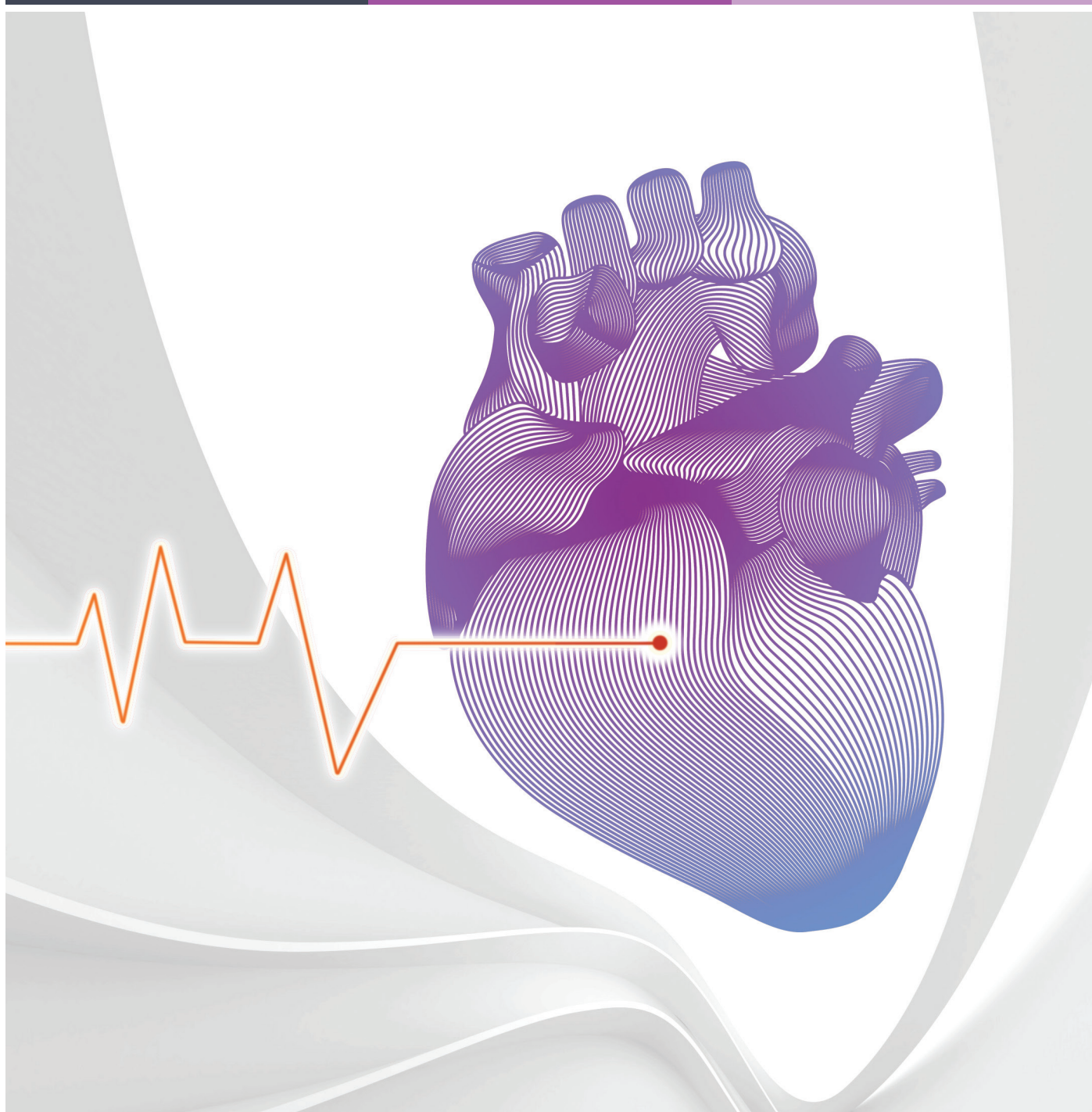


Cardiac Assessment Controls

A critical element of reliable cardiac testing



Choose the products best suited for your cardiac assessment needs

Each year, an estimated 17.9 million people lose their lives to Cardiovascular Disease (CVD). This accounts for nearly 32% of all deaths globally, making CVD the world's leading cause of death. Of these, 85% are due to heart attack and stroke with half of the victims dying before they reach the hospital.^{1,2}

When a patient experiences chest pain, critical treatment decisions require timely detection and diagnosis. In turn, diagnosis often relies on an accurate assessment of the correct cardiac markers, which carry significant importance for both patient and care provider in determining the correct course of treatment.

