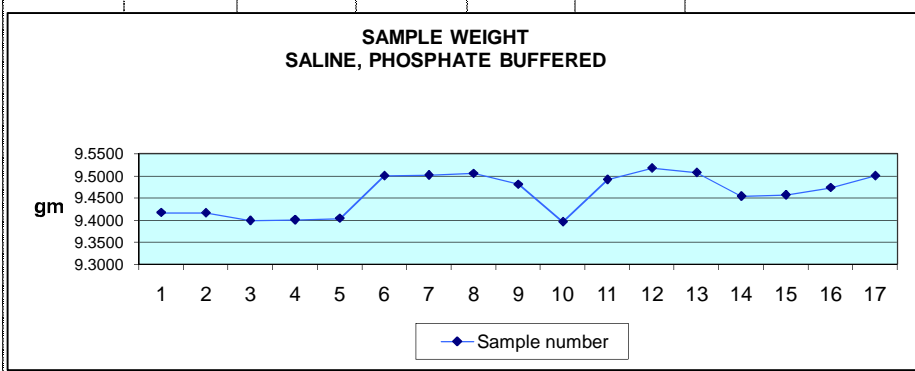


Customer				Date	04-Feb-08
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Contact						
Material	Saline, phosphate buffered		Material condition		Bulk Density (gm/cc)	
			Particulate size		From Table	Measured
Desired Sample size	9.4gm into 5ml vial (9.8 gm max)		50 - 100 micron		1.2 -1.3	1.27
Desired accuracy	Std +/- Best results		rh		55%	
Pipette Size	.500 dia., 10 cc pipette (Special length)		Filter Cup	Std Filter cup mesh	10 micron	

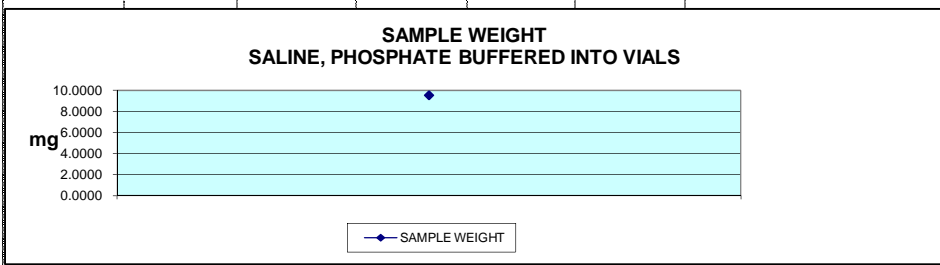
Micrometer setting	Sample weight
0.500 dia pipette	50 mg
0.9	9.4170
↓	9.4160
	9.3988
	9.4010
	9.4040
	9.4999
	9.5020
	9.5054
	9.4807
	9.3964
	9.4919
	9.5173
	9.5078
	9.4542
	9.4569
	9.4734
	9.5000

Control unit settings	
Vacuum (1in hg)	Air (psi)
20	5



Samples pipetted from bag to weigh boat on laboratory analytical balance.
 >Sifted powder prior to testing.
 >Very granular material. Some small diameter clumps as delivered. Material is hygroscopic.
 >Variation in grain size causes weight deviation .

Micrometer setting	Sample weight
0.9	9.5010
↓	9.5406
	9.5151
	9.5205
	9.5584
	9.4689



Weight shown is after vials were tared before dispensing powder.

Notes/observations	9.5174 Av
	9.5174 Mean
	0.0312 Std Dev
	9.5584 Range Hi
	9.4689 Low
	0.94 %

1. Free flowing powder with average angle of repose. Somewhat granular non uniform particulate material. Many clumps up to 1.5 mm dia. as delivered. Hygroscopic, moisture weight gain the longer the powder was exposed to the air.

Large variation in particulate size will cause sample weight variations >.5 - 1%.

2. Recommend high vacuum setting, >20 in hg or more, to pull and retain the large sample.
3. Sample will eject from pipette at 3-4 psi without blowback or flying dust particles.
4. Requires extra volume to accommodate 9.4 gm samples. Prototype pipette was fabricated to give a sample adjustment range of 9.0 - 11.5 gm
5. Sample cycle time: 4 - 5 seconds including leveling the excess material from the tip.
Should be approx 3 seconds if leveling step eliminated. Small impact, <1%, to repeatability
6. 6 bottles were filled to test dispensing process. The powder dispensed into the supplied glass vials easily with no blowback or loose particles.

Excellent candidate for pipetting