

# honeybun



**UN**CHAINED  
LABS

## Let it flow

Honeybun is the only rapid viscosity system that pours out data as fast as you can handle it. Whether you've got one sample or ten, Honeybun sips microliters of each sample through a microfluidic channel to get a read on viscosities from 0.5–150 cP in minutes – with zero sample prep or clean-up. Ditch old school, one-at-a-time techniques that use too much sample and level up to the quickest, low-volume viscosity measurements out there.

**10** at time

**35**  $\mu\text{L}$  per sample

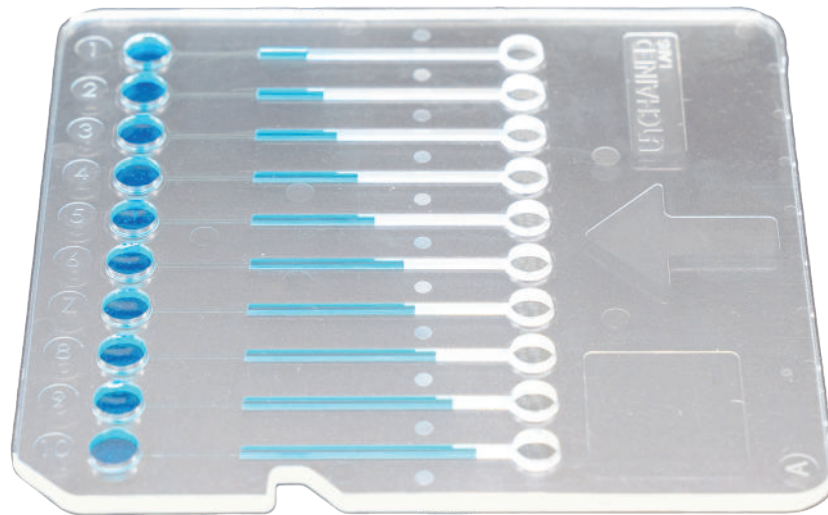
**1** minute runs ( $\leq 10$  cP)

Up to **150** cP



## Grab your bun

Load 35  $\mu\text{L}$  of up to 10 samples into a Bun consumable, insert and hit go – nothing to it. Honeybun then applies pressure to push the samples through the Bun’s microfluidic channels. While you watch them flow on live video, the software tracks how fast samples move through each channel to get you their viscosity. Gone are the days of filling syringes or cleaning expensive chips that are prone to clogging – these Buns are disposable.



**Sample Flow**

## Short and sweet

Fill in all the details about your samples if that's your jam or take the fast track – Honeybun's software will auto-fill everything so you can just start your run. Three clicks gets you through experimental setup and right to collecting data.

The screenshot shows the Honeybun software interface. At the top, there is a green header with the Honeybun logo and the word "Experiment". Below the header, the "Experiment name" field contains "Viscosity Experiment". The "Temperature" section has a "Target temperature (°C)" of 25.0 and a "Current temperature (°C)" of -. The "Samples & Settings" section is a table with 10 rows, each with a "Sample name" field and a "Mode" dropdown menu. The "Sample loading" section on the right contains instructions for the default mode: "Pipette 35  $\mu$ L of sample into the inlet reservoir. Ensure that the bottom surface of the reservoir is coated with fluid and that no air gaps are present." Below the text is a diagram of a blue pipette tip. At the bottom, there are buttons for "OPEN", "IMPORT", "EXPORT", and "START". A message "Please load your Bun in the instrument" is displayed next to the "START" button.

Sample name	Mode
Sample_1	Default
Sample_2	Default
Sample_3	Default
Sample_4	Default
Sample_5	Default
Sample_6	Default
Sample_7	Default
Sample_8	Default
Sample_9	Default
Sample_10	Default

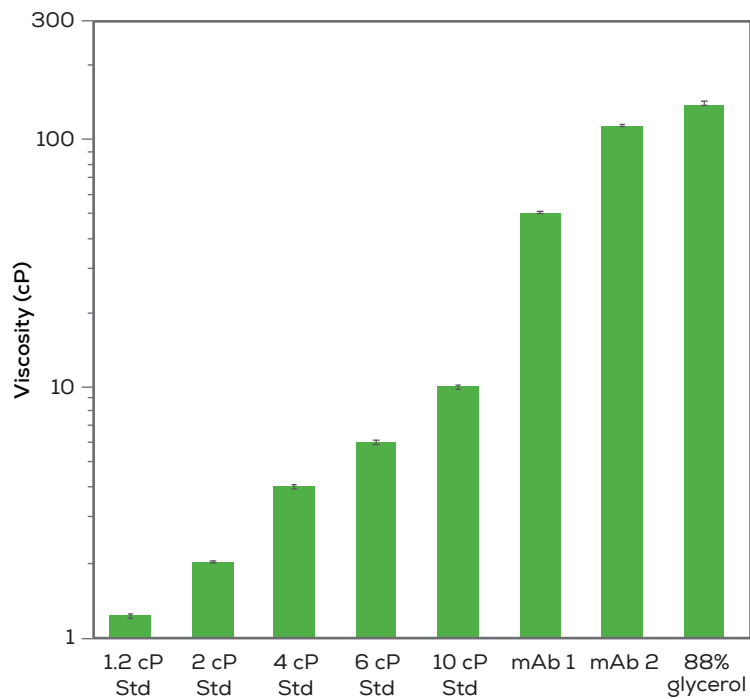
Default mode:  
Pipette 35  $\mu$ L of sample into the inlet reservoir. Ensure that the bottom surface of the reservoir is coated with fluid and that no air gaps are present.

