

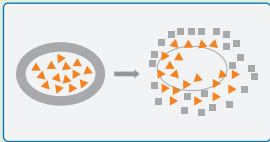
## Getting your product at the right purity in a scalable, fully ATEX and economically viable DSP process

### Value proposition

For companies who are looking for a partner with a proven track record in scaling DSP/purification processes to help them achieve high-quality commercial products the very first time around, BPF offers extensive lab & pilot scale capabilities and industrial scale experience. Unlike universities, research companies and other scale-up service providers, the BPF team offers true industrial thinking on a smaller scale.

#### Cell-disruption

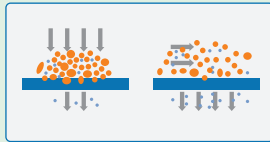
- Homogenisation



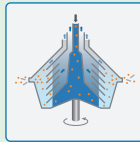
Cell-disruption

#### Cell removal / clarification

- Filtration
- Centrifugation



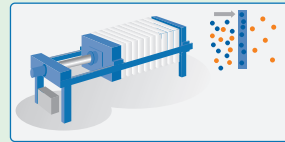
Filtration



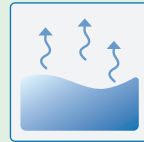
Centrifugation

#### Concentration

- Evaporation
- Crystallisation/precipitation
- Filtration



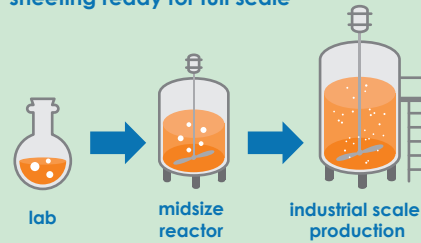
Filtration



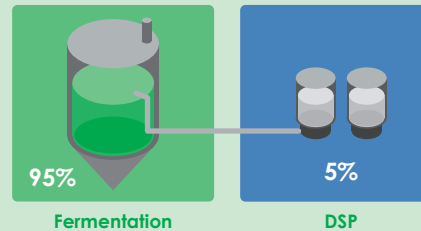
Evaporation

#### Equipment / piloting scale

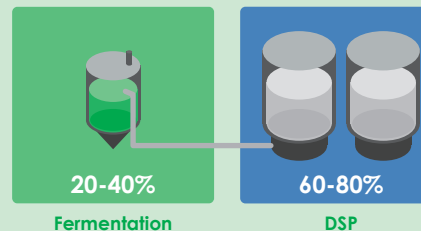
Translation of customer process in flow sheeting ready for full scale



#### Budget planning perception

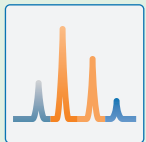


#### Production commercial reality



#### Purification

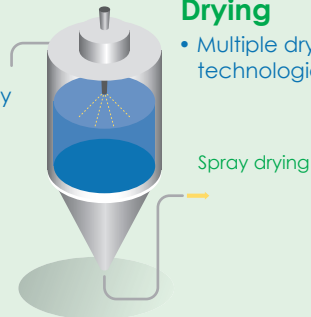
- Extraction
- Distillation
- Chromatography
- Crystallisation



Chromatography

#### Drying

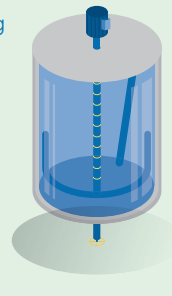
- Multiple drying technologies



Spray drying

#### Chemical operations

- Fully equipped glass lined vessels for e.g. classic organic chemistry



Glass lined vessel

### BPF's infographics

- 1 Impact of Bioprocess Pilot Facility 2012-2019
- 2 Unlock the potential of your biomass
- 3 Valorization of 1<sup>st</sup> and 2<sup>nd</sup> generation sugars
- 4 Benefits of piloting at BPF
- 5 Demonstration and pilot scale production at BPF
- 6  Benefits of Purification / Downstream Processing at BPF
- 7 Food and feed ingredients

BPF's customers come from all over the world:



420,000 hrs experience

270 Projects executed



15% Public Private Partnership projects  
85% Commercial projects

### DSP product examples

- Proteins
- Sweeteners
- C5 and C6 sugars (1<sup>st</sup> & 2<sup>nd</sup> gen)
- Microbially produced enzymes and small molecules
- Biomass purification
- Biobased building blocks



### BPF offers

- Extensive DSP asset base for commercial scale process design and validation
- Hands-on and extensive experience
- Lab, pilot and industrial scale knowledge
- De-risking of your business
- Shortening your time-to-market