

Reconstitution: Bring the vial to room temperature for 30 minutes. Gently tap the vial on a table to drop any lyophilized material from the rubber cap in the vial. Open the vial very carefully and, with an accurate volumetric pipette, slowly add exactly 3,0 mL of high-quality distilled water. Take care to avoid any loss of the lyophilized material. Close the vial and allow to stand for 30 minutes. Swirl gently to homogenize. Ensure that all traces of dry material are dissolved. Do not shake, vortex or invert.

Bring to room temperature for about 30 minutes before use and mix carefully before each use. Avoid the formation of foam.

Inaccurate reconstitution, improper storage and errors in assay technique can cause erroneous results. Stability: 8 hours at 15-25 °C, 2 days at 2-8 °C or 1 month at -25 to -15°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.

CALIBRATION & QUALITY CONTROL

Use the calibrator included in the kit.Note 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).** Note 4 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.

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.

SAMPLES

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

Stability: 2 days at 2 - 8 °C.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Reagent Blank Note 2	10 µL Distilled water + 1 mL Reagent 1 + 200 µL Reagent 2
For Calibrator Note 3	10 µL Calibrator + 1 mL Reagent 1 + 200 µL Reagent 2
For Sample	10 µL Sample + 1 mL Reagent 1 + 200 µL Reagent 2

Prepare, mix and measure **one sample at a time.** Aspirate the mixture in the instrument, **immediately** after addition of the working reagent to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample.

PROGRAM SETUP

Prog. Name:	LIPASE		**Linearity Max:**	250	U/L	**STD variable:**	Yes Note 3	
Prog. ID:	23		**Fit:**	95		**Standard Conc.:**	value: see vial Note 3	
Prog. Version:	2		**Direction:**	Up		**Calibration repeats:**	3	
Method ID:	23		**Working reagent:**	No		**CAL CV%:**	10	
Method Name:	Lipase		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Kinetic		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	578	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	5	U/L
Prog. Unit:	U/L		**Blank CV%:**	0		**Normal High - Male**	38	U/L
Decimals:	3		**Blank Low:**	0,000 Note 2		**Normal Low - Female**	5	U/L
Aspiration Volume:	0800	µL	**Blank High:**	1,400 Note 2		**Normal High - Female**	38	U/L
Delay Time:	060	s	**Blank Mandatory:**	No		**Normal Low - Child**	5	U/L
Test Time:	090	s	**Factor:**	0		**Normal High - Child**	38	U/L
Dilution factor:	1		**Calib. By factor:**	No Note 3		**Method order:**	0	
Linearity Min:	5	U/L	**Num of STD:**	1 Note 3				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. 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.
2. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
3. Use the calibrator included in the kit. Enter the concentration values shown on the calibrator vials. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
4. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (4.1) - Replaces all previous versions

Cypress Diagnostics: Nijverheidsstraat 8 • 2235 Hulshout • Belgium
www.diagnostics.be • Tel: ++ 32 15 67 67 68 • e-mail: cypress@diagnostics.be

Magnesium

Xylidyl Blue - EGTA. Colorimetric

REF	**HB0320**
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

The 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 - 25 °C.
Handle standard very carefully to prevent contamination. The reagent should be a clear blue solution. If turbidity or precipitation has occurred, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Reagent
For Standard Note 2	10 µL Standard + 1 mL Reagent
For Sample	10 µL Sample + 1 mL Reagent

You can prepare several samples simultaneously. Mix and incubate for 3 minutes at 37 °C or for 5 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 45 minutes after preparation.

PROGRAM SETUP

Prog. Name:	MG		**Linearity Max:**	6,6	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	24		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	3	
Method ID:	24		**Working reagent:**	No		**CAL CV%:**	10	
Method Name:	Magnesium		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	510	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	3		**Normal Low - Male**	1,6	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	10		**Normal High - Male**	2,5	mg/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	1,6	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	1,500 Note 1		**Normal High - Female**	2,5	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	1,6	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	2,5	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	4	
Linearity Min:	0,05	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Phosphorus

Phosphomolybdate. UV.

REF	**HB014**
VOL	2 x 125 mL
Standard	1 x 5 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm ≥ 0,54, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02).** Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Reagent
For Standard Note 2	10 µL Standard + 1 mL Reagent
For Sample	10 µL Sample + 1 mL Reagent

Mix and incubate for **5 minutes** at 37 °C. Then aspirate to measure. You can prepare several samples simultaneously, as long as you respect the incubation times indicated.

