



**EQAS**

**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 monitor 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 40 years.

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

- Large international database with participants from over 110 countries
- Fully 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 and Blood Typing Programs)
- Comprehensive analyte menus covering a wide range of diagnostic tests suitable for clinical labs and blood banks
- Analyte levels that challenge both normal and abnormal ranges
- Reference Method Values provided for select programs

# EQAS Program Overview

Contact your Bio-Rad representative to place your order and receive a unique laboratory number



Register your test methods



Specimen Package is shipped to you

## Getting Started

- Select and enroll in your desired EQAS programs
- Configure your lab information and register tests online or by using your smart phone
- Receive specimen package containing all twelve samples for a specific cycle (Hematology and Blood Typing samples are provided in multiple shipments)

## Testing Samples and Submitting Data

- Each EQAS sample is uniquely numbered for easy identification
- Submit results on time; Blood Typing samples should be tested with results reported as soon as they are received
- Sample due dates are provided in a number of places including the sample label, product insert, EQAS Online and the EQAS Calendar on QCNet.com

Test the appropriate EQAS sample as a patient sample



Submit your results in a timely manner



Receive and review your confidential Sample Report

Implement corrective measures based on laboratory performance



Continue process for entire program cycle

## Reviewing Reports and Troubleshooting

- Securely access your laboratory specific sample report online within three days of the statistical analysis
- A Certificate of Registration will accompany your Sample 1 Report
- For help interpreting your EQAS reports, view the tutorial on QCNet.com, or seek assistance from your knowledgeable Bio-Rad representative

Receive an End-of-Cycle Report\*



Earn a Certificate of Performance

Earn a Certificate of Achievement

## Program Cycle Completion

- The End-of-Cycle Report provides an overall assessment of your laboratory's performance in terms of bias
- A Certificate of Performance lists all analytes that passed the performance criteria for the cycle
- A Certificate of Achievement is issued to you if a minimum amount of acceptable data has been submitted for the cycle



\*Provided for quantitative programs only.



## 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, including a Troubleshooting Checklist, reference method values and customer notifications. It also provides entry to EQAS Online, where you can manage your contact details and test configurations, submit your results and view or print all your 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.



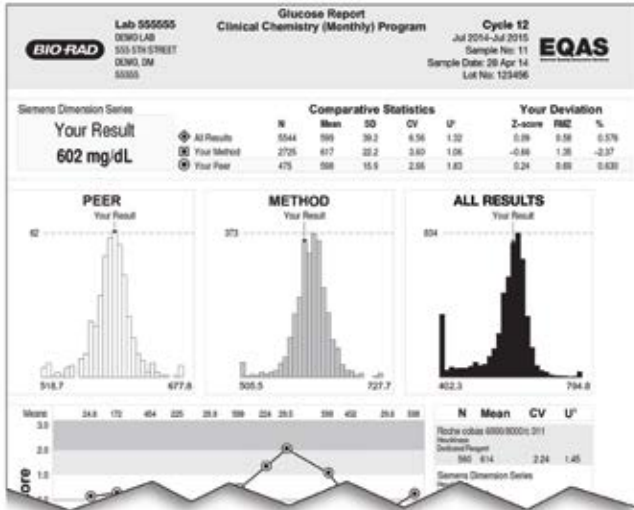
### Submitting Results via EQAS Online/Mobile

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.

## Quantitative Reports



### Sample Report

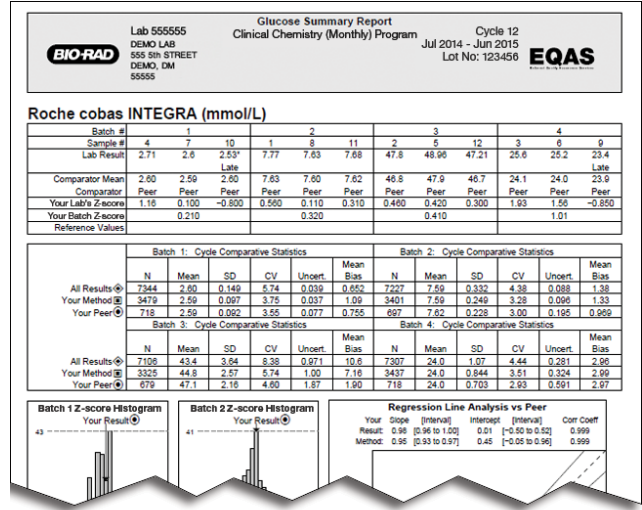
Detailed individual statistical analyses and peer group comparisons are provided.

