

USER MANUAL



Biomeme Cloud User Manual

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Table of Contents

Table of Contents	2
Logging In and Out	3
To log in	3
To log out	3
Changing Your Password	3
How to Select Runs to View	3
How To Use Chart View	4
Selecting and Deselecting Runs to Display by Using the Grid	4
Analysis Modes	5
Multi Threshold (default)	5
Detailed Data View	8
How To Download Your Data	9
How To Print Your Data	10
How To Use Sample Management	10
Biomeme Cloud Subscription	12
Biomeme Cloud Security Statement	13
Disclaimer	14

Logging In and Out

To log in

1. Navigate to cloud.biomeme.com in your web browser
2. Enter your email address and password (both are case sensitive)
 - a. Click the **Login** button



Note: If you have forgotten your password, click “Forgot Password” or email support@biomeme.com.

To log out

1. Click on **Logout** (located in the upper left)

Changing Your Password

1. Login following the directions above
2. Click **Settings** in the upper right hand corner
3. Click on **Change Your Password**
4. Create your new password
 - a. Note that your new password must meet the listed requirements

How to Select Runs to View

1. Login following the steps above
2. If you are part of multiple teams, select the desired team.
3. Click on the **Folder** containing your run data (if applicable)

4. Select the **Runs** you wish to view (may select up to 10 at once)
5. Once you have chosen the runs to view, click on **Chart View** in the bottom right hand of the page
6. Select **Single Threshold**, **Multi Threshold**, or **Reprocessed** view. You can change this at any time. **Multi Threshold** is the default view. See below for more information regarding the thresholds

How To Use Chart View

Selecting and Deselecting Runs to Display by Using the Grid


Chart View will display all selected runs on one chart

1. The runs you selected to view will be listed on the left hand side in bold typeface
2. You can select and deselect whole run data to display at anytime by checking or unchecking the box next to the name of the run
3. You can select or deselect individual fluorescent channel data or even individual well data by clicking on the corresponding row, column, or cell in the Grid under the run name. Blue row, column, and cell data is being displayed.

	All	1	2	3	4	5	6	7	8	9
● G										
● A										
● R										

Analysis Modes

You can change your Analysis mode at any time by:

1. Clicking on the  icon to the right of **Analysis Mode**
2. Selecting the desired analysis mode

Multi Threshold (default)

In this default mode, Biomeme’s algorithm thresholds for each of the targets individually. This is the analysis mode we recommend for users not experienced in setting their own thresholds.

Reprocessing

Use the sliding bar beneath the amplification plots to select data points that should be considered “background” (i.e. pre-amplification and free from significant non-linear trends).



Click “Apply Changes” to reprocess the data with your selected background. Different background points can be used for each curve by

selecting and deselecting data in the Grid. The left and right bounds of the background (Left Value and Right Value) for each target are summarized in Tabular Data.

Single Threshold

This analysis mode sets one threshold per fluorescence channel and applies these thresholds to all selected runs. Users have the ability to edit the generated thresholds and apply the modifications to all runs. All Cq values are then recalculated using the new thresholds.

Edit Thresholds ^

● GREEN	20.86
● AMBER	25.69
● RED	28.75

Apply

View Options:

Baseline View (default)

 **Baseline**
 Raw
 Tabular Data

This our default view, which displays your fluorescence data processed through our algorithm. Hovering your mouse over a run will display the Run Name, Well Number, Sample ID, and Cq Value

Raw View

 Baseline  Raw  Tabular Data

Plots your raw fluorescence data without applying our algorithm. Hovering your mouse over a run will display the Run Name, Well Number, Sample ID, and Cq Value. We do not recommend this view for users inexperienced in PCR data analysis

Tabular View




 Baseline  Raw  Tabular Data

Presents your data in a tabular format rather than by plotting a graph. (Note: In multi threshold analysis mode, threshold values are able to be directly modified by clicking in the cell you wish to change, entering the desired value, and then clicking outside the cell)

Filter All Runs

Filter All Runs



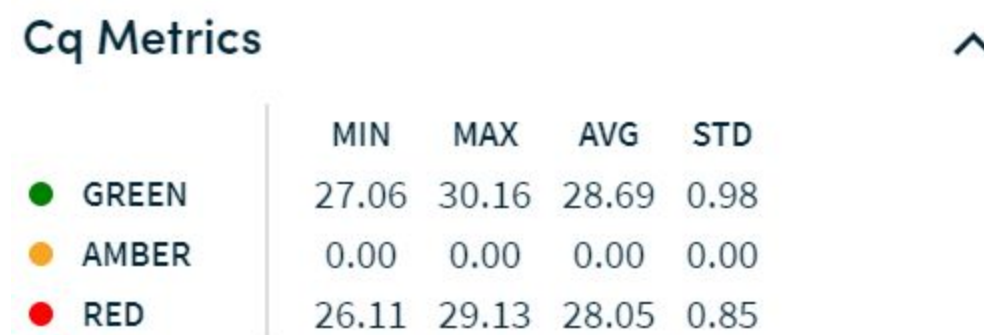
	All	1	2	3	4	5	6	7	8	9
	G									
	A									
	R									

Apply Filter

You can apply the same filter to all of your currently viewed runs by clicking on **Filter All Runs** in the upper right hand corner of the screen. Any filtering you

apply to this Grid will immediately be applied to the chart display for all currently viewed runs. For example, in the displayed image the Amber channel has been deselected for all runs. For more information on the Grid, please see pg 4 above.