Because so much is at stake, a one-size-fits-all control may not sufficiently monitor performance where the laboratory needs it most. This makes it critical for laboratories to choose quality control products targeted at medical decision levels appropriate for the cardiac markers tested.

Our family of cardiac controls covers the complete range of cardiac testing needs so labs can find the right control to fit your testing and workflow needs. Our newest control, Cardiac Advance, is capable of high sensitivity Troponin testing near the limit of detection per IFCC and AACC cardiac guidelines.

¹"Cardiovascular diseases (CVDs) Fact Sheet." World Health Organization. Accessed January, 2023. [https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))

²"World Heart Day 2017." World Health Organization. Accessed November 27, 2017. http://www.who.int/cardiovascular_diseases/world-heart-day-2017/en/.

Cardiac Markers Product Family

High Sensitivity Troponin



Cardiac Advance

- ✓ Optimized high-sensitivity Troponin targets with values near limit of instrument detection*
- ✓ Consolidated control with 10 value assigned cardiac analytes including Homocysteine**
- ✓ Extended open vial stability for Troponin I compared to Cardiac Markers Plus LT
- ✓ Available in barcoded load and go formats to enhance workflow



Cardiac Markers Plus LT

- Compatible with high-sensitivity Troponin assays
- Consolidated control with 9 value assigned cardiac analytes
- Available in barcoded load and go formats to enhance workflow

Non High Sensitivity Troponin



Cardiac Markers Plus

- Compatible with non high-sensitivity Troponin assays
- Consolidated control with 9 value assigned cardiac analytes

Complementary Products



D-dimer

- Single-analyte control to monitor assay precision in diagnosis of Thrombotic events



Cardiac Troponins

- A control for high-sensitivity Troponin assays



Homocysteine

- Single-analyte control to monitor Homocysteine precision testing
- Offered in load-and-go IntelliQ formats

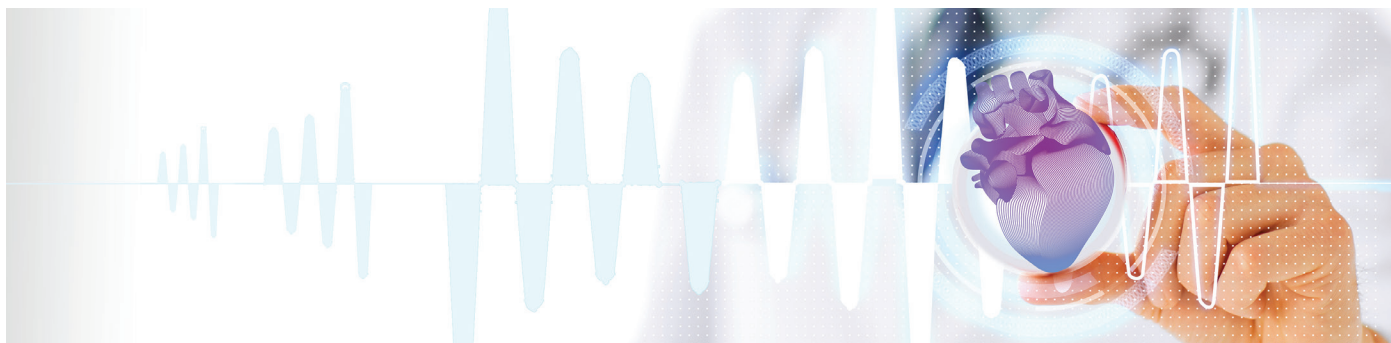


CK/LD Isoenzyme

- Multi-analyte control to monitor the precision of electrophoretic methods

*Not compatible with Abbott platforms. Abbott users should use IntelliQ Cardiac Markers Plus LT and Liquechek Cardiac Markers Plus LT.