PROGRAM SETUP

Prog. Name:	PHOSPH		**Linearity Max:**	35	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	25		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	3	
Method ID:	25		**Working reagent:**	No		**CAL CV%:**	10	
Method Name:	Phosphorus		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	2,5	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	5	mg/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	2,5	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,540 Note 1		**Normal High - Female**	5	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	4	mg/dL
Test Time:	003	s	**Factor:**	0 Note 2		**Normal High - Child**	7	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	5	
Linearity Min:	0	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Potassium Prec

NaTPB. Colorimetric. Precipitation

REF	**HB015**
VOL	3 x 50 mL
Standard	1 x 3 mL

REAGENT PREPARATION AND STABILITY

Working reagent: Shake R2 (NaOH) before use. Mix proportionally 1:1 Reagent 1 and Reagent 2. After mixing, allow to stand for 30 minutes prior to use. Before each use**, the working reagent must be shaken. The working reagent is stable for 7 days at 15-25 °C and 30 days at 2-8 °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. Handle standard very carefully to prevent contamination. Do not freeze or expose to elevated temperatures. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator Specific **(HBC03-S)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls Specific **(HBC01-S, HBC02-S)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

SAMPLES

Sample type: non hemolytic serum or heparin plasma.

PROCEDURE

Make sure the reagents and samples are at room temperature.
Then, pipette into a test tube:

PRECIPITATION STEP:	
For Sample	50 µL Sample + 500 µL Reagent 3
Mix carefully. Centrifuge at high speed (± 5000 rpm) for 5-10 minutes. Separate the clear supernatant in a new test tube.	
TEST STEP: pipette into a cuvette:	
For Blank	1,0 mL Working reagent (R1 + R2)
For Standard Note 2	100 µL Standard + 1,0 mL Working reagent (R1 + R2)
For Sample	100 µL Supernatant + 1,0 mL Working reagent (R1 + R2)

You can prepare several samples simultaneously. To produce a homogeneous turbidity, the standard or the clear supernatant must be added to the surface of the working reagent in the test tube. Mix each test tube carefully before proceeding to the next sample. Mix and allow to stand for 5 min. After the incubation time, aspirate and measure all the samples within 30 min after addition of the working solution.

PROGRAM SETUP

Prog. Name:	POT		**Linearity Max:**	10	mEq/L	**STD variable:**	Yes Note 2	
Prog. ID:	26		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	26		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Potassium		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	578	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	3,6 Note 4	mEq/L
Prog. Unit:	mEq/L		**Blank CV%:**	0		**Normal High - Male**	5,5 Note 4	mEq/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	3,6 Note 4	mEq/L
Aspiration Volume:	0800	µL	**Blank High:**	3,500 Note 1		**Normal High - Female**	5,5 Note 4	mEq/L
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	3,6 Note 4	mEq/L
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	5,5 Note 4	mEq/L
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	6	
Linearity Min:	2	mEq/L	**Num of STD:**	1				

MEASURING RANGE

This method is linear from 2,0 mEq/L (detection limit) to 10,0 mEq/L (linearity limit). If the obtained results are greater than 10,0 mEq/L, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator Specific **(HBC03-S)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.
4. These values are for serum samples. For plasma, please check the insert for the values.

2026-03 (3.1) - Replaces all previous versions

Sodium Prec

Mg-Uranylacetate. Colorimetric. Precipitation

REF	**HB016**
VOL	2 x 60 mL
Standard	1 x 2 mL

REAGENT PREPARATION AND STABILITY

Reagents 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. Handle standard very carefully to prevent contamination. Precipitating solution becomes discolored when exposed to the light. Store protected from light. A slight turbidity does not affect the determination. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator Specific **(HBC03-S)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls Specific **(HBC01-S, HBC02-S)**. Note 3 Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.

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.

SAMPLES

Sample type: serum or ammonium or lithium heparin plasma

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

PRECIPITATION STEP:	
For Blank	-
For Standard Note 2	20 µL Standard + 1,0 mL Reagent 2
For Sample	20 µL Sample + 1,0 mL Reagent 2
Mix well. Incubate for 5 min. Then shake intensively for at least 30 sec. Then incubate for 30 min. Centrifuge for 5-10 min at 5000 rpm. Collect the supernatant in a new test tube	
TEST STEP: pipette into a cuvette:	
For Blank	20 µL Reagent 2 + 1,0 mL Reagent 1
For Standard	20 µL Supernatant + 1,0 mL Reagent 1
For Sample	20 µL Supernatant + 1,0 mL Reagent 1

You can prepare several samples simultaneously. Mix and incubate for 5 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 30 minutes after preparation.

