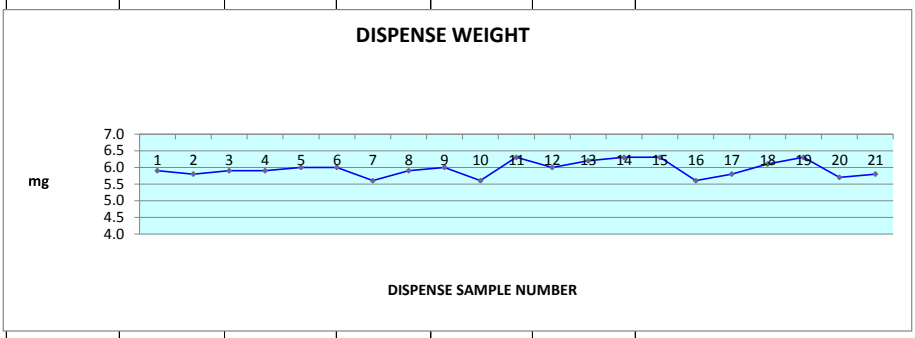
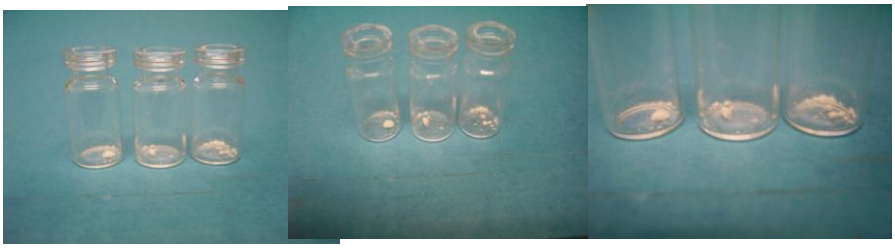
Customer		Contact		Date	30-Aug-10

					Date		Test 2		
Material	Powdered Sugar	Material condition		.5 mm	Bulk Density (gm/cc)		.1 mm	Bulk Density (gm/cc)	
		Paticulate size	Fines	From Table	Measured	Tap Density	From Table	Measured	Tap Density
Desired Sample size	6 mg tgt. wt.	Crystals >5 micron	>10%	NA	0.57	0.6	NA		
Desired accuracy	+/-10% Range= 5.4 - 6.6 mg (+/-.5 mg)	Dispense into 2 ml Wheaton Bottles		rh	49%				
Pipette Size	0.125 dia.	Filter Cup:		Filter cup mesh	10 micron				

Micrometer setting		Sample weight MG		Control unit settings Vacuum (in hg)	Air (psi)
		5.80		12	14
0.40	Set	**5.90**			
		5.80			
		5.90			
		5.90			
		6.00			
		6.00			
		5.60			
		5.90			
		6.00			
		5.60			
		6.30			
		6.00			
		6.20			
		6.30			
		6.30			
		5.60			
		5.80			
		6.10			
		6.30			
		5.70			
		5.80			
		5.95	Av		
		5.95	Mean		
		0.2337	Std Dev		
		6.3	High	Range	
		5.8	Low		
		7.94	%		
		#DIV/0!	Av		
		#NUM!	Mean		
		#DIV/0!	Std Dev		
			High	Range	
			Low		
			%		



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



Notes/observations

Powdered sugar (as an analog to the sodium cyanoborohydrite)

1a. White crystals, easily aspirated and dispensed. No issues dispensing into the customers bottles.
1b. Set up and calibration are straight forward.
1c. Requires relatively high air pressure to eject sample from the pipette due to the crystalline shape compacting.
1d. Tip pressure on leveling plate compacts the crystals so the sugar is expelled as a loose pellet.
Care must be exercised to ensure all powder proud of the tip orifice must be removed to minimize sample weight variation. See samples # 11 - 15 and 16 - 21.
1f. No special process efforts were taken to optimize the dispense weight variation as this powder is an analog and may vary in characteristics form the actual powder.
2.0 Standard 0.125 dia tip used for testing due to small dispense volume.
3.0 **Aerosol:** No aerosol or loose crystals were observed during or after dispense.
4.0 Under normal laboratory conditions, periodic cleaning, based on humidity. Tip/filter cleaning and changeover is <5 minutes.

Summary: Easy material to pipette, even at the small dispense weight. This powder is an analog and may vary in characteristics form the actual powder.