## Qualitative Report



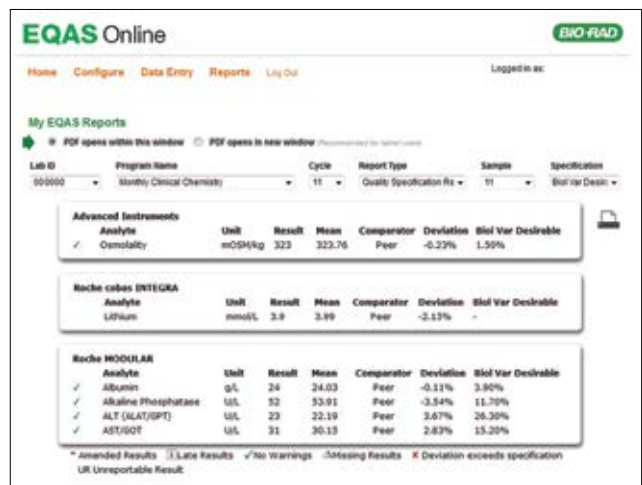
### Sample Report

These reports provide clear and concise information about your qualitative test laboratory performance in the form of histograms and modified Levey-Jennings charts. They include detailed information about the distribution of the qualitative responses and the peer group consensus.



### End-of-Cycle Report

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



### Quality Specification Report

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



# EQAS Programs

## Blood Gas Program



- Liquid, aqueous samples
- Comprehensive menu for external assessment of laboratory test 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

## Blood Typing Program



- Ideal for clinical lab, blood bank and transfusion center testing needs
- Barcoded and ready-to-use tubes for automated platforms
- 3 samples tested every 4 months
- Includes 3 case studies per year

### Parameters

ABO Group	<b>Pilot Analyte</b>
Antibody Identification	Antigen Typing
Antibody Screen	
Compatibility (Cross-match)	
DAT (Direct Antiglobulin Test)	
Rh(D)	

## Cardiac Markers Program



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

### Analytes

BNP	Myoglobin
CK-MB	NT-proBNP
D-dimer	Troponin I
Homocysteine	Troponin T
hs-CRP	

Refer to [myinserts.com](http://myinserts.com) or the package insert of currently available lots for specific analyte and stability 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)  
 Bile Acid  
 Bilirubin (Direct)  
 Bilirubin (Indirect)  
 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 (T4), Free  
 Thyroxine (T4), Total  
 Transferrin  
 Triglycerides  
 Triiodothyronine (T3), Free  
 Triiodothyronine (T3), Total  
 Urea  
 Urea Nitrogen  
 Uric Acid  
 Zinc

## Coagulation Program



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

### Analytes

Antithrombin III (ATIII)  
 APTT  
 D-dimer  
 Factor VIII  
 Fibrinogen  
 INR

Protein C  
 Protein S  
 PT  
 Thrombin Time (TT)  
 Von Willebrand Factor (vWF)

## 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

### Parameters

Hematocrit (HCT)	Platelets (PLT)
Hemoglobin	Red Blood Cells (RBC)
Mean Corpuscular Hemoglobin (MCH)	Red Blood Cell Distribution Width (RDW)
Mean Corpuscular Hemoglobin Concentration (MCHC)	Red Blood Cell Distribution Width-SD (RDW-SD)
Mean Corpuscular Volume (MCV)	White Blood Cells (WBC)
Mean Platelet Volume (MPV)	

## Hemoglobin Program



- Lyophilized, human whole blood based
- Includes HbA<sub>1C</sub> and HbA<sub>2</sub>
- 12-month cycle
- Submit results for the appropriate sample every month
- **Reference Method Values** provided for Hemoglobin A<sub>1C</sub>