PROGRAM SETUP

Prog. Name:	SOD		**Linearity Max:**	300	mEq/L	**STD variable:**	Yes Note 2	
Prog. ID:	27		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	4		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	27		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Sodium		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	405	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	135	mEq/L
Prog. Unit:	mEq/L		**Blank CV%:**	0		**Normal High - Male**	155	mEq/L
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	135	mEq/L
Aspiration Volume:	0800	µL	**Blank High:**	3,500 Note 1		**Normal High - Female**	155	mEq/L
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	135	mEq/L
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	155	mEq/L
Dilution factor:	1		**Calib. By factor:**	No Note 2		**Method order:**	7	
Linearity Min:	49	mEq/L	**Num of STD:**	1				

MEASURING RANGE

This method is linear from 49 mEq/L (detection limit) to 300 mEq/L (linearity limit). If the obtained results are greater than 300 mEq/L, dilute the sample 1:2 with distilled water, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator Specific **(HBC03-S)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Total Protein

Biuret. Colorimetric

REF	HB0190
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

The reagent and standard 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 546 nm ≥ 0,22, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL R1 Biuret
For Standard Note 2	25 µL Standard + 1 mL R1 Biuret
For Sample	25 µL Sample + 1 mL R1 Biuret

You can prepare several samples simultaneously. Mix and incubate for 5 minutes at 37 °C or for 10 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 1 hour after preparation.

PROGRAM SETUP

Prog. Name:	TP		**Linearity Max:**	15	g/dL	**STD variable:**	Yes Note 2	
Prog. ID:	28		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	2		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	29		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Tot Prot (Bior)		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	546	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	6,6	g/dL
Prog. Unit:	g/dL		**Blank CV%:**	0		**Normal High - Male**	8,3	g/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	6,6	g/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,220 Note 1		**Normal High - Female**	8,3	g/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	6,6	g/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	8,3	g/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	5	
Linearity Min:	0,008	g/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (2.2) - Replaces all previous versions

CYPRESS DIAGNOSTICS

CY014 CYANVision

Application sheet

Urine Total Protein

Pyrogallol-Red. Colorimetric.

REF	**HB020**
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if the reagent blank absorbance is out of range, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Note 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. The control values can be found on the control sheets, delivered together with the control vials. Measure at least one replicate per control.
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.

SAMPLES

Sample type: human urine 24h: Stability 8 days at 2 - 8 °C.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Reagent 1
For Standard Note 2	20 µL Standard + 1 mL Reagent 1
For Sample	20 µL Sample + 1 mL Reagent 1

You can prepare several samples simultaneously. Mix and incubate for 5 minutes at 37 °C or for 10 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 30 minutes after preparation.

PROGRAM SETUP

Prog. Name:	TPU		**Linearity Max:**	400	mg/dL	**STD variable:**	Yes	
Prog. ID:	29		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	28		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Tot Prot (Pyr)		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	578	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	3		**Normal Low - Male**	0	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	10		**Normal High - Male**	10	mg/dL
Decimals:	3		**Blank Low:**	0,000 Note 1		**Normal Low - Female**	0	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,700 Note 1		**Normal High - Female**	10	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	0	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	10	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	6	
Linearity Min:	0,944	mg/dL	**Num of STD:**	1				

MEASURING RANGE

This method is linear from 0,944 mg/dL (detection limit) to 400 mg/dL (linearity limit). If the obtained results are greater than 400 mg/dL, dilute the sample 1:2 with NaCl 9 g/L, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial).

2026-03 (2.1) - Replaces all previous versions

Triglycerides

Enzymatic. Colorimetric. GPO-POD

REF	HBL060
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

The 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 510 nm ≥ 0,23, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Prepare and measure these controls the same as samples. Measure at least one replicate per control. The control values can be found on the control sheets, delivered together with the control vials.
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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Reagent
For Standard Note 2	10 µL Standard + 1 mL Reagent
For Sample	10 µL Sample + 1 mL Reagent

You can prepare several samples simultaneously. Mix and incubate for 5 minutes at 37 °C or for 10 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 30 minutes after preparation.

