

Solid dispenser and ionizer

For Big Kahuna and Junior

Unchained Labs' powder dispense technology uses an algorithm that monitors and optimizes dosing parameters in real time. The dispense hoppers come in two flavors: the classic hoppers, with internal stirring wires to fluidize the powder and the SV hopper, dispensing solids directly from storage vials using a vibratory dispense head, which is ideal for small dispenses.

Specifications

10 mL Classic hopper, gravimetric dispense

Unchained Labs part number	Target*	Software tolerance band	Standard deviation	Accuracy	Average time
10 mL Classic hopper, 12 mm valve, 3 mm funnel (PN: SG131465-001)	2 mg	±2-5%	0.22 mg	1.3%	148 s
	10 mg		0.10 mg	1.5%	91 s
	25 mg		0.39 mg	2.7%	77 s
	50 mg		0.88 mg	1.6%	73 s
	100 mg		0.90 mg	1.5%	104 s
	150 mg		0.64 mg	1.6%	78 s

*Four replicates of silica gel (Sigma-Aldrich 236802).



SV hopper on a Big Kahuna arm



Classic hopper dispense heads



Classic hopper dispense head on a Big Kahuna arm

25 mL Classic hopper, gravimetric dispense

Unchained Labs part number	Target*	Software tolerance band	Standard deviation	Accuracy	Average time
25 mL Classic hopper, 8 mm valve, 3 mm funnel (PN: SG152436-004)	2 mg	±5%	0.10 mg	8.8%	56 s
	5 mg		0.23 mg	0.7%	120 s
	10 mg		0.59 mg	1.2%	89 s
	25 mg		0.42 mg	2.1%	68 s
	50 mg		0.34 mg	1.1%	96 s
	100 mg		1.09 mg	1.4%	83 s
	150 mg		2.26 mg	1.7%	153 s

*Four replicates of silica gel (Sigma-Aldrich 236802).

SV hopper, gravimetric dispense

Unchained Labs part number	Target*	Software tolerance band	Standard deviation	Accuracy	Average time
SV hopper (PN: SG154010)	2 mg	±2-5%	0.23 mg	15.8%	70 s
	5 mg		0.50 mg	1.0%	84 s
	10 mg		0.32 mg	1.7%	78 s
	25 mg		0.33 mg	0.5%	76 s

*Six replicates of caffeine (Sigma-Aldrich C0750).

Classic hopper options

The most common hopper options are listed below. Other hopper options may be available through custom orders.

Unchained Labs part number	Description
SG131465-001	10 mL powder dispense head. Valve: 12 mm; funnel: 3 mm ID x 4 mm OD
SG131465-004	10 mL powder dispense head. Valve: 8 mm; funnel: 3 mm ID x 4 mm OD
SG152436-001	25 mL powder dispense head. Valve: 12 mm; funnel: 3 mm ID x 4 mm OD
SG152436-002	25 mL powder dispense head. Valve: 12 mm; funnel: 6 mm ID x 7 mm OD
SG152436-004	25 mL powder dispense head. Valve: 8 mm; funnel: 3 mm ID x 4 mm OD
F162775-001	50 mL powder dispense head. Valve: 12 mm; funnel: 3 mm ID x 4 mm OD
F162775-002	50 mL powder dispense head. Valve: 12 mm; funnel: 6 mm ID x 7 mm OD
SG152402-001	100 mL powder dispense head. Valve: 12 mm; funnel: 3 mm ID x 4 mm OD
SG152402-006	100 mL powder dispense head. Valve: 8 mm; funnel: 2.1 mm ID x 2.6 mm OD

Disposable hopper options

Unchained Labs part number	Description
SG136950	Plastic 10 mL dispensing hopper. 12 mm valve, 3 mm funnel
SG145888	Plastic 50 mL dispensing hopper. 12 mm valve, 6 mm funnel
SG151057-10	SV hopper powder dispense head, pack of 10

Ionizer (PN: F158719, F00455)

Providing rapid neutralization of static charges and preventing electrostatic discharge, the ionizer bar is essential to solid dispensing with Big Kahuna and Junior.



Ionizer



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