685 Route 202/206
Bridgewater, NJ 08807
www.repligen.com

PATsmart™ REBEL® System

Range Finding Tool

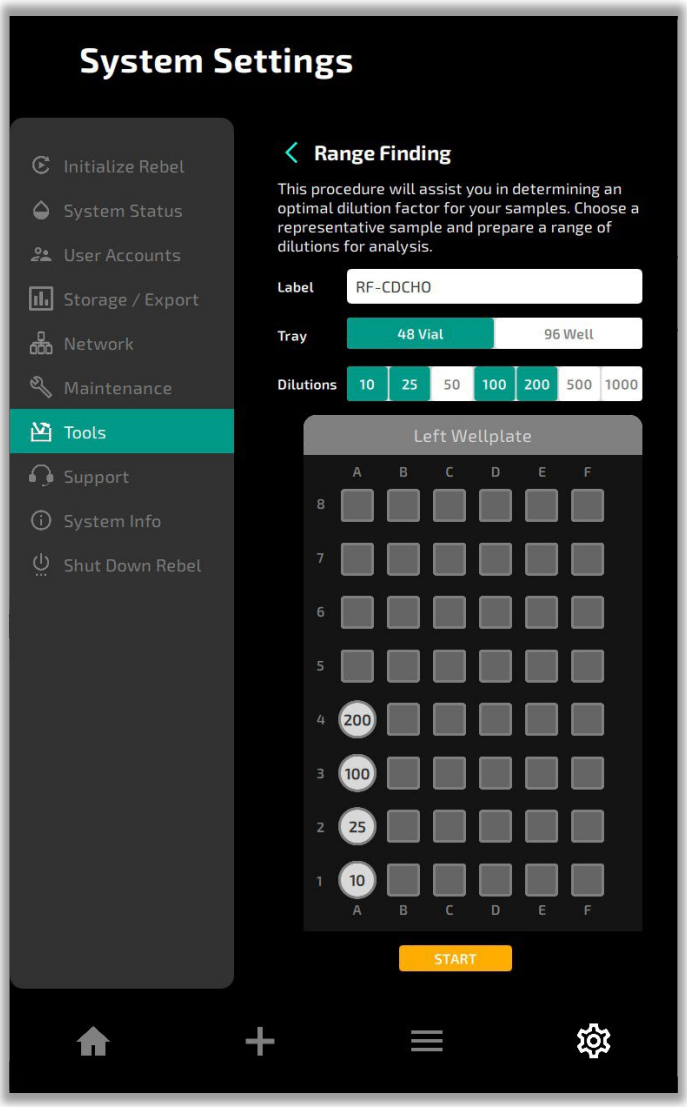
Software Version 1.2 and higher

What is it?

The dilution factor you use to prepare samples with PATsmart™ REBEL® diluent is critical to quantitative performance. This feature assists in determining an optimal dilution factor for your samples. When you embark on a study with a new medium or a new application, that's the time to perform a range finding exercise and now there is an embedded tool to kickstart your project.

Let's get started

- **Confirm that all consumables are within the recommended shelf life* and waste is empty.**
- **The REBEL must have a passing Quantitative Calibration to execute Range Finding.**
- In System Settings, select **Tools**.
- Under Advanced, press **Range Finding**.
- Press the label field to designate a label for your range finding batch.
- Indicate if the samples will be prepared in either a 48-vial tray or 96-well plate.
- Select the dilution factors you wish to evaluate for your new sample type.
- Prepare one vial or well matching each dilution factor in the positions shown on screen.*
- Place the sample tray or well plate in the left sample tray in the REBEL and replace the cooling cover.
- Press 'START'.
- Success confirmed with message 'Range Finding batch successfully added to queue.' Select OK.
- Press 'START' on Home Screen to kick off the run.

