



## Triple/S Dynamics, Inc.

1031 South Haskell Avenue

Dallas, TX 75223

800-527-2116

[www.sssdynamics.com](http://www.sssdynamics.com)

### TSD TEST REPORT — [REDACTED]

Test Date(s): [REDACTED]

Product: Infant formula powders, Product GE is free flowing, Product LH is not flowable and tends to lump

Customer: [REDACTED]

Equipment:

1. Dwg. # 8518-155, Tex-Flex RLUEB-18"W x 6"D x 8'-0"L with 304-2B Stainless Steel Pan
2. Dwg. # 8630-834, Slipstick HDC-8/3.0-30"W x 8"D x 40'-0"L with 304-2B Stainless Steel Pan
3. Dwg. # 8618-1432, Slipstick HDC-6/2.0 VS-18"W x 6"D x 8'-0"L with 304-2B Stainless Steel Pan
4. Dwg. # 8618-1367, Slipstick HDC-6/2.5 VS-18"W x 6"D x 10'-0"L with 304 #8 Stainless Steel Pan Liner

Purpose: Evaluate product segregation on Natural Frequency Vibratory Conveyor and Slipstick Horizontal Motion Conveyor. Check if product intermixing occurs during transport on Slipstick.

Lab Conditions: 70° F at 64% RH

Observations:

1. Product LH material built up a wavy crust quickly on HDC's with 2B finish, smooth coating on RLUEB. Product GE was better. It took a high stroke 3/8" and 890 CPM to dust while conveying on RLUEB. At 3/16" and 1060 CPM it moved OK without dusting but relatively slow ~15 ft/min? Dusting on infeed and discharge was similar to any drop from anything.
2. On HDCs, the coating would build up after one run and reduce travel rate and induce more Jelly action. If left open for an hour or 2, Product LH material becomes really hard.
3. HDC #2 was poor performance with a thin layer of product, especially if over a pre run crusty surface, 1 pass. HDC #3 was better, but still started to jelly on 3<sup>rd</sup> pass. Best results were on HDC #4 with #8 liner, 1.5" stroke at 268 CPM. Got 30+ ft/min travel rate. Product moved really well. Customer liked it.
4. Product GE is more solid with a higher angle of repose. Looks more like typical infant formula. Whereas LH is more powdery with a lower angle of repose, but more hygroscopic.



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5. Customer more concerned with segregation than degradation. Recommended low bed depth, no more than 4-5" and ideally 2-3" so the jelly effect is avoided.
6. We did the sprinkle test and it basically stayed up on top and elongated some as the pile spreads in line of action. Didn't sink down really.
7. We did a core test: leveled out material to approx. 2 in thick, made a hole, inserted 3" diameter cylinder. Filled with mix of cinnamon (20% lighter than the LH) and evened out with GE. Conveyed this about 20' ft and you could still see the top although the surrounding seemed to mound up slightly. Scraping the top level and then bisecting with a trowel revealed nice clean straight sides with clear definition of light cream and brown colors. Customer liked this a lot. See photo below.

#### Results:

Customer analyzed samples in their lab and reported the following:

*"As expected we did see some variation in the results but not significantly different when we check the blend uniformity, but when we compared the levels of the analytes which we tested, the Slipstick Conveyor reflected that the levels to be more consistent than the vibratory conveyor results"*

PRODUCT MANAGER:  
ADMINISTERED BY:  
REPORT DATE:





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No intermixing after conveying 20 feet on a Slipstick