



# EQAS<sup>®</sup>

External Quality Assurance Services





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## Participate in an Internationally Recognized Quality Assessment Program

**Bio-Rad EQAS® programs are fully accredited to help meet the regulatory needs of today's clinical laboratories.**

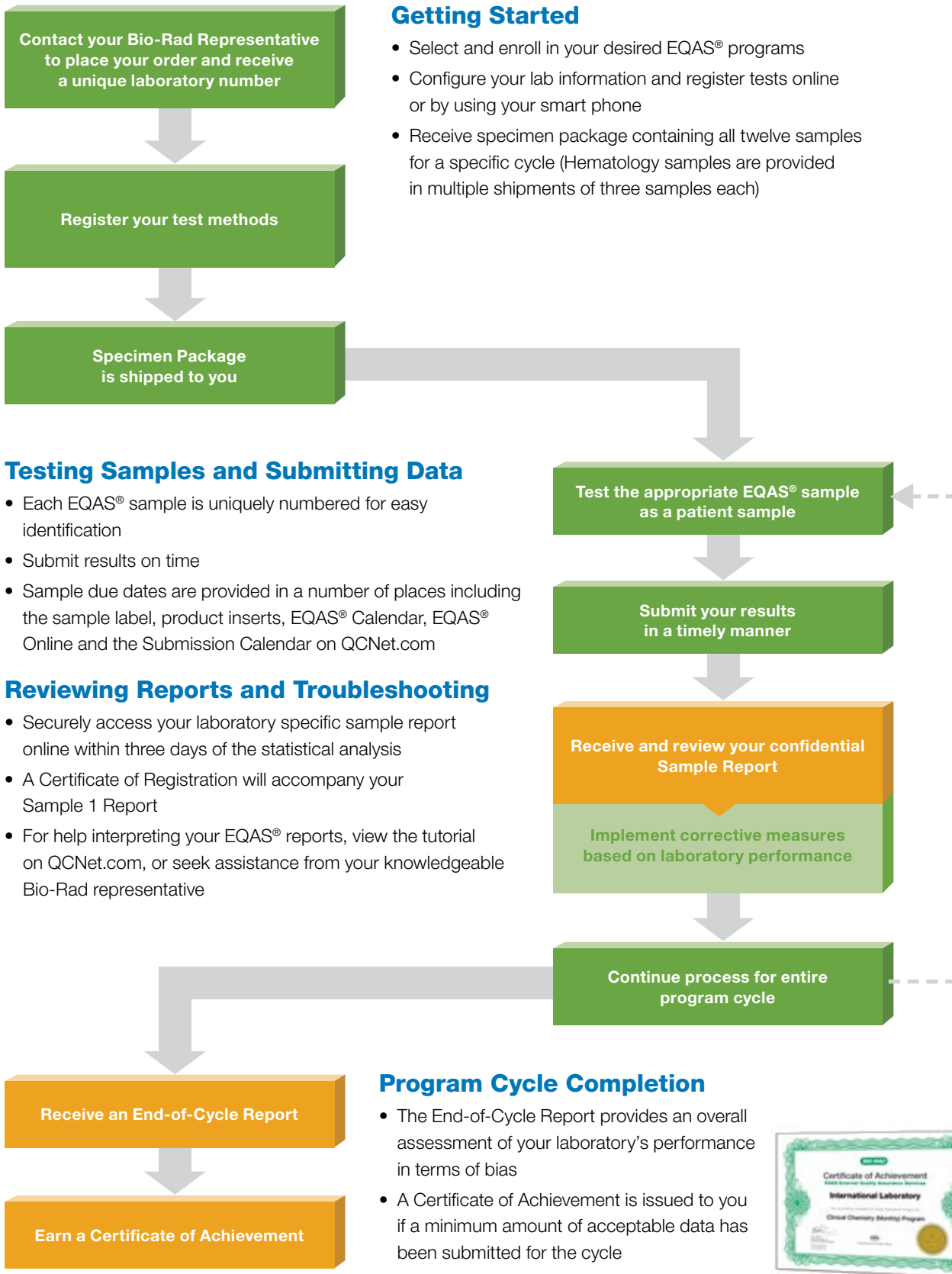
External quality assessment programs are accepted around the world as invaluable tools used by laboratories to periodically assess the performance of their test systems. Results are objectively compared to other laboratories using the same methodologies, instruments and reagents. When used in conjunction with daily quality controls, these external programs can give laboratories added confidence in reporting their patient test results.