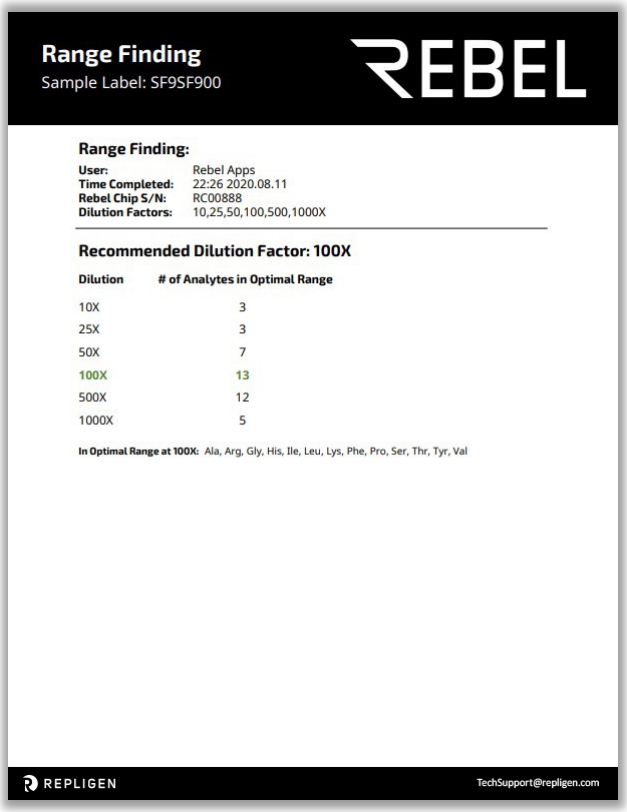


**Refer to* Consumables Lifetime Guide and Sample Preparation Guides *available on the [Repligen Knowledge Base](#).*

685 Route 202/206
Bridgewater, NJ 08807
www.repligen.com

How to interpret our Range Finding Report

- When the batch completes, a report in CSV and (if enabled) PDF format will be generated along with the results you are familiar with from the REBEL. These reports are labeled “DilutionReport”.



Range Finding
Sample Label: SF9SF900

REBEL

Range Finding:

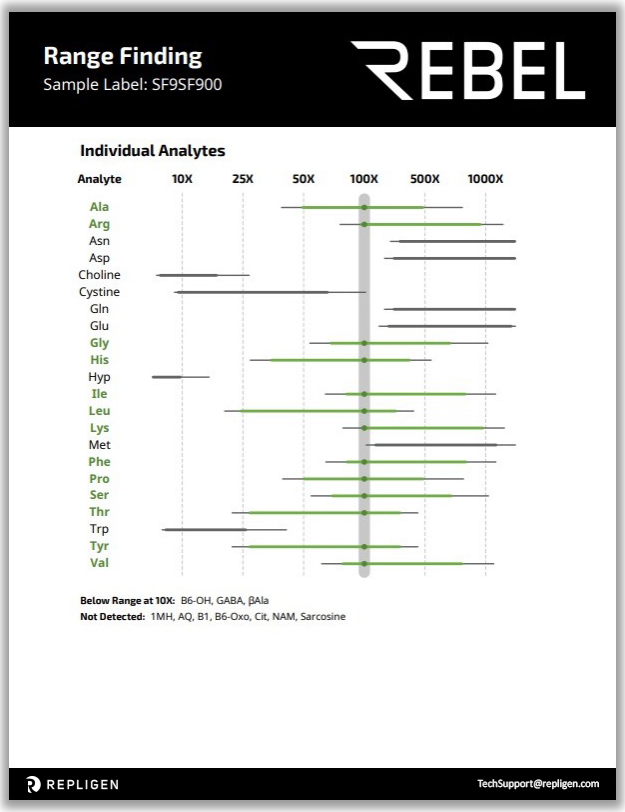
User: Rebel Apps
Time Completed: 22:26 2020.08.11
Rebel Chip S/N: RC00888
Dilution Factors: 10,25,50,100,500,1000X

Recommended Dilution Factor: 100X

Dilution	# of Analytes in Optimal Range
10X	3
25X	3
50X	7
100X	13
500X	12
1000X	5

In Optimal Range at 100X: Ala, Arg, Gly, His, Ile, Leu, Lys, Phe, Pro, Ser, Thr, Tyr, Val

REPLIGEN TechSupport@repligen.com



Range Finding
Sample Label: SF9SF900

REBEL

Individual Analytes

Below Range at 10X: B6-OH, GABA, βAla
Not Detected: 1MH, AQ, B1, B6-Oxo, Cit, NAM, Sarcosine

REPLIGEN TechSupport@repligen.com

- **Page 1** gives a recommended dilution factor for samples similar to the one that you analyzed. This dilution factor is chosen to maximize the number of target analytes detected within the optimal range for measurement.
- **Page 2** presents more detailed information about the Range Finding experiment. For each detected analyte, the chart shows the range of dilution factors for which it will likely be within the calibrated (thin bars) and optimal (thick bars) ranges for measurement. The analytes within the optimal range at the recommended dilution factor are highlighted in green.
- The information on **Page 2** can be used to fine tune the dilution factor based on the specific analytes you are interested in investigating. In this example, a user interested specifically in Asn and Asp may choose a 500x dilution factor for analysis in order to put those analytes within the optimal range.