### Analytes

Hemoglobin A <sub>1C</sub>	Hemoglobin (Total Glycated)
Hemoglobin A <sub>2</sub>	

## HIV/Hepatitis Program



- Liquid, human source material
- Suitable for serological tests used to detect key HIV and Hepatitis viral antibodies and antigens
- Qualitative and quantitative results reporting available
- Submit results and view reports each month through EQAS Online

### Analytes

Anti-HAV	Anti-HTLV-I
Anti-HBc	HAV IgG
Anti-HBe	HAV IgM
Anti-HBs	HBc IgM
Anti-HCV	HBeAg
Anti-HIV-1	HBsAg
Anti-HIV-1/2	HIV-1 Ag
Anti-HIV-2	

Refer to myinserts.com or the package insert of currently available lots for specific analyte and stability claims.



## 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	DHEA	Phenobarbital	Thyroid Stimulating Hormone (TSH)
17- $\alpha$ -OH-Progesterone	DHEA Sulfate	Phenytoin	Thyroxine Binding Globulin (TBG)
25-OH Vitamin D	Digoxin	Plasma Renin Activity	Thyroxine, Free (FT <sub>4</sub> )
$\beta$ -2 Microglobulin	Estradiol	Progesterone	Thyroxine (T4), Total
ACE	Estriol, Free (UE <sub>3</sub> )	Prolactin	Transferrin
ACTH	Ferritin	PSA (Free)	Triiodothyronine, Free (FT <sub>3</sub> )
Aldosterone	Folate	PSA (Free/Total Ratio)	Triiodothyronine (T3), Total
Alphafetoprotein (AFP)	Follicle Stimulating Hormone (FSH)	PSA (Total)	Valproic Acid
Androstenedione	Gastrin	Renin	Vitamin B <sub>12</sub>
C-Peptide	hCG	S100 Protein	<b>Pilot Analytes</b>
CA 15-3	hGH	Sex Hormone Binding Globulin (SHBG)	Calcitonin
CA 19-9	Immunoglobulin E (IgE)	T3 Uptake	Fructosamine
CA 27.29	Insulin	T-Uptake	Testosterone (Free)
CA 125	Intact PTH	Testosterone	
Carbamazepine	LH	Theophylline	
Carcinoembryonic Antigen (CEA)	NSE	Thyroglobulin (Tg)	
Cortisol			

## 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	<b>Pilot Analyte</b>
Apolipoprotein B	Cholesterol (non-HDL)
Cholesterol (HDL)	
Cholesterol (LDL)	
Cholesterol (Total)	
Lipoprotein (a)	
Triglycerides	

## 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  
**Pilot Analyte**  
 Anti-DNase B

## Syphilis/Chagas Program



- Liquid, human source material
- Suitable for serological tests detecting *Treponema pallidum*, Non-Treponemal and *Trypanosoma cruzi* antibodies
- 12-month cycle
- Qualitative and quantitative results reporting available
- Submit results and view reports each month through EQAS Online

### Analytes

Non-Treponemal Antibodies  
*Treponema pallidum* IgG

*Treponema pallidum* Antibodies  
*Trypanosoma cruzi* Antibodies

## Therapeutic Drug Monitoring Program



- Lyophilized, human serum 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

### 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

Refer to [myinserts.com](http://myinserts.com) or the package insert of currently available lots for specific analyte and stability claims.

## ToRCH/EBV/MuMZ Program



- Liquid, human source material
- Suitable for serological tests used to detect pediatric diseases and congenital infections
- Qualitative and quantitative results reporting available
- Submit results and view reports each month through EQAS Online

### Analytes

Cytomegalovirus (CMV) IgG  
 Cytomegalovirus (CMV) IgM  
 Epstein-Barr Virus (EBNA) IgG  
 Epstein-Barr Virus (VCA) IgG  
 Epstein-Barr Virus (VCA) IgM  
 Herpes Simplex Virus (HSV-1) IgG  
 Herpes Simplex Virus (HSV-1/2) IgG  
 Herpes Simplex Virus (HSV-2) IgG

Measles Virus (Rubeola) IgG  
 Mumps Virus IgG  
 Rubella Virus IgG  
 Rubella Virus IgM  
*Toxoplasma gondii* (Toxo) IgG  
*Toxoplasma gondii* (Toxo) IgM  
 Varicella Zoster Virus (VZV) IgG