As the worldwide leader in the development of quality control systems, participants in EQAS® can benefit from the experience, knowledge and reliability that Bio-Rad has offered for more than 35 years.

Bio-Rad EQAS® programs provide an independent and confidential external assessment of individual laboratory performance.

- Large international database with participants from over 109 countries
- Accredited to ISO/IEC 17043:2010 "Conformity assessment—General requirements for proficiency testing"
- Comprehensive, easy-to-read reports
- Technical support from experienced professionals
- Convenient electronic reporting options: EQAS® Online and EQAS® Mobile
- Each cycle includes 12 high quality samples together in one convenient shipment (except Hematology Program)
- Extensive analyte menus
- Analyte levels that challenge both normal and abnormal ranges
- Reference Method Values provided for select programs

# EQAS® Program Overview



# Online EQAS® Resources

Access product information, product inserts and user documentation through [www.QCNet.com](http://www.QCNet.com). This secure website allows registered participants access to training material, customer notifications and provides the ability to submit results with EQAS® Online and view or print EQAS® reports.

## Become a Registered QCNet™ User

Go to [www.QCNet.com](http://www.QCNet.com) today and click on the Log In/ Register link. Once you've completed the new user form, you will have access to all available EQAS® tools.

## Register your EQAS® Lab Number

1. Log in to [www.QCNet.com](http://www.QCNet.com)
2. Click the EQAS® tab
3. Click on EQAS® Registration
4. Enter your EQAS® lab number and select your country
5. Click Register, and you are done

Please allow up to 2 business days to process your registration. Upon verification, your EQAS® reports will be posted.

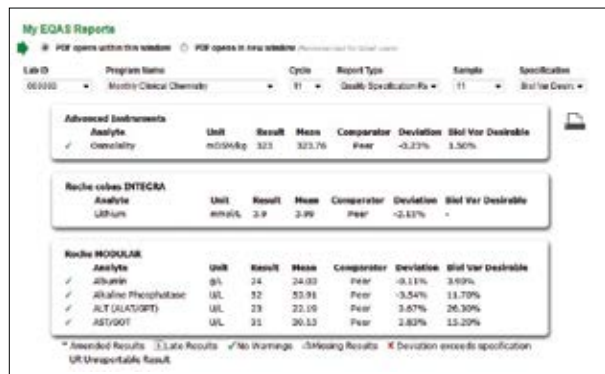


## Submitting Results via EQAS® Online/Mobile

Conveniently manage your laboratory's test configuration and submit results from any device with an internet connection.

## EQAS® Reports

Participants receive twelve sample reports and one end-of-cycle report over each program cycle. These detailed reports are presented in an easy-to-read graphic format. Sample reports are available online within three days of the statistical analysis. Additional special reports (Quality Specification, Subgroup and Instrument/Method Summary) are available to registered participants.

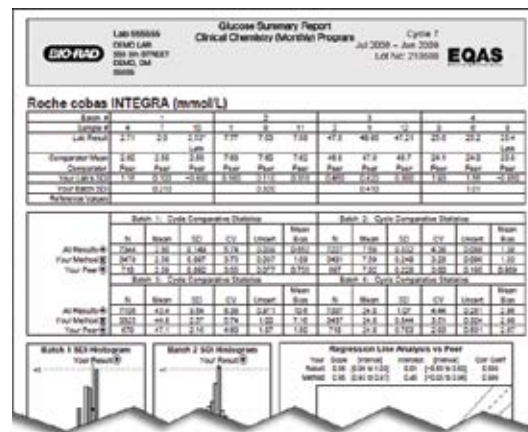


## Quality Specification Report

An evaluation, in terms of percentage deviation, against set performance criteria from key regulatory and scientific organizations (ex. CLIA, BV, RCPA, QMP-LS and Riik BÄK), is available online for each sample analyte.

