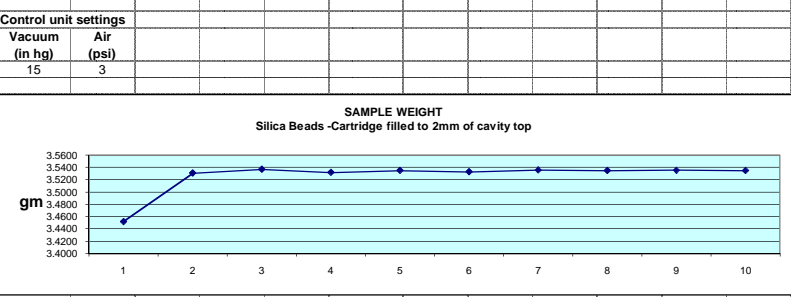


<b>Customer</b>						
<b>Material</b>	Silica bea	0.3 - 0.6mm dia.	Est. Bulk Density	0.9 gm/cc EST.	Date	06-Jun-06
	Carbon pellets	Aprox 0.05 mm X 0.5 mm		0.5 gm/cc		
<b>Desired Sample size</b>	Fill clients supplied cartridges to 1mm of cavity top			rh	55%	Ambient temp 74 deg F
<b>Desired accuracy</b>	+/-1.00% Repeatability samples			Pipette Size	Special Pipette sized to dispense into 4.42 diameter hole, 8.33 mm long	

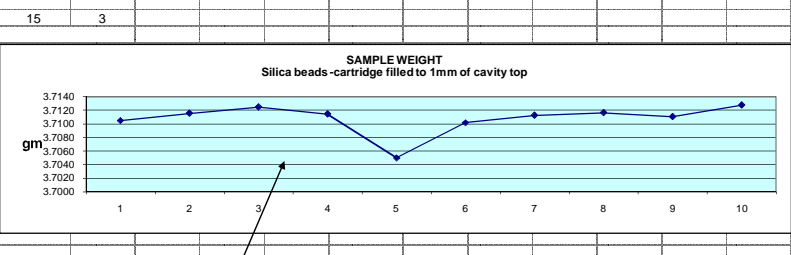
Micrometer setting	Sample weight gm
0.36 in.	
Funnel pipette	3.4525
82.2mm long	3.5312
	3.5373
	3.5325
	3.5355
	3.5333
	3.5360
	3.5352
	3.5358
	3.5350



**Note:**  
 Sample #1 was leveled. Discontinued for samples 2 - 10. Loss of sample volume due to beads rolling out of the pipette tip as it was passed over the grate.  
 Sample #1 vacuum was 6 in. hg increased to 15 in. hg to completely fill pipette due to bulk density  
 Small supplied sample requires emptying the cartridges after each 2 cycles and sifting of the powder. Causes Tap Density variations.

3.5346	Av
3.5346	Mean
0.0019	Std Dev

Micrometer setting	Sample weight gm
0.36 in.	
Funnel pipette	
Special Pipette, 82.2mm long	3.7105
	3.7116
	3.7125
	3.7115
	3.7050
	3.7102
	3.7113
	3.7117
	3.7111
	3.7128

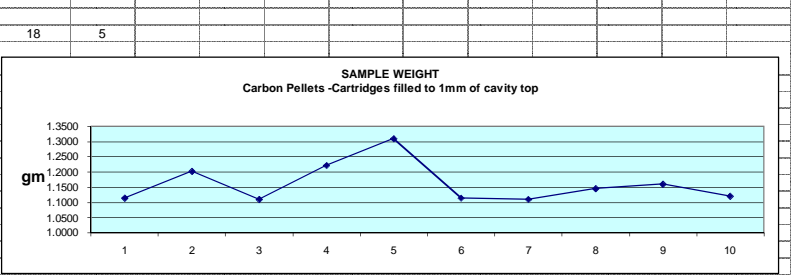


Knocked dross off tip before dispensing sample

**Notes:**  
 Sample #1 was leveled. Discontinued for samples 2 - 10. Loss of sample volume due to beads rolling out of the pipette tip as it was passed over the grate.  
 Small supplied sample requires emptying the cartridges after each 2 cycles and sifting of the powder. Causes Tap Density variations.

3.7108	Av
3.7108	Mean
0.0022	Std Dev

Micrometer setting	Sample weight gm
0.36 in.	
Funnel pipette	
Special Pipette, 82.2mm long	1.1150
	1.2021
	1.1104
	1.2220
	1.3100
	1.1148
	1.1106
	1.1457
	1.1601
	1.1213



**Note:**  
 First pass with carbon pellets. Will need to modify the pipette tip and adjust air pressure to ensure complete purge of the pipette tip.

1.1612	Av
1.1596	Mean
0.0656	Std Dev

**Notes:**  
 Silica beads pipette easily and smoothly. Absolutely no "blowback" of beads during filling. Filter paper exhausts air during filling.  
 Carbon Pellets are irregular in shape and do not pack the pipette uniformly. Additionally, tapping the cartridge settles the pellets increasing the space at the top of the cavity after filling. Need to pack or vibrate the pellets in the cartridge during filling.  
 Samples tended to lose volume due to beads rolling out of the tip using the scraper. Changes the tap density and or volume.  
 Suggest sharp edge or wire to level tip end for small samples.