**Homocysteine not compatible with Siemens platforms. Siemens users should use IntelliQ Homocysteine control or Liquechek Homocysteine control.



NEW Cardiac Advance Control

Comprehensive, multi-analyte control optimized for high sensitivity Troponin near the limit of detection

Cardiac Advance controls are a four level multi-analyte cardiac quality control optimized for high-sensitivity Troponin testing. Capable of Troponin testing near the limit-of-detection, this control adheres to both IFCC and AACC cardiac testing guidelines. Containing the ten most tested cardiac analytes, this product offers a consolidated formula to monitor the precision of cardiac laboratory testing all in one. Offered in automation capable configurations that can help streamline QC workflows to save time and resources.

Available in multiple configurations to fit your laboratory's needs

InteliQ™ Cardiac Advance Control



Load-and-go tubes (3 mL fill size)

- Consolidated multi-analyte cardiac control optimized for high sensitivity Troponin and barcoded for load-and-go efficiency.
- Compatible with major automated chemistry and immunoassay instruments
- Liquid, human serum based
- 28 month shelf life at -20°C to -70°C
- Open-vial stability
 - Refrigerator storage: 10 day stability at 2–8°C for most analytes and instruments*
 - Instrument storage: 10 day stability at 2–8°C for most analytes (Siemens Atellica Solution, on-board)

Liquichek™ Cardiac Advance Control



Standard Vials (3 mL fill size)

- Liquid human serum based
- 28 month shelf life at -20°C to -70°C
- 20 day open-vial stability at 2–8°C for most analytes



Compact Vials (2.5 mL fill size)

- Compatible with applicable automated platforms such as Siemens Dimension Vista
- Store refrigerated on-board the Dimension Vista instrument
- 2D barcode for quick and easy product insert and vial label scanning
- 28 month shelf life at -20°C to -50°C
- 5 day open-vial stability for all analytes when stored at 2–8°C

Analytes

BNP	C-Reactive protein (CRP)	Galectin-3	Myoglobin	Troponin I
CK-MB Isoenzyme	Digitoxin	Homocysteine	NT-proBNP	Troponin T**

**Not available in compact vial

*Please refer to the package insert for platform-specific stability and performance claims.

For specific analyte, open-vial stability, methods, mean values and ranges, refer to the package inserts of currently available lots at myeinserts.com.



Cardiac Markers Plus Control LT

Full cardiac panel with high sensitivity Troponin

Comprehensive liquid, human serum based cardiac assessment controls designed to monitor assay precision around the clinically significant 99th percentile upper reference limit (URL) for key analytes.

Running two levels of control materials may meet minimum regulatory requirements, but may not adequately provide control across the analytical measuring range (AMR). InteliQ and Liquichek Cardiac Markers Plus Control LT provide options to monitor a wide range of assays across the AMR.

Available in different configurations to fit your laboratory workflow

InteliQ™ Cardiac Markers Plus Control LT

Load-and-go tubes (3 mL fill size)

- Ready-to-use, barcoded tube helps automate your daily QC
- Compatible with major automated chemistry and immunoassay platforms
- Liquid, human serum based
- 3 year shelf life at -20°C to -70°C
- Open-vial stability
 - Refrigerator storage: 10 days at 2-8°C for most analytes (all instruments, off-board)*
 - Instrument storage: 20 days at 2-8°C for most analytes (Siemens Atellica Solution, on-board)

Liquichek™ Cardiac Markers Plus Control LT

Standard vials (3 mL fill size)

- Choice of four low Troponin I levels (1, 1A, 1B and 1C)
- Includes values for NT-proBNP and hs-CRP
- Level Low offers lower target values for all analytes (available only in 3 mL fill size)
- 3 year shelf life at -20°C to -70°C
- 20 day open-vial stability at 2-8°C for most analytes

Compact vials (2.5 mL fill size)

- Compatible with applicable automated platforms such as Siemens Dimension Vista and Abbott Alinity
- Store refrigerated on-board the Dimension Vista instrument
- 2D barcode for quick and easy product insert and vial label scanning
- 3 year shelf life at -20°C to -50°C
- 5 day open-vial (punctured) stability for all analytes when stored at 2-8°C

Analytes

BNP** CK (Total)	CK-MB Isoenzyme CRP	Digitoxin Homocysteine [†]	Myoglobin NT-proBNP	Troponin I Troponin T**
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*Please refer to the package insert for platform-specific stability and performance claims.