PROGRAM SETUP

Prog. Name:	TRIG		**Linearity Max:**	1000	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	30		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	30		**Working reagent:**	No		**CAL CV%:**	0	
Method Name:	Triglycerides		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	510	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	40	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	160	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	35	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,230 Note 1		**Normal High - Female**	135	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	35	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	135	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	1,01	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.

2026-03 (3.1) - Replaces all previous versions

Uric Acid

Enzymatic. Colorimetric. URICASE-POD

REF	HBL020
VOL	2 x 125 mL
Standard	1 x 5 mL

REAGENT PREPARATION AND STABILITY

Mix equal volumes of R1 (Buffer) and R2 (Enzymes). This working reagent is stable for 2 months at 2-8 °C or 2 weeks 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.
Handle standard very carefully to prevent contamination. The reagents should be clear solutions. If turbidity or precipitation has occurred or if blank absorbance of the working reagent at 510 nm ≥ 0,12, the reagents should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 The control values can be found on the control sheets, delivered together with the control vials. Note 4 Prepare and measure these controls the same as samples. Measure at least one replicate per control. 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.

SAMPLES

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

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1 mL Working reagent (R1 + R2)
For Standard Note 2	25 µL Standard + 1 mL Working reagent (R1 + R2)
For Sample	25 µL Sample + 1 mL Working reagent (R1 + R2)

You can prepare several samples simultaneously. Mix and incubate for 5 minutes at 37 °C or for 10 minutes at 15-25 °C (room temperature). After the incubation time, aspirate and measure the samples within 45 minutes after preparation.

PROGRAM SETUP

Prog. Name:	UA		**Linearity Max:**	25	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	31		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	5		**Direction:**	Not applicable		**Calibration repeats:**	0	
Method ID:	32		**Working reagent:**	Yes		**CAL CV%:**	0	
Method Name:	Uric Acid		**Blank Type:**	Reagent		**Temp flowcell:**	37	°C
Method Type:	End Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	510	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None	nm	**Blank substraction:**	Yes		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	3,6	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	7,7	mg/dL
Decimals:	3		**Blank Low:**	-0,010 Note 1		**Normal Low - Female**	2,5	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	0,02 Note 1		**Normal High - Female**	6,8	mg/dL
Delay Time:	001	s	**Blank Mandatory:**	No		**Normal Low - Child**	2,5	mg/dL
Test Time:	003	s	**Factor:**	0		**Normal High - Child**	6,8	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	0,15	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. In case the Reagent Blank is too high, see CYANVision User manual § 8 for troubleshooting ("Blank is out of range").
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Fill the values for monochromatic methods. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.
4. Fill the values for semi-automates (monochromatic).

2026-03 (5.1) - Replaces all previous versions

REF	HBL030
VOL	240 + 60 mL
Standard	1 x 5 mL

Urea

Urease-GLDH. UV. Kinetic

REAGENT PREPARATION AND STABILITY

Working reagent: Mix 4 volumes of R1 (Buffer) with 1 volume of R2 (Substrate). After mixing, allow to stand for 30 minutes prior to use. The working reagent can be stored at 2 – 8 °C or at room temperature (15 – 25 °C) and can be used as long as the blank absorbance is > 1,00 AU. The stability of the working reagent is at least 24h at 15 - 25 °C. The standard 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.
Handle standard very carefully to prevent contamination. The reagent should be a clear solution. If turbidity or precipitation has occurred or if blank absorbance at 340 nm ≤ 0,90 AU, the reagent should be discarded. Note 1

CALIBRATION & QUALITY CONTROL

For calibration, use the standard included in the kit. Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. Note 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. Use Biochemistry Normal and Pathological Controls **(HBC01, HBC02)**. Note 3 The control values can be found on the control sheets, delivered together with the control vials. Prepare and measure these controls the same as samples. Measure at least one replicate per control. 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.

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.

