

**SOLVED
WITH**
CHEMISTRY & CONVICTION

patheon

Solutions for formulation challenges.

Formulation challenges for enhancing the bioavailability of poorly soluble APIs can be solved by spray drying. We have extensive capabilities and expertise in process development, scale-up and manufacturing of spray dried material for preclinical to commercial needs. Bring us your formulation challenges and we will bring you years of experience to get your molecule to market. Partner with us for a better API and formulation solution today.

Spray drying capabilities from preclinical to commercial scale

Equipment/sites	Buchi B-290 (Bend, USA & Milton Park, UK)	Anhydro MS-35 (Milton Park, UK)	GEA Mobile Minor & Anhydro MS-150 (Bend, USA)	Anhydro MS-400 (Florence, USA)	GEA PSD-3 (Cork, Ireland – Aqueous only)	Anhydro MS-1250 (Florence, USA)
	(g's – 100's g)	(100's g – kg)	(kg – 10's kg)	(10's kg – 0.5 MT)	(100's kg – MT+)	
Scale	Preclinical	Phase I and II		Phase II and Commercial	Commercial	

Scale up

Scientific and engineering expertise in spray drying thermodynamics

Our focus is on your molecule's success and our Patheon™ Quadrant 2™ predictive modeling will predict the best technology to enable the enhancement of your molecules solubility. Across a global network, Thermo Fisher Scientific has manufacturing capabilities for amorphous solid dispersions to enhance bioavailability of poorly soluble molecules, applicable to a broad range of APIs.

Spray drying expertise

- For process development and scale up activities we utilize bench top Buchi B-290, Anhydro 35, and larger-scale GEA Mobile Minor™ and Anhydro MS-150 equipment situated at our Bend, OR and Milton Park, UK sites.
- Further scale up to commercial volumes is available at our facility in Florence, SC, containing commercial scale Anhydro MS-400 and MS-1250 equipment.
- Aqueous spray drying for late phase development and commercial scale is available from our Cork, Ireland site utilizing GEA PSD-3 equipment. Full analytical support plus QbD, PAT tools implementation, Design of Experiments and process validation are also available.
- Teams from the Bend, OR, Milton Park, UK and Florence, SC sites cooperate closely to support technology transfer activities and collaborate with clients to mitigate risk through process development, NDA submission and launch.

In addition, we can offer API manufacture, solid state chemistry and drug product development and commercial supply services with your spray drying needs to deliver an integrated offering to solve your challenges and move your product to the next milestone.

Proven track record

- ✓ Low to highly potent handling
- ✓ Grams to metric tonnes
- ✓ More than 200 molecules analyzed using Quadrant 2™
- ✓ More than 120 molecules spray dried
- ✓ More than 60 molecules progressed to next development phase
- ✓ Scale up from development to commercial scale
- ✓ Integration of API, spray drying and drug product services



From spray drying to preclinical and commercialization, we can be your full-service partner. Contact us today.