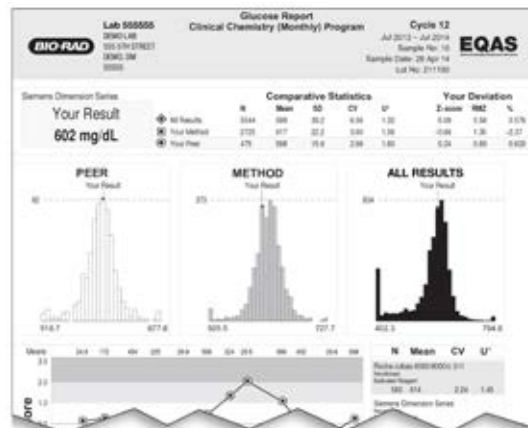
## Sample Report

Detailed individual statistical analyses and peer group comparisons are provided.



## End-of-Cycle Report

An overall assessment of laboratory performance over the entire cycle in terms of bias among participating laboratories is presented.





## EQAS<sup>®</sup> Programs

### Blood Gas Program

- Liquid, aqueous samples
- Comprehensive menu for external assessment of laboratory performance of Blood Gas, Electrolytes, Glucose, Lactate and Magnesium
- 12-month cycle

#### Analytes

Calcium (Ionized)	pCO <sub>2</sub>
Chloride	pH
Glucose	pO <sub>2</sub>
Lactate (Lactic Acid)	Potassium
Magnesium	Sodium



### Cardiac Markers Program

- Liquid, human plasma based
- Comprehensive menu of important cardiac assessment markers, plus D-dimer
- 12-month cycle

#### Analytes

BNP	NT-proBNP
CK-MB	Troponin I
D-dimer	Troponin T
hs-CRP	<i>Pilot Analyte</i>
Myoglobin	Homocysteine



Refer to [myinserts.com](http://myinserts.com) or the package insert for current analyte claims.

## Clinical Chemistry (Monthly) Program

- Lyophilized, human serum based
- 12-month cycle
- Submit results for the appropriate sample every month
- **Reference Method Values** provided for select analytes



### Analytes

Acid Phosphatase (Total)  
 Alanine Aminotransferase (ALT/SGPT)  
 Albumin  
 Alkaline Phosphatase (ALP)  
 Amylase (Pancreatic)  
 Amylase (Total)  
**Aspartate Aminotransferase (AST/SGOT)**  
 Bilirubin (Direct)  
 Bilirubin (Total)  
 Calcium (Ionized)  
 Calcium (Total)

Carbon Dioxide (CO<sub>2</sub>)  
 Chloride  
 Cholesterol (HDL)  
 Cholesterol (LDL)  
**Cholesterol (Total)**  
 Cholinesterase  
 Copper  
 Cortisol  
 Creatine Kinase (CK)  
**Creatinine**  
 Gamma Glutamyl Transferase (GGT)  
 Glucose

Iron  
 Iron Binding Capacity, Total (TIBC)  
 Iron Binding Capacity, Unsaturated (UIBC)  
 Lactate (Lactic Acid)  
**Lactate Dehydrogenase (LDH)**  
 Lipase  
 Lithium  
 Magnesium  
 Osmolality  
 Phosphorus  
**Potassium**

Protein (Total)  
**Sodium**  
 Thyroid Stimulating Hormone (TSH)  
 Thyroxine (FT<sub>4</sub>), Free  
 Thyroxine (T<sub>4</sub>), Total  
 Triglycerides  
 Triiodothyronine (FT<sub>3</sub>), Free  
 Triiodothyronine (T<sub>3</sub>), Total  
 Urea  
 Urea Nitrogen  
 Uric Acid  
 Zinc

## Coagulation Program

- Lyophilized, human plasma based
- 8 parameters for external assessment of laboratory coagulation test performance
- 12-month cycle

### Analytes

Antithrombin III (ATIII)  
 APTT  
 Fibrinogen  
 INR

Protein C  
 Protein S  
 PT  
 Thrombin Time (TT)



Refer to [myinserts.com](http://myinserts.com) or the package insert for current analyte claims.