PROCEDURE

Make sure the reagents and samples are at room temperature. Then, pipette into a test tube:

For Blank	1,00 mL Working reagent (R1 + R2)
For Standard Note 2	10 µL Standard + 1,00 mL Working reagent (R1 + R2)
For Sample	10 µL Sample + 1,00 mL Working reagent (R1 + R2)

Prepare, mix and measure **one sample at a time**. **Aspirate** the mixture in the instrument, **immediately** after addition of the working solution to the sample/calibrator. Wait with the preparation of the next sample until the instrument is finished with measuring the previous one. At this time, the instrument asks to aspirate the sample. Note 4

PROGRAM SETUP

Prog. Name:	UREAn		**Linearity Max:**	206	mg/dL	**STD variable:**	Yes Note 2	
Prog. ID:	33		**Fit:**	0		**Standard Conc.:**	value: see vial Note 2	
Prog. Version:	3		**Direction:**	Down		**Calibration repeats:**	3	
Method ID:	31		**Working reagent:**	Yes		**CAL CV%:**	10	
Method Name:	Urease - GLDH		**Blank Type:**	Reagent Note 1		**Temp flowcell:**	37	°C
Method Type:	Two Point		**Sample Blank:**	No		**Calib. Mandatory:**	No	
Main Filter:	340	nm	**VCF:**	1		**Control Mandatory:**	No	
Sub Filter:	None		**Blank substraction:**	No		**SampleTypeRefValue:**	Serum	
Bichromatic Factor:	0		**Num of Blank:**	1		**Normal Low - Male**	15	mg/dL
Prog. Unit:	mg/dL		**Blank CV%:**	0		**Normal High - Male**	45	mg/dL
Decimals:	3		**Blank Low:**	0,9 Note 1		**Normal Low - Female**	15	mg/dL
Aspiration Volume:	0800	µL	**Blank High:**	2,5000 Note 1		**Normal High - Female**	45	mg/dL
Delay Time:	030	s	**Blank Mandatory:**	Yes		**Normal Low - Child**	15	mg/dL
Test Time:	060	s	**Factor:**	0		**Normal High - Child**	45	mg/dL
Dilution factor:	1		**Calib. By factor:**	No		**Method order:**	0	
Linearity Min:	3,16	mg/dL	**Num of STD:**	1				

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, dilute the sample 1:2 with saline solution, repeat the determination, and multiply the result by factor 2.

NOTES

1. If the blank absorbance is out of range, the instrument will give you a flag. Programming reagent as blank gives you the advantage that deterioration of the reagent can be easily detected.
2. Program the value of the standard (see vial). Alternatively, you can use the Biochemistry Calibrator **(HBC03)** for calibration. See CYANVision user manual for instructions to calibrate a test with a calibrator.
3. If other controls (not manufactured by Cypress Diagnostics) are used, they have to be validated by the user as they can vary.
4. Carry-over by pathological samples is possible. To prevent this, we recommend to follow a sample with concentration >50 mg/dL by aspiration of 0,8 mL Reagent Blank (working solution) before proceeding with the next sample.

2026-03 (2.1) - Replaces all previous versions

DRIFT

PROGRAM SETUP

Prog. Name:	DRIFT		**Num of Blank:**	0	
Prog. ID:	92		**Blank CV%:**	0	
Prog. Version:	2		**Blank Low:**	-0,01	
Method ID:	92		**Blank High:**	0,1	
Method Name:	DRIFT		**Blank Mandatory:**	No	
Method Type:	End Point		**Factor:**	1000	
Main Filter:	340	nm	**Calib. By factor:**	Yes	
Sub Filter:	None		**Num of STD:**	0	
Bichromatic Factor:	0		**STD variable:**	No	
Prog. Unit:	mA		**Standard Conc.:**	0,0000	
Decimals:	4		**Calibration repeats:**	0	
Aspiration Volume:	0800	µL	**CAL CV%:**	0	
Delay Time:	3	s	**Temp flowcell:**	37	°C
Test Time:	3	s	**Calib. Mandatory:**	No	
Dilution factor:	1		**Control Mandatory:**	No	
Linearity Min:	0	mA	**SampleTypeRefValue:**	Serum	
Linearity Max:	3500	mA	**Normal Low - Male**	Not applicable	mA
Fit:	0		**Normal High - Male**	Not applicable	mA
Direction:	Not applicable		**Normal Low - Female**	Not applicable	mA
Working reagent:	No		**Normal High - Female**	Not applicable	mA
Blank Type:	Water		**Normal Low - Child**	Not applicable	mA
Sample Blank:	No		**Normal High - Child**	Not applicable	mA
VCF:	1		**Method order:**	999	
Blank substraction:	Yes				

2021-02 (1.0) - Replaces all previous versions