## Urinalysis Program



- Liquid matrix
- Suitable for manual and automated dipstick analysis in both clinical and point-of-care testing (POCT)
- Submit qualitative results and view reports each month through EQAS Online

### Analytes

Albumin  
 Albumin-to-Creatinine Ratio  
 Bilirubin  
 Blood/Hemoglobin  
 Creatinine  
 Glucose  
 Ketones  
 Leukocytes

Nitrite  
 pH  
 Pregnancy (hCG)  
 Protein (Total)  
 Protein-to-Creatinine Ratio  
 Specific Gravity  
 Urobilinogen

## 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)  
 Calcium (Total)  
 Chloride  
 Cortisol (Free)  
 Creatinine  
 Dopamine

Epinephrine  
 Glucose  
 Homovanillic Acid (HVA)  
 Magnesium  
 Metanephrine  
 Microalbumin (Albumin)  
 Norepinephrine

Normetanephrine  
 Osmolality  
 Phosphorus  
 Potassium  
 Protein (Total)  
 Sodium

Urea Nitrogen  
 Uric Acid  
 Vanillylmandelic Acid (VMA)  
**Pilot Analyte**  
 Urea

Refer to myelnserts.com or the package insert of currently available lots for specific analyte and stability claims.

## Ordering Information

Cat #	Description		
<b>Blood Gas Program*</b>			
BC31	.....	12 x 2.5 mL	
<b>Blood Typing Program*</b>			
		<i>Sample</i>	<i>Donor</i>
12000837	Shipment A	.....	3 x 4 mL + 1 x 2 mL
12000838	Shipment B	.....	3 x 4 mL + 1 x 2 mL
12000839	Shipment C	.....	3 x 4 mL + 1 x 2 mL
<b>Cardiac Markers Program*</b>			
BC39	.....	12 x 1.5 mL	
<b>Clinical Chemistry (Monthly) Program</b>			
BC50	.....	12 x 5 mL	
<b>Coagulation Program*</b>			
BC34	.....	12 x 1 mL	
<b>Ethanol/Ammonia Program*</b>			
BC35	.....	12 x 3 mL	
<b>Hematology Program*</b>			
BC90A	Shipment A	.....	3 x 2 mL
BC90B	Shipment B	.....	3 x 2 mL
BC90C	Shipment C	.....	3 x 2 mL
BC90D	Shipment D	.....	3 x 2 mL

\*Aspects of the program are subcontracted from an approved supplier. Refer to myinserts.com or the package insert for current analyte claims.

Cat #	Description	
<b>Hemoglobin Program</b>		
BC80	.....	12 x 0.5 mL
<b>HIV/Hepatitis Program</b>		
12000815	.....	12 x 2 mL
<b>Immunoassay (Monthly) Program</b>		
BC75	.....	12 x 5 mL
<b>Lipids Program*</b>		
BC47	.....	12 x 3 mL
<b>Serum Proteins Program</b>		
BC23	.....	12 x 1 mL
<b>Syphilis/Chagas Program</b>		
12000833	.....	12 x 1.5 mL
<b>Therapeutic Drug Monitoring Program</b>		
BC10	.....	12 x 5 mL
<b>ToRCH/EBV/MuMZ Program</b>		
12000825	.....	12 x 2 mL
<b>Urinalysis Program</b>		
12000810	.....	12 x 12 mL
<b>Urine Chemistry Program</b>		
BC45	.....	12 x 10 mL

### EQAS

An independent, external assessment of performance in comparison to your peers.

[QCNet.com/eqas](http://QCNet.com/eqas)

### Independent QC

Ongoing, proactive, unbiased daily QC that helps identify errors as they occur or begin to trend.

[QCNet.com/independentqc](http://QCNet.com/independentqc)

### Unity

QC Data Management tools that help you create a strategy to reduce risk and streamline QC workflow.

[QCNet.com/datamanagement](http://QCNet.com/datamanagement)

**BIO-RAD**

**Bio-Rad  
Laboratories, Inc.**

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

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