

# Case Study: Herbal Capsules

## Application

Disperse turmeric and other powders into liquid lecithin.

## Specifications

600 lbs of turmeric and other powders into 92 gallons of liquid lecithin.

## Challenge

Dissolving and mixing the powders completely.

## Issue

The undissolved solids caused other machinery to clog and the end product need to be mixed for long periods and filtered.

## Products with Similar Challenges

- Condiments
- Ice cream
- Salad dressing
- Sauces



## Powder Mixer Capabilities

**Models:** 7 configurable  
**Max. Induction Rate:** 600 lbs/min  
**Max. Flow Rate:** up to 350 gpm



## Powder Mixer Resolves Quality Issue and Speeds Up Process

A major U.S. herbal company manufacturing turmeric capsules had issues dispersing turmeric and other dry powdered ingredients into liquid lecithin using a top-entry high-speed dispenser blade blender in a tank. The old system left undissolved solids in the mix that plugged the filler tip on their encapsulation machine, forcing production shutdown to clear the clog, and required extra mixing and filtering.

## Solution

A Powder Mixer model 20-53 with variable frequency drive, allowing the processor to control the amount of shear applied to the product.

## Why It Worked

With the Fristam Powder Mixer, the processor was able to pour the bags of powder into the Powder Mixer's funnel where they were pulled directly into the liquid stream by the unit's FZX liquid-ring pump, then mixed quickly and thoroughly by its FS Shear Blender, with no lumps or fisheyes. Processing times dropped from 6-24 hours per batch down to 1-3, and the product quality was excellent. The processor is quoted as saying, "The new machine is running 2-3 times a week with great results." They estimate it will pay for itself in about 2 months.

To read the complete story, visit: [www.fristam.com/pm-apps](http://www.fristam.com/pm-apps)

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