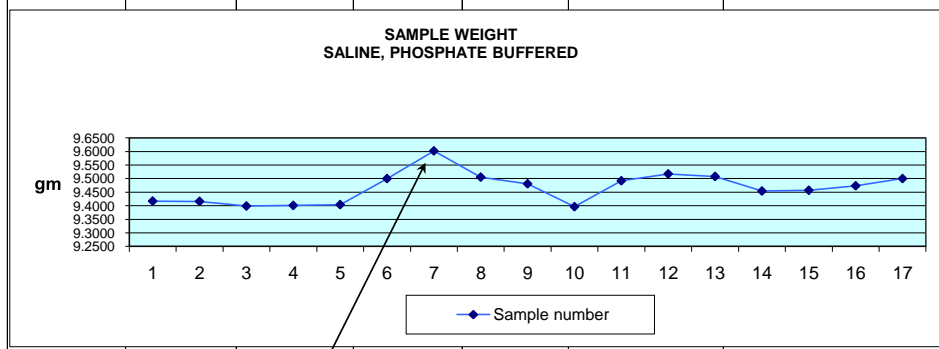


Customer	Contact	Date	04-Feb-08
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Material	Saline phosphate -buffered	Material condition	Bulk Density (gm/cc)		
		Particulate size	From Table	Measured	Tap Density
Desired Sample size	9.4gm into 5ml vial (9.8 gm max)	50 - 100 micron	1.2 -1.3	1.27	1.38
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	0.500 dia pipette	0.9
Sample weight	50 mg	
	9.4170	
	9.4160	
	9.3988	
	9.4010	
	9.4040	
	9.4999	
	9.6020	
	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)	20
Air (psi)	5

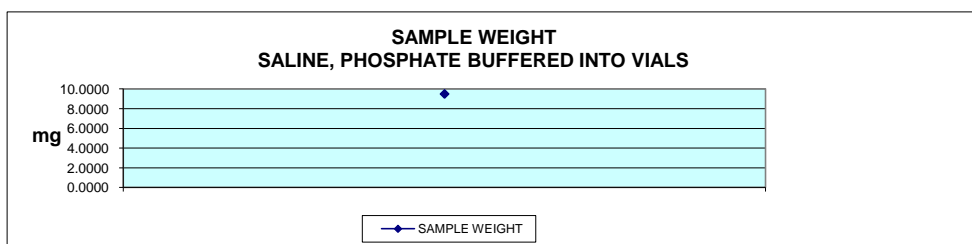


Bulk density change due to Pipette packing at bottom of supply vessel

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 hydroscopic, moisture
- >Variation in grain size causes weight deviation .

Micrometer setting	0.9
Sample weight	50 mg
	9.5010
	9.5406
	9.5151
	9.5205
	9.5584
	9.4689
	9.52
	9.52
	0.03



Weight shown is after vials were tared before dispensing powder.



Notes/observations

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.
Hydroscopic, 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. See photos, above
Excellent candidate for pipetting