## Ethanol/Ammonia Program

- Liquid, human serum based
- Clinically relevant levels of serum Ethanol and Ammonia
- 12-month cycle

### Analytes

Ammonia  
Ethanol



## Hematology Program

- Liquid product with human RBCs
- Choice of 11 basic hematology parameters
- For use on manual or automated analyzers
- Convenience of primary pierceable tubes
- 12-month cycle consisting of 4 separate shipments
- Submit results for the appropriate sample every month



### Analytes

Hematocrit (HCT)  
Hemoglobin  
Mean Corpuscular Hemoglobin (MCH)  
Mean Corpuscular Hemoglobin Concentration (MCHC)

Mean Corpuscular Volume (MCV)  
Mean Platelet Volume (MPV)  
Platelets (PLT)  
Red Blood Cells (RBC)  
Red Blood Cell Distribution Width (RDW)

Red Blood Cell Distribution Width-SD (RDW-SD)  
White Blood Cells (WBC)

## Hemoglobin Program

- Lyophilized, human whole blood based
- Includes HbA1C and HbA<sub>2</sub>
- 12-month cycle
- Submit results for the appropriate sample every month
- **Reference Method Values** provided for select analytes

### Analytes

Hemoglobin A1C  
Hemoglobin A<sub>2</sub>  
Hemoglobin (Total Glycated)





## Immunoassay (Monthly) Program

- Lyophilized, human serum based
- Comprehensive menu of the most commonly tested immunoassay analytes
- 12-month cycle
- Submit results for the appropriate sample every month



### Analytes

11-Deoxycortisol	Carcinoembryonic Antigen (CEA)	Insulin	(SHBG)
17- $\alpha$ -OH-Progesterone	Cortisol	Intact PTH	T3 Uptake
25-OH Vitamin D	DHEA	LH	T-Uptake
$\beta$ -2 Microglobulin	DHEA Sulfate	NSE	Testosterone
ACE	Digoxin	Phenobarbital	Theophylline
ACTH	Estradiol	Phenytoin	Thyroid Stimulating Hormone (TSH)
Aldosterone	Estriol, Free (UE <sub>3</sub> )	Plasma Renin Activity	Thyroxine Binding Globulin (TBG)
Alphafetoprotein (AFP)	Ferritin	Progesterone	Thyroxine, Free (FT <sub>4</sub> )
Androstenedione	Folate	Prolactin	Thyroxine (T <sub>4</sub> ), Total
C-Peptide	Follicle Stimulating Hormone (FSH)	PSA (Free)	Transferrin
CA 15-3	Gastrin	PSA (Free/Total Ratio)	Triiodothyronine, Free (FT <sub>3</sub> )
CA 19-9	hCG	PSA (Total)	Triiodothyronine (T <sub>3</sub> ), Total
CA 27.29	hGH	Renin	Valproic Acid
CA 125	Immunoglobulin E (IgE)	S100 Protein	Vitamin B <sub>12</sub>
Carbamazepine		Sex Hormone Binding Globulin	

## Lipids Program

- Liquid, human serum based
- Comprehensive menu of lipid profile analytes
- 12-month cycle
- Submit results for the appropriate sample every month



### Analytes

Apolipoprotein A-1  
 Apolipoprotein B  
 Cholesterol (HDL)  
 Cholesterol (LDL)  
 Cholesterol (Total)  
 Triglycerides  
*Pilot Analyte*  
 Cholesterol (non-HDL)  
 Lipoprotein (a)

Refer to [myinserts.com](http://myinserts.com) or the package insert for current analyte claims.

## Serum Proteins Program

- Lyophilized, human serum based
- Comprehensive menu for external assessment of serum protein assays
- 12-month cycle
- Submit results for the appropriate sample every month



### Analytes

$\alpha$ -1 Acid Glycoprotein  
 $\alpha$ -1 Antitrypsin  
 $\alpha$ -2 Macroglobulin  
 $\beta$ -2 Microglobulin  
 Albumin  
 Antistreptolysin O (ASO)  
 C-Reactive Protein (CRP)

Ceruloplasmin  
 Complement C3  
 Complement C4  
 Haptoglobin  
 Immunoglobulin A (IgA)  
 Immunoglobulin E (IgE)  
 Immunoglobulin G (IgG)

