



ENHANCED MAGNAFLO® ASSEMBLY

FOR POLARDRY® MODEL 001



PolarDry®





OBJECTIVES

A trial was conducted in August 2022 on the PolarDry® Model 001 to gather information and data to better understand the effects of the Enhanced MAGNAFLO® on the PolarDry® process. The feedstock, conditions, and parameters of this trial were replicated identically to a previous scale-up study completed on Model 001 in 2020, which was equipped with the prior MAGNAFLO® system. The primary goal was to capture the advantages of the new Enhanced MAGNAFLO® over the previous version.

	Measurement (All Runs)
Drying Gas Flow	21 Nm ³ /hr
Inlet Drying Gas Temp	140°C
Atomizing Gas Pressure	100 kPa
Atomizing Gas Temp	70°C
Voltage	10 kV:1 kV

Ingredient	FA Spray Dry Formulation	
Capsul TA	405 g	27%
Gum Arabic	45 g	3%
Water	1050 g	70%
Total	1500 g	100%
Solids Content	30%	

The quality of collection powder was also tested from each run and the data suggests that with the larger yield, quality was maintained. The shift in the particle size shown in the Results Table is due to the ability of the Enhanced MAGNAFLO® system to clear the smaller particles from the process filters. This trial has proven that with the addition of the Enhanced MAGNAFLO® into the system, more powder is collected and maintained during the PolarDry® process.

RESULTS

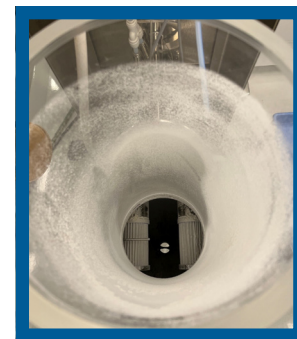
	Previous MAGNAFLO®	Enhanced MAGNAFLO®
Yield Collection*	67.4%	89.3%
Moisture (LOD)	4.13%	4.24%
Water Activity	.0698 Aw	.0906 Aw
Dv (50)	45.2 µm	28.9 µm
Dv (90)	233 µm	213 µm

*Does not include brushdown material.

PREVIOUS
MAGNAFLO® SYSTEM



ENHANCED
MAGNAFLO® SYSTEM



Experts in Solid
Dosage Technology
A Division of *Spraying Systems Co.*