**Not claimed in compact vial configuration.

[†]No claim is made for expected values or stability in Liquichek controls. Not claimed in InteliQ configuration.

For specific analyte, open-vial stability, methods, mean values and ranges, refer to the package inserts of currently available lots at myeinserts.com.



Complementary Multi-Analyte Cardiac Controls

Consolidated cardiac controls for individualized testing requirements

Myocardial injury due to cardiac events can result in elevated levels of a number of markers including Troponin, creatine kinase (CK), and lactate dehydrogenase (LDH). Formulated for specialty testing, these controls are consolidated with the most tested cardiac analytes allowing expanded panel testing from a single quality control.

Liquichek™ Cardiac Markers Plus Control

- Monitors precision of Troponin I and T assays at higher levels
- Includes BNP and NT-proBNP
- Values provided for hs-CRP
- Liquid, human serum based
- 3 year shelf life at -20°C to -70°C
- 20 day open-vial stability at 2–8°C for most analytes

Analytes

BNP
CK (Total)
CK-MB Isoenzyme

CRP
Digitoxin
Homocysteine*

Myoglobin
NT-proBNP

Troponin I
Troponin T

*No claim is made for expected values or stability.

Liquichek™ CK/LD Isoenzyme Control

- Monitors precision of traditional and electrophoretic methods
- Liquid, human serum based
- 2 year shelf life at -20°C to -70°C
- 10 day open-vial stability at 2–8°C

Analytes

Albumin
CK (Total)
CK Electrophoresis

CK-MB Isoenzyme
Globulin

LD Electrophoresis
LDH

Protein (Total)
Protein Electrophoresis

For specific analyte, open-vial stability, methods, mean values and ranges, refer to the package inserts of currently available lots at myeinserts.com



Complementary Single-Analyte Cardiac Controls

Versatile cardiac control selection to fit every lab's testing needs

Elevated concentrations of certain cardiac biomarkers such as D-dimer and Homocysteine can indicate an increased risk for CVD or the presence of other health conditions with similar symptoms. These single analyte controls also reduce consumption of multi-analyte controls, and may improve laboratory efficiency because these analytes are often measured on separate platforms.

InteliQ™ Homocysteine Control

Load-and-go tubes (1 mL fill size)

- Monitors precision of Homocysteine assays
- Liquid, human serum based
- 3 year shelf life at -20°C to -70°C
- 30 day on-board stability at 2-8°C*
- 5 day open-vial stability at 2-8°C

Liquichek™ Homocysteine Control

Standard vials (1 mL fill size)

- A single analyte control designed to monitor Homocysteine precision across a wide range of target values
- Liquid, human serum based
- 3 year shelf life at -20°C to -70°C
- 30 day open-vial stability at 2-8°C
- Includes values in all three levels for automated immunoassays

Target Value	
	Homocysteine (µmol/L)
Level 1	6.5
Level 2	12.0
Level 3	28

The values listed are approximate targets. The actual observed values will vary depending upon lot number, analyzer, reagent, method, and calibrator.

Liquichek™ D-dimer Control

Four level control monitoring assay precision across the critical values used in diagnosis of thrombotic events. Assayed for major coagulation and chemistry platforms.

- Liquid, human plasma based
- 3 year shelf life at -20°C to -70°C
- 15 day open-vial stability at 2-8°C

Target Value	
	D-dimer ng/mL (FEU)*
Level Low	250
Level 1	550
Level 2	1600
Level 3	3200

*Fibrinogen Equivalent Units (FEU) = twice the mass of the D-DU (D-dimer units).

The values listed are approximate targets. The actual observed values will vary depending upon lot number, analyzer, reagent, method, and calibrator.

*Please refer to the package insert for platform-specific stability and performance claims.