CQ Metrics




	MIN	MAX	AVG	STD
● GREEN	27.06	30.16	28.69	0.98
● AMBER	0.00	0.00	0.00	0.00
● RED	26.11	29.13	28.05	0.85

You can view the following summary Cq metrics for all enabled targets, by fluorescence channel: Min, Max, Avg, Standard Deviation. To view these metrics:


1. Click on **Cq Metrics** on the left hand side of the screen
2. Select or deselect the runs you would like included in the calculations by checking or unchecking the box next the run name

Detailed Data View

Pressing the  button allows you to see the protocol, device, and metadata for each run. To enable or disable a run, check or uncheck the box next to the run name on the left hand side of the page. You can download the

run details in xlsx format by clicking the **Download Data** button at the bottom of the **Detailed Data View** page and selecting the data you wish to download


How To Download Your Data

1. Click the  button in the upper right hand corner of the page
2. Choose either **Download Data** or **Download Chart**
 - a. Download Data will then ask you to select which runs' data you wish to download and whether you prefer **Detailed** or **Summary** data. Your selected data will then be downloaded as an XLSX file. The **Detailed** xlsx contains all fluorescence data of each run along with Cq and protocol data. **Summary** exports a consolidated table of Cq data for all the runs selected.
 - i. You can also download your detailed data by following the steps above in the **Detailed Data View** section
 - ii. **Note:** If you have multiple runs selected, the data for all selected runs will be downloaded into one xlsx file with different sheets for each respective run. If you prefer to have individual runs downloaded into individual files, ensure that only one run is selected before downloading the data.
 - b. Download Chart will download the chart currently displayed in Chart View as a PNG file named chart.png



Note: All downloaded charts will be named chart.png, chart(1).png, chart(2).png, etc. We recommend that you rename the chart files as you download them to aid in your data organization efforts.

How To Print Your Data


To print the run data for a specific run, click  underneath the desired run name on the left side of the page. A preview of the page will appear. The printed run data will include:

- Run Type (Quantitative, Qualitative, ISO, Melt Curve)
- Run Name
- Fluorescence Chart
- Table with Cq values by Well and Channel
- Protocol Name
- Sample ID
- Notes

How To Use Sample Management

Sample Management uses Sample Layouts and Sample QR Codes. Sample Layouts define sample metadata parameters and default values, which can be used to create a sample metadata record. Sample QR codes are scanned when setting up a run and can be used to track samples in greater detail while reducing the risk for human error.

Sample Layouts

1. Select **Sample Management** on the left side of the screen
2. Click on the New Layout  button
3. Add the Data Fields you would like to track and submit:

[← Back to Sample Management](#)

Create Sample Layout

Layout Name
Brook Trout

Field Name	Type	Default Value	Optional?	Delete
Date	Date (yyyy/mm/dd) ▼		<input type="checkbox"/> Yes	DELETE
Location	Text ▼		<input type="checkbox"/> Yes	DELETE
	Text ▼		<input type="checkbox"/> Yes	DELETE

[Add Row](#)

[Submit](#)

Sample QR Codes

1. After you have submitted your Sample Layout, click on the Layout for which you want to generate QR codes
2. Select **+ Create QR Code**

Sample Layouts Sample QR Codes [+ New Layout](#)

LAYOUT NAME	DATE CREATED ▲
Brook Trout	2019/10/21 4:33 PM ^

Date date	Location text	Scientist text
+ Create QR Code	Edit Layout	Delete

3. Add the desired sample metadata values to be associated with this QR code and click on **Finish and Submit**

QR Code 1


Date
2019/10/24


Location
Bear Lake

Scientist
Andrew

Name
BLBT

Short Name
BT



4. Click on the name of the desired QR Code
5. Select the Print  button
6. Choose either 1” x 1” labels or 8.5” x 11” sheet
7. Print and scan the Sample QR Code when setting up your run!

Biomeme Cloud Subscription

Biomeme Cloud is sold as an annual subscription service that provides you with a base plan of 1 team consisting of 3 users. Additional users can be added for \$99 per year, up to 10 users. If you are interested in adding additional teams please contact orders@biomeme.com for a custom quote.

Biomeme Cloud Security Statement

The Biomeme Cloud ecosystem has been designed for security and data integrity. Databases are securely stored with industry standard AES-256 encryption. All Cloud connections require HTTPS connections. The Cloud ecosystem is deployed within a virtual private cloud with minimal access to the external cloud system further isolating and protecting the system.

Biomeme Cloud users must always be authenticated using stringent password requirements.

- Forced SSL connections
- Network limited access to the database
- Virtual private cloud
- Fully authenticated API
- Minimum password requirements
- Original data is always stored
- Original data cannot be overwritten

REFERENCES

AES-256 encryption: <https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Overview.Encryption.html>

Client-side SSL certificates: <https://docs.aws.amazon.com/apigateway/latest/developerguide/apigateway-control-access-to-api.html>

Lambda security overview: <https://d1.awsstatic.com/whitepapers/Overview-AWS-Lambda-Security.pdf>

Disclaimer

For Research Use Only. Not for use in human or veterinary diagnostics.

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