

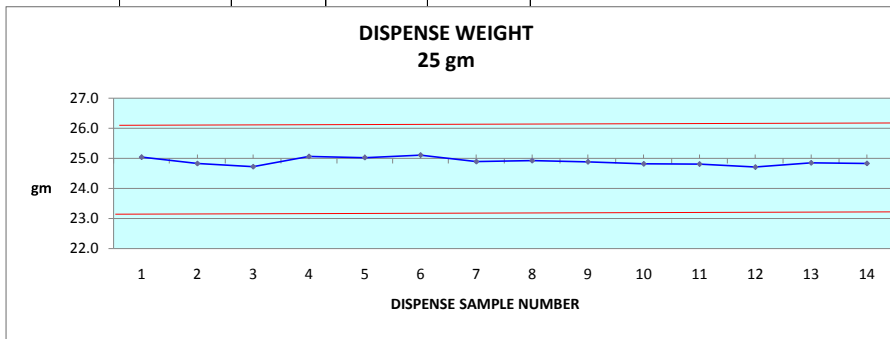
Customer		Contact		Date	07-Jan-11
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				Date	Test 2			
Material	Sodium Sulfate		Material condition		Bulk Density (gm/cc)	Tap Density (gm/cc)	Bulk Density (gm/cc)	Tap Density (gm/cc)
			Paticulate size	Fines	From Table	Measured	From Table	Measured
Desired Sample size	2 - 25 gm		Crystals >20 micron	>1%	1.6 -1.8	1.6428	1.8676	1.6 -1.8

Desired accuracy	+/-5%		rh	53%
Pipette Size	0.500 in. and special .562 in dia.		Filter Cup: Filter cup mesh	10 micron

Micrometer setting	0.40
Sample weight	Set
	25.0390
	24.8290
	24.7243
	25.0612
	25.0250
	25.1080
	24.8920
	24.9229
	24.8852
	24.8178
	24.8118
	24.7113
	24.8515
	24.8325
	24.8937
	24.8934
	0.1232

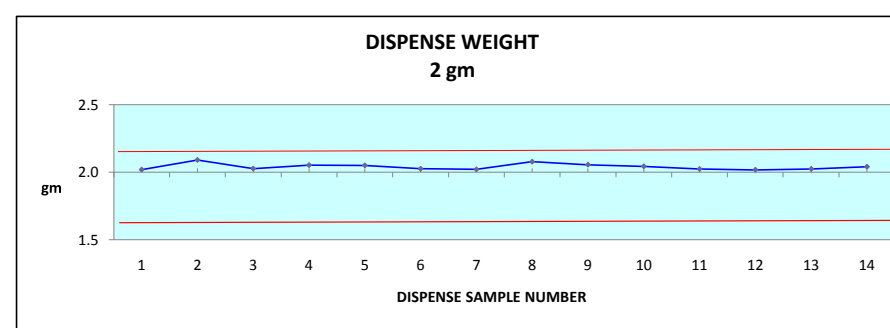
Control unit settings	
Vacuum (in hg)	12
Air (psi)	4



Cycle time (sec)	Aspirate	Level	Dispense	total
	2	1	1	4

25.1080	max	Range
24.7113	min	
1.6053	%	

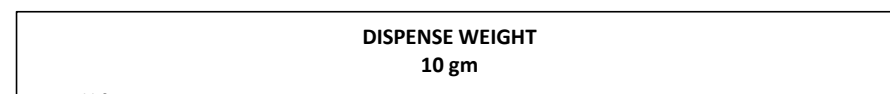
SET	2.0191	Range
	2.0907	
	2.0270	
	2.0528	
	2.0506	
	2.0257	
	2.0210	
	2.0777	
	2.0558	
	2.0438	
	2.0235	
	2.0182	
	2.0244	
	2.0405	



Cycle time (sec)	Aspirate	Level	Dispense	total
	1	1	1	3

2.0408	Av	Range
2.0407	Mean	
0.0227	Std Dev	
2.0907	max	Range
2.0182	min	
3.5923	%	

SET	10.0880	Range
	10.0834	
	10.1960	
	10.0070	

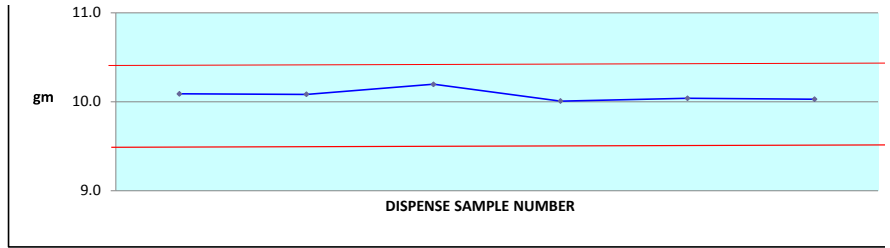


10.0378
10.0274

10.0733 | Av
10.0731 | Mean
0.0680 | Std Dev

10.1960 | max
10.0070 | min
1.8887 | %

Range



Cycle time (sec)	Aspirate	Level	Dispense	total
	1	1	1	3

Notes/observations

- 1a. Free flowing white crystals, easily aspirated and dispensed. Some fines <20 micron present. No issues dispensing 2- 25 gm doses.
 - 1b. Set up and calibration are straight forward.
 - 1c. Requires relatively low air pressure to eject sample from the pipette due to the high bulk density.
 - 1 d. Max. vacuum was used to ensure the pipette aspirated and held the powder. No effort made to find the lowest practical vacuum at the lower weight samples.

 - 2.0 Standard 0.500 dia tip used for 2 - 8 mg. Larger volume, 9 - 25 gm require extended length pipettes.
powder from the tip orifice
 - 3.0 **Aerosol:** No aerosol or loose crystals were observed during or after dispense.
- Summary: Easy material to pipette, even at the larger, 25 gm dispense weight. Pump has enough capacity with reserve.