

# freestate

Small Molecule Preformulation



**UNCHAINED**  
LABS

## Kick your preformulation screening into high gear

Freeslate systems give you automated, high-throughput, end-to-end solutions to characterize every last physicochemical property of your drug candidates. They're completely configurable and built to take on the hard stuff. Churn through more structures and conditions earlier, find out what's worth formulating sooner and get to the best druggable form of your API pronto.

- Solubility screening
- Polymorph screening
- Powder dispensing
- Reaction screening



## Supercharge your workflow

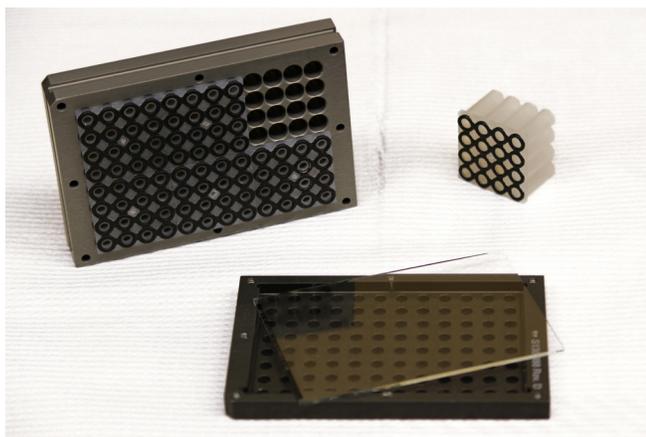
Freeslate lets you run hundreds of experiments in parallel with way less material, so deep exploration of your preformulation space is totally doable. Pick your variables, map out your workflow and get it all done on one system. See the big picture more clearly, discover clues and spot more advantageous variables and conditions.



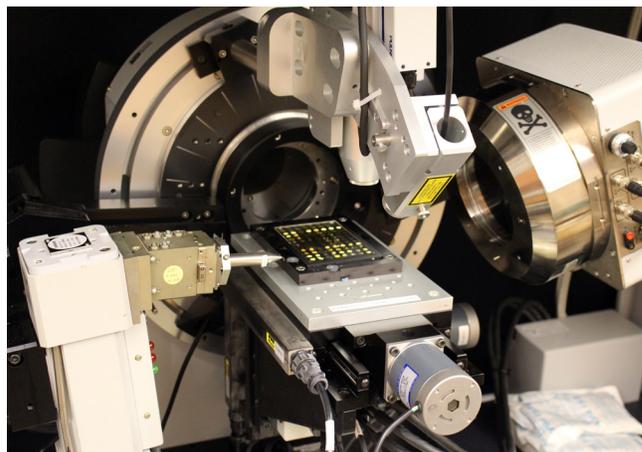
- |                                  |                                 |
|----------------------------------|---------------------------------|
| 1 Vial/plate gripper             | 6 3-Position heating/stirring   |
| 2 Balance with visual inspection | 7 3-Position heating/stirring   |
| 3 Powder dispense hopper rack    | 8 Heated filter block           |
| 4 Passive rack                   | 9 Heated 4-tip liquid dispenser |
| 5 Tip rack                       |                                 |

## Get your crystals on

Give the number of crystalline forms you can characterize on your API a big-time boost with freeslate's 8 x 12 array crystallization assembly. Heat or cool samples right on the deck. The universal substrate lets you analyze samples by birefringence, XRD and Raman spectroscopy without wrecking a single crystal.



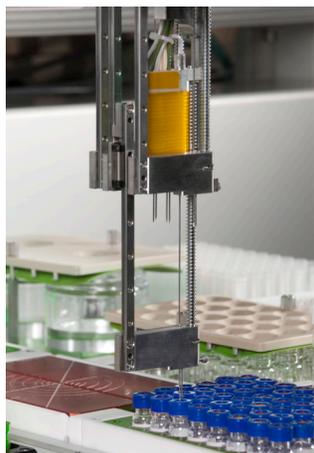
Crystallization assembly with universal substrate plate



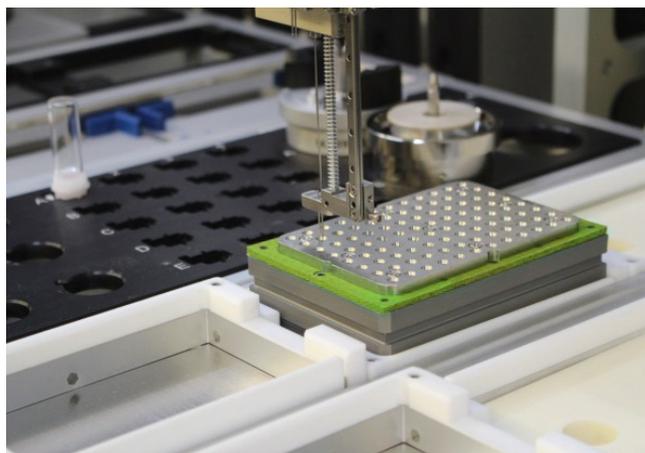
Integrated structural characterization by XRD

## Stay soluble

Freeslate's temperature-controlled pipetting and filtering help get your API's into solution. Keep them from precipitating on you when you add or remove reagents using a heated dispense element with septum piercing tips for sealed vials. A heated filter block with 96 isolated sample wells erases any chance of well-to-well cross contamination, so you can get the conditions just right.



Heated dispense element with septum-piercing tips



Crystallizer block for polymorph screening

## Go sticky or solid

Spot-on pipetting, dispensing and weighing of viscous and solid materials means you're accurately evaluating your formulated drugs. Freeslate's positive displacement pipetting handles the stickiest stuff out there – even at low volumes. Solid dispensers use an adaptive learning algorithm to accurately dispense and weigh powders. They also remember optimal settings so you get fast, reproducible dosing every time.



Viscous liquid  
dispenser handles  
up to 1000 cP



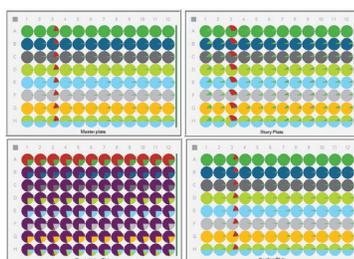
Classic Hopper  
uses active stirring  
for uniform flow rate



SV dispensers  
use vibration for  
precise delivery

## Break through bottlenecks

LEA doesn't move the bottleneck, it totally unclogs it. You get intuitive experimental design that makes sense on the front end and full integration with analytical tools on the back end. LEA also links your conditions, steps and analytical data together so your final report doesn't just have numbers, it's got all the information you need to make real decisions.

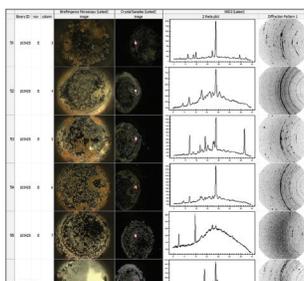


### Library Studio

Design complex, high-throughput experiments in an array-based format

### PolyView

Review and report all info from experimental design, execution and analytics



### Automation Studio

Execute designed experiments and integrated analytics



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