Immunoglobulin M (IgM)  
 Kappa Light Chain  
 Lambda Light Chain  
 Prealbumin  
 Protein (Total)  
 Rheumatoid Factor (RF)  
 Transferrin

## Therapeutic Drug Monitoring Program

- Lyophilized, human plasma based
- Analytes targeted at therapeutic, sub-therapeutic and toxic levels
- 12-month cycle
- Submit results for the appropriate sample every month
- **Weighed-in Values** provided for select analytes at end of cycle



### Analytes

Acetaminophen  
 Amikacin  
 Amitriptyline  
 Caffeine  
 Carbamazepine  
 Cyclosporine

Digoxin  
 Ethosuximide  
 Gentamicin  
 Lithium  
 Methotrexate  
 Nortriptyline

Phenobarbital  
 Phenytoin  
 Primidone  
 Salicylate  
 Theophylline  
 Tobramycin

Tricyclic Antidepressants (TCA)  
 Screen  
 Valproic Acid  
 Vancomycin

## Urine Chemistry Program

- Lyophilized, human urine based
- Matrix appropriate samples include basic and specialty urine chemistry analytes
- 12-month cycle
- Submit results for the appropriate sample every month



### Analytes

5-Hydroxyindoleacetic Acid  
(5-HIAA)  
Aldosterone  
Calcium (Total)  
Chloride  
Cortisol (Free)

Creatinine  
Dopamine  
Epinephrine  
Glucose  
Homovanillic Acid (HVA)  
Hydroxyproline (Total)

Magnesium  
Metanephrine  
Microalbumin  
Norepinephrine  
Normetanephrine  
Osmolality

Phosphorus  
Potassium  
Protein (Total)  
Sodium  
Urea Nitrogen  
Uric Acid  
Vanillylmandelic Acid (VMA)

Refer to [myinserts.com](http://myinserts.com) or the package insert for current analyte claims.

# EQAS<sup>®</sup> Analyte Chart

● Analyte present  
 ◐ Pilot analyte

	Blood Gas	Cardiac Markers	Clinical Chemistry (Monthly)	Coagulation	Ethanol/Ammonia	Hematology	Hemoglobin	Immunocassay (Monthly)	Lipids	Serum Proteins	Therapeutic Drug Monitoring	Urine Chemistry
5-Hydroxyindoleacetic Acid (HIAA)												●
11-Deoxycortisol								●				
17- $\alpha$ -OH-Progesterone								●				
25-OH Vitamin D								●				
$\alpha$ -1 Acid Glycoprotein										●		
$\alpha$ -1 Antitrypsin										●		
$\alpha$ -2 Macroglobulin										●		
$\beta$ -2 Microglobulin								●		●		
Acetaminophen											●	
ACE								●				
Acid Phosphatase (Total)			●									
ACTH								●				
Alanine Aminotransferase (ALT/SGPT)			●									
Albumin			●							●		
Aldosterone								●				●
Alkaline Phosphatase (ALP)			●									
Alphafetoprotein (AFP)								●				
Amikacin											●	
Amitriptyline											●	
Ammonia					●							
Amylase (Pancreatic)			●									
Amylase (Total)			●									
Androstenedione								●				
Angiotensin Converting Enzyme (ACE)												
Antistreptolysin O (ASO)										●		
Antithrombin III (ATIII)				●								
Apolipoprotein A-1									●			
Apolipoprotein B									●			
APTT				●								
Aspartate Aminotransferase (AST/SGOT)			●									
Bilirubin (Direct)			●									
Bilirubin (Total)			●									
BNP	●											
C-Peptide								●				
C-Reactive Protein (CRP)										●		
CA 15-3								●				
CA 19-9								●				
CA 27.29								●				
CA 125								●				
Caffeine											●	
Calcium (Ionized)	●	●										
Calcium (Total)		●										●
Carbamazepine								●			●	
Carbon Dioxide (CO <sub>2</sub> )			●									
Carcinoembryonic Antigen (CEA)								●				
Ceruloplasmin										●		
Chloride	●	●										●
Cholesterol (HDL)			●						●			
Cholesterol (LDL)			●						●			
Cholesterol (non-HDL)									◐			