For specific analyte, open-vial stability, methods, mean values and ranges, refer to the package inserts of currently available lots at myeinserts.com



Liquichek™ Cardiac Troponins Control

Single-analyte high-sensitivity Troponin testing challenging the 99th percentile upper reference limit

Quality control of Troponin I (TnI) and Troponin T (TnT) at low levels is critical. Patient results with at least one value above the 99th percentile upper reference limit (URL), in addition to other criteria, designate myocardial infarction.¹ However, results from Troponin test methods vary. Troponin assays have wide variation in lower detection limits, upper reference limits, diagnostic points, assay imprecision (CV), and specimen matrices. Because of this variation, and because physicians rely on Troponin results, it's important that control materials monitor precision at critical medical decision levels.

Liquichek™ Cardiac Troponins Control

A dedicated Troponins control designed to meet the quality control demands of high-sensitivity or next generation assays for major analyzer systems.

- Values closer to medical decision levels
- Convenience of a liquid control
- 18 month shelf life at -20°C to -70°C
- Open-vial stability at 2-8°C
 - 14 days for Troponin I
 - 25 days for Troponin T

Analytes

Troponin I
Troponin T

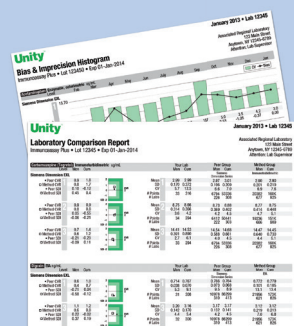
1. Joint ESC/AACF/AHA/WHF Task Force for the Universal Definition of Myocardial Infarction. Third universal definition of myocardial infarction. European Heart Journal 2012; 33: 2551-2567. Available online at: www.escardio.org/guidelines.

For specific analyte, open-vial stability, methods, mean values and ranges, refer to the package inserts of currently available lots at myinserts.com

Unity QC Data Management Solutions

Bio-Rad Cardiac Assessment Controls are part of the Unity QC program with its industry-leading features for benchmarking laboratory performance

- Benefit from peer data generated from more than 50,000 instruments and 29,000 peers worldwide
- Utilize real-time access to peer group comparisons to help troubleshooting
- Consolidate your entire laboratory into one system
- Facilitate run-time decisions with optimized Westgard rules
- Ease compliance with ISO 15189 using simple tools to review rule violations and document corrective actions
- Define your own quality requirements and track key quality performance indicators



You can consolidate your entire laboratory into one QC system through our Unity Program. This sophisticated software includes best-in-class tools to support releasing results, benchmarking laboratory performance, and designing your QC system.

Unity Software Solutions

Contact your local sales representative for more information about our range of QC Data Management Solutions



Unity Real Time

Expert QC Data Management Solution for Desktop or Online Users

- Facilitate CLIA and ISO 15189 compliance
- Improve real-time bench and supervisor QC data review
- Implement best QC rules when used with Westgard Advisor™
- Run validation with comprehensive audit trails
- Advanced charts and reports for data analysis
- Reduce non-essential retests with Analytical Goal options
- Upload QC data points from an LIS, middleware or instrument (optional)
- RiLiBÄK Advisor™ module available to comply with German regulations

Bio-Rad Mission: Control

Take the guesswork out of your QC strategy

Bio-Rad Mission: Control is the first objective risk management solution for quality control in laboratories. This intuitive interface allows users to focus on patient safety by assessing the risk of reporting incorrect patient results in their laboratory.

Bio-Rad Mission: Control allows you to:

- Determine your laboratory's Risk Management Index (RMI)
- Evaluate your test method performance based on your QC results
- Quantify the likelihood and severity of reporting incorrect patient results
- Assess how much you can lower your risk, based on instrument performance
- Create a QC Plan by confidently selecting rules and frequency that fit your risk tolerance