OPEN IMPORT EXPORT START

Please load your Bun in the instrument

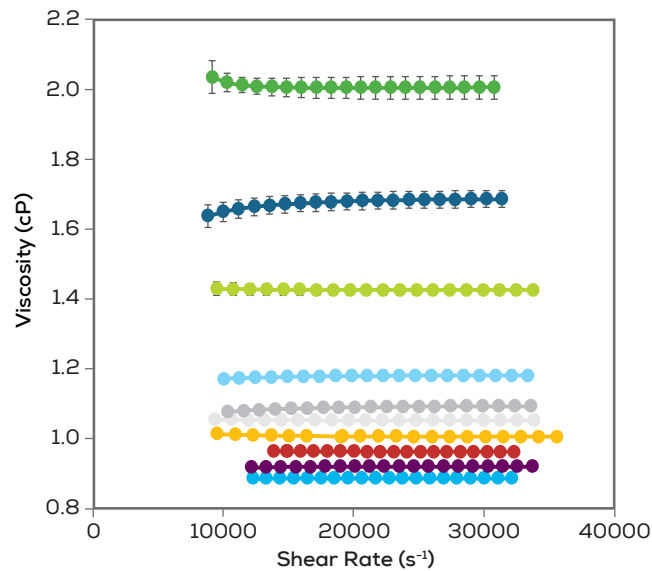
## Satisfy your craving

When you roll with Honeybun, you'll finally be stuffed full of all the sweet viscosity data that you need. Honeybun's speed and throughput make it easier than ever to gather viscosity any time you make a change in your protein, concentration or formulation.



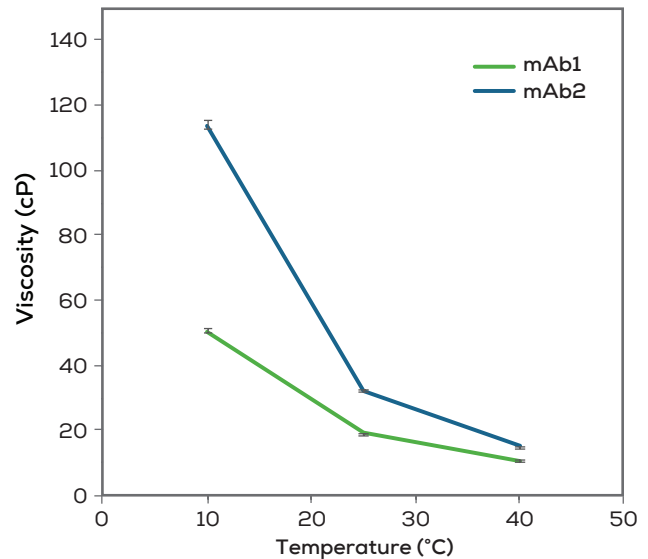
## Know your flow

Every experiment includes a sweep of shear rates in each channel so you can compare how each and every sample is flowing – Newtonian or not.



## Tasty at any temp

Control temp from 10 °C up to 45 °C so you'll always know how your sample behaves – straight out of the fridge, at room temp, or in the heat of manufacturing.



## Specifications

Instrument	Specification
Physical	Dimensions: 46 cm W x 45 cm D x 43 cm H; 28 kg
Computer	Separate computer with Windows 10 included
Electrical	Input voltage: 110–230 V AC 50–60 Hz Max power: 500 W
Nitrogen or compressed air requirements	Pressure: 6–10 bar (87–145 PSI) Flow rate: $\geq 10$ L/min Gas type: Nitrogen or ISO 8573-1:2010 [7:4:4] compressed air
Detection method	Camera: CMOS Resolution: 1920x1080
Approval	CE, FCC
Application	
Sample types	Antibodies and other proteins, vaccines, viral vectors and injectables
Sample temperature range	10–45 °C
Temperature control accuracy	$\pm 0.5$ °C
Viscosity range	0.5–150 cP
Viscosity accuracy	<3%
Viscosity precision	<3%
Consumable	
Bun material	Cyclic olefin copolymer
Samples per Bun	10
Recommended sample volume	35 $\mu$ L (default mode) or 15 $\mu$ L (low volume mode)
Measurement total time	$\leq 1$ min ( $\leq 10$ cP)



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