● Analyte present  
 ◐ Pilot analyte

	Blood Gas	Cardiac Markers	Clinical Chemistry (Monthly)	Coagulation	Ethanol/Ammonia	Hematology	Hemoglobin	Immunocassay (Monthly)	Lipids	Serum Proteins	Therapeutic Drug Monitoring	Urine Chemistry
Cholesterol (Total)			●						●			
Cholinesterase			●									
CK-MB		●										
Complement C3										●		
Complement C4										●		
Copper			●									
Cortisol			●					●				
Cortisol (Free)												●
Creatine Kinase (CK)			●									
Creatinine			●									●
Cyclosporine											●	
D-dimer		●										
DHEA								●				
DHEA-Sulfate								●				
Digoxin								●			●	
Dopamine												●
Epinephrine												●
Estradiol								●				
Estriol, Free (UE <sub>3</sub> )								●				
Ethanol					●							
Ethosuximide											●	
Ferritin								●				
Fibrinogen				●								
Folate								●				
Follicle Stimulating Hormone (FSH)								●				
Gamma Glutamyltransferase (GGT)			●									
Gastrin								●				
Gentamicin											●	
Glucose	●	●										●
Haptoglobin										●		
hCG								●				
HDL Cholesterol			●						●			
Hematocrit (HCT)						●						
Hemoglobin A1C								●				
Hemoglobin A <sub>2</sub>								●				
Hemoglobin						●						
Hemoglobin (Total Glycated)								●				
hGH								●				
Homocysteine												
Homovanillic Acid (HVA)												●
hs-CRP		●										
Hydroxyproline (Total)												●
IgA										●		
IgE								●		●		
IgG								●		●		
IgM								●		●		
INR			●									
Insulin								●				
Intact PTH								●				
Iron			●									

Continued on following page



- Analyte present
- ◐ Pilot analyte

	Blood Gas	Cardiac Markers	Clinical Chemistry (Monthly)	Coagulation	Ethano//Ammonia	Hematology	Hemoglobin	Immunoassay (Monthly)	Lipids	Serum Proteins	Therapeutic Drug Monitoring	Urine Chemistry
Iron Binding Capacity, Total (TIBC)			●									
Iron Binding Capacity, Unsaturated (UIBC)			●									
Kappa Light Chain										●		
Lactate	●		●									
Lactate Dehydrogenase (LDH)			●									
Lambda Light Chain										●		
LH								●				
Lipase			●									
Lipoprotein (a)									◐			
Lithium			●							●		
Magnesium	●		●									●
Mean Corpuscular Hemoglobin (MCH)						●						
Mean Corpuscular Hemoglobin Concentration (MCHC)						●						
Mean Corpuscular Volume (MCV)						●						
Mean Platelet Volume (MPV)						●						
Metanephrine												●
Methotrexate										●		
Microalbumin												●
Myoglobin		●										
Norepinephrine												●
Normetanephrine												●
Nortriptyline											●	
NSE								●				
NT-proBNP		●										
Osmolality			●									●
pCO <sub>2</sub>	●											
pH	●											
pO <sub>2</sub>	●											
Phenobarbital								●		●		
Phenytoin								●		●		
Phosphorus			●									●
Plasma Renin Activity (PRA)								●				
Platelets (PLT)						●						
Potassium	●		●									●
Prealbumin										●		
Primidone											●	
Progesterone								●				
Prolactin								●				
Protein C			●									
Protein S			●									
Protein (Total)			●							●		●
PSA (Free)								●				
PSA (Free/Total Ratio)								●				
PSA (Total)								●				
PT			●									
Red Blood Cells (RBC)						●						
Red Blood Cell Distribution Width (RDW)						●						
Red Blood Cell Distribution Width (RDW-SD)						●						
Renin								●				
Rheumatoid Factor (RF)										●		