**For more information, visit
www.qcnet.com/missioncontrol**

Ordering Information

Cat # Description

NEW InteliQ™ Cardiac Advance Control

12016484	Level 1	6 x 3 mL
12016485	Level 2	6 x 3 mL
12016486	Level 3	6 x 3 mL
12016487	Level 4	6 x 3 mL

NEW Liquichek™ Cardiac Advance Control

12016447	Level 1	6 x 3 mL
12016448	Level 2	6 x 3 mL
12016449	Level 3	6 x 3 mL
12016450	Level 4	6 x 3 mL
12016472	Level 1/compact vials	6 x 2.5 mL
12016473	Level 2/compact vials	6 x 2.5 mL
12016474	Level 3/compact vials	6 x 2.5 mL
12016475	Level 4/compact vials	6 x 2.5 mL

InteliQ™ Cardiac Markers Plus Control LT

12009955	Level 1	6 x 3 mL
12009958	Level 1A	6 x 3 mL
12009959	Level 1B	6 x 3 mL
12009960	Level 1C	6 x 3 mL
12009956	Level 2	6 x 3 mL
12009957	Level 3	6 x 3 mL
12009961	Level 1 MiniPak	1 x 3 mL
12009964	Level 1A MiniPak	1 x 3 mL
12009965	Level 1B MiniPak	1 x 3 mL
12009966	Level 1C MiniPak	1 x 3 mL
12009962	Level 2 MiniPak	1 x 3 mL
12009963	Level 3 MiniPak	1 x 3 mL

Liquichek™ Cardiac Markers Plus Control LT

146	Level 1	6 x 3 mL
147	Level 2	6 x 3 mL
148	Level 3	6 x 3 mL
149	Level Low	6 x 3 mL
146X	Level 1 MiniPak	1 x 3 mL
147X	Level 2 MiniPak	1 x 3 mL
148X	Level 3 MiniPak	1 x 3 mL
149X	Level Low MiniPak	1 x 3 mL
27104	Level 1A	6 x 3 mL
27105	Level 1B	6 x 3 mL
27106	Level 1C	6 x 3 mL
27104X	Level 1A MiniPak	1 x 3 mL
27105X	Level 1B MiniPak	1 x 3 mL
27106X	Level 1C MiniPak	1 x 3 mL
297	Level 1C/compact vials	6 x 2.5 mL
298	Level 2/compact vials	6 x 2.5 mL
299	Level 3/compact vials	6 x 2.5 mL
298X	Trilevel MiniPak (1 of each level)/compact vials	3 x 2.5 mL

Cat # Description

Liquichek™ Cardiac Markers Plus Control

180	Trilevel (2 of each level)	6 x 3 mL
181	Level 1	6 x 3 mL
182	Level 2	6 x 3 mL
183	Level 3	6 x 3 mL
180X	Trilevel MiniPak (1 of each level)	3 x 3 mL

Liquichek™ CK/LD Isoenzyme Control

671	Level 1	6 x 1 mL
672	Level 2	6 x 1 mL
670X	Bilevel MiniPak (1 of each level)	2 x 1 mL

InteliQ™ Homocysteine Control

12004309	Level 1	6 x 1 mL
12004310	Level 2	6 x 1 mL
12004311	Level 3	6 x 1 mL
12004312	Trilevel MiniPak (1 of each level)	3 x 1 mL

Liquichek™ Homocysteine Control

287	Level 1	6 x 1 mL
288	Level 2	6 x 1 mL
289	Level 3	6 x 1 mL
288X	Trilevel MiniPak (1 of each level)	3 x 1 mL

Liquichek™ D-dimer Control

27100	Level Low	6 x 1 mL
27101	Level 1	6 x 1 mL
27102	Level 2	6 x 1 mL
27103	Level 3	6 x 1 mL
27102X	Four Level MiniPak (1 of each level)	4 x 1 mL

Liquichek™ Cardiac Troponins Control

12001084	Level 1	6 x 3 mL
12006239	Level 2	6 x 3 mL
12006369	Level 3	6 x 3 mL
12001085	Level 1 MiniPak	1 x 3 mL
12006370	Level 2 MiniPak	1 x 3 mL
12006371	Level 3 MiniPak	1 x 3 mL

Unity Real Time™

804-1	Unity Real Time	Annual subscription
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Bio-Rad Mission: Control™

1100002	Bio-Rad Mission: Control	Annual Subscription
1100005	Bio-Rad Mission: Control Subscription & Service Bundle	

BIO-RAD

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