

CASE STUDY: TT2 TUMBLER TRIAL PROTEIN POWDER DRINK

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OBJECTIVE:

To produce a chemically balanced mixture of all ingredients.

Consistency in mix and colour to be maintained throughout.

Tests by lab must prove correct distribution.

INGREDIENTS:

Whey Protein Isolate Milk, Flax Seed, Nutritional Yeast, Psyllium Husk, Apple Pectin, Steviol, Ground Sunflower Kernels, Coconut, Ground Chia Seeds and Coffee.

EQUIPMENT:

CM Process TT2 Tumbler
CM Process 400 lb Euro Buggy
CM Process Euro Buggy Weighscale









BLEND COMPONENTS





RESULTS:

TEST NUMBER	TEST LOAD (lb)	TUMBLER VELOCITY (%)	CW ROTATION DURATION (sec)	DWELL TIME (sec)	CCW ROTATION DURATION (sec)	NO. CYCLES #	TOTAL BLEND DURATION (sec)	COMMENTS AND OBSERVATIONS
TEST 1	365	100	10	5	10	1	25	Inconsistent mix. Colour test was incorrect throughout the mix
TEST 2	365	100	30	5	30	1	65	Colour test better on upper level, but slightly different on lower level.
TEST 3	365	100	45	5	45	1	95	Perfect mix at all levels. Colour test on all levels past and mix consistent was constant.

CONCLUSIONS:

TEST 1:

Was not enough to fully mix the ingredients.

TEST 2:

Saw improved results but slight colour discrepancy at lower level.

TEST 3:

Produced a perfect, consistent mix throughout with a perfect colour test at all levels. Chemical tests carried out at the lab confirmed this as a perfect batch.

365 lb of product can be mixed to very high standards in 95 seconds.





FINISHED PRODUCT

THE SINGLE EURO BUGGY SOLUTION

The CM Process Solutions Single Bin Solution is the complete handling solution for processing food and food ingredients, utilising industry standard DIN 9797 Eurobins with the minimum amount of product transfer and manual handling.

Weigh ► Mix ► Dump ► Rack and Stack ► Washdown

REDUCED MANUAL HANDLING

From the initial batch weighing of ingredients, WIP storage, product mixing and finally tipping product onto process lines can all be done utilising a single DIN 9797 Eurobin. This greatly reduces the number of product transfer points and aids employee safety, helping prevent musculoskeletal injuries associated with manual handling.

INCREASED PRODUCTIVITY

Changeover time between product batches is greatly reduced and with minimal handling transfers and only a single bin to clean at the end of the operation, this solution allows more time to be spent on manufacturing.

HYGIENE

Stainless steel hygienic design specifically for the food industry environment ensures all equipment can be washed down quickly and effectively.

FOOD SAFETY

The complete process offers benefit to food safety standards by reducing product exposure and possible cross contamination associated with multiple product transfers.

IMPROVED QUALITY AND REDUCED WASTE

Streaming product handling utilising the Single Bin Solution range of equipment can offer significant reduction in product damage and increase product yield through repeated transfer.