- Analyte present
- ◐ Pilot analyte

	Blood Gas	Cardiac Markers	Clinical Chemistry (Monthly)	Coagulation	Ethano//Ammonia	Hematology	Hemoglobin	Immunoassay (Monthly)	Lipids	Serum Proteins	Therapeutic Drug Monitoring	Urine Chemistry
S100 Protein								●				
Salicylate											●	
Sex Hormone Binding Globulin (SHBG)								●				
Sodium	●		●									●
T3 Uptake								●				
T-Uptake								●				
Testosterone								●				
Theophylline								●			●	
Thrombin Time (TT)			●									
Thyroid Stimulating Hormone (TSH)			●					●				
Thyroxine Binding Globulin (TBG)								●				
Thyroxine (FT <sub>4</sub> ), Free			●					●				
Thyroxine (T <sub>4</sub> ), Total			●					●				
Tobramycin											●	
Transferrin								●		●		
Tricyclic Antidepressants (TCA) Screen											●	
Triglycerides			●						●			
Triiodothyronine (FT <sub>3</sub> ), Free			●					●				
Triiodothyronine (T <sub>3</sub> ), Total			●					●				
Troponin I		●										
Troponin T		●										
Urea			●									
Urea Nitrogen			●									●
Uric Acid			●									●
Valproic Acid								●			●	
Vancomycin											●	
Vanillylmandelic Acid (VMA)												●
Vitamin B <sub>12</sub>								●				
White Blood Cells (WBC)						●						
Zinc			●									

## Ordering Information

Cat #	Configuration	Cat #	Configuration	
<b>Blood Gas Program<sup>1</sup></b>				
BC31	12 x 2.5 mL	BC80	12 x 0.5 mL	
<b>Cardiac Markers Program<sup>1</sup></b>				
BC39	12 x 1.5 mL	<b>Immunoassay (Monthly) Program</b>		
<b>Clinical Chemistry (Monthly) Program</b>				
BC50	12 x 5 mL	BC75	12 x 5 mL	
<b>Coagulation Program<sup>1</sup></b>				
BC34	12 x 1 mL	<b>Lipids Program<sup>1</sup></b>		
<b>Ethanol/Ammonia Program<sup>1</sup></b>				
BC35	12 x 3 mL	BC47	12 x 3 mL	
<b>Hematology Program<sup>1</sup></b>				
BC90A	Shipment A	3 x 2 mL	<b>Serum Proteins Program</b>	
BC90B	Shipment B	3 x 2 mL	BC23	12 x 1 mL
BC90C	Shipment C	3 x 2 mL	<b>Therapeutic Drug Monitoring Program</b>	
BC90D	Shipment D	3 x 2 mL	BC10	12 x 5 mL
<b>Urine Chemistry Program</b>				
			BC45	12 x 10 mL

<sup>1</sup>Aspects of the program are subcontracted from an approved supplier. Refer to myeinserts.com or the package insert for current analyte claims.



**Bio-Rad  
Laboratories**

For further information, please contact the Bio-Rad office nearest you or visit our website at [www.bio-rad.com/eqas](http://www.bio-rad.com/eqas)

Clinical  
Diagnostics Group

Website [www.bio-rad.com/qualitycontrol](http://www.bio-rad.com/qualitycontrol) Australia 61-2-9914-2800 Austria 43-1-877-8901 Belgium +32 (3)710-53-00 Brazil +55 (31)3689-6600 Canada 1-514-334-4372 China 86-21-61698500 Czech Republic 420-241-430-532 Denmark +45-4452-1000 Finland 358-9-804-22-00 France 33-1-47-95-60-00 Germany +49 (0)89-318-840 Greece 30-210-7774396 Hong Kong 852-2789-3300 Hungary +36-1-459-6100 India 1800-180-1224 Israel 972-3-9636050 Italy +39-02-216091 Japan 81-3-6361-7070 Korea 82-2-3473-4460 Mexico +52 (55)5488-7670 The Netherlands +31-318-540666 New Zealand 64-9-415-2280 Norway +47-23-38-41-30 Poland 48-22-3319999 Portugal 351-21-472-7700 Russia +7-495-721-1404 Singapore 65-6415-3170 South Africa 27-11-442-85-08 Spain 34-91-590-5200 Sweden +46-8-555-127-00 Switzerland +41 (0)26-674-55-05/06 Taiwan 886-2-2578-7189 Thailand 662-651-8311 United Kingdom +44 (0)20-8328-2000