



High Performance Bio-based Functional Coatings for Wood and Decorative Applications

Greener Ingredients

Scale up of precision fermentation for biobased ingredients

Webinar 2
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Bio-based Industries
Consortium



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This project receives funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101022370. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.

Chromologics—a sustainable production platform



Farmland

- Reduced need for farmland
- Independent of seasonality, climate



Flexibility

- Bioreactors allow for flexibility
- Production can be set up globally where is renewable energy is abundant and in proximity to costumers to reduces GHG footprint



Transparency

- Reliable supply chain and price stability
- Entire production can be done under one roof
- Transparent supply chain. Easy to monitor labor conditions and safety



Scale up of precision fermentation for biobased ingredients



1. Strain Engineering

Development of strains producing target product



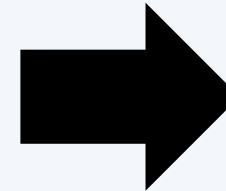
2. Fermentation (UPS)

Target molecule is produced by the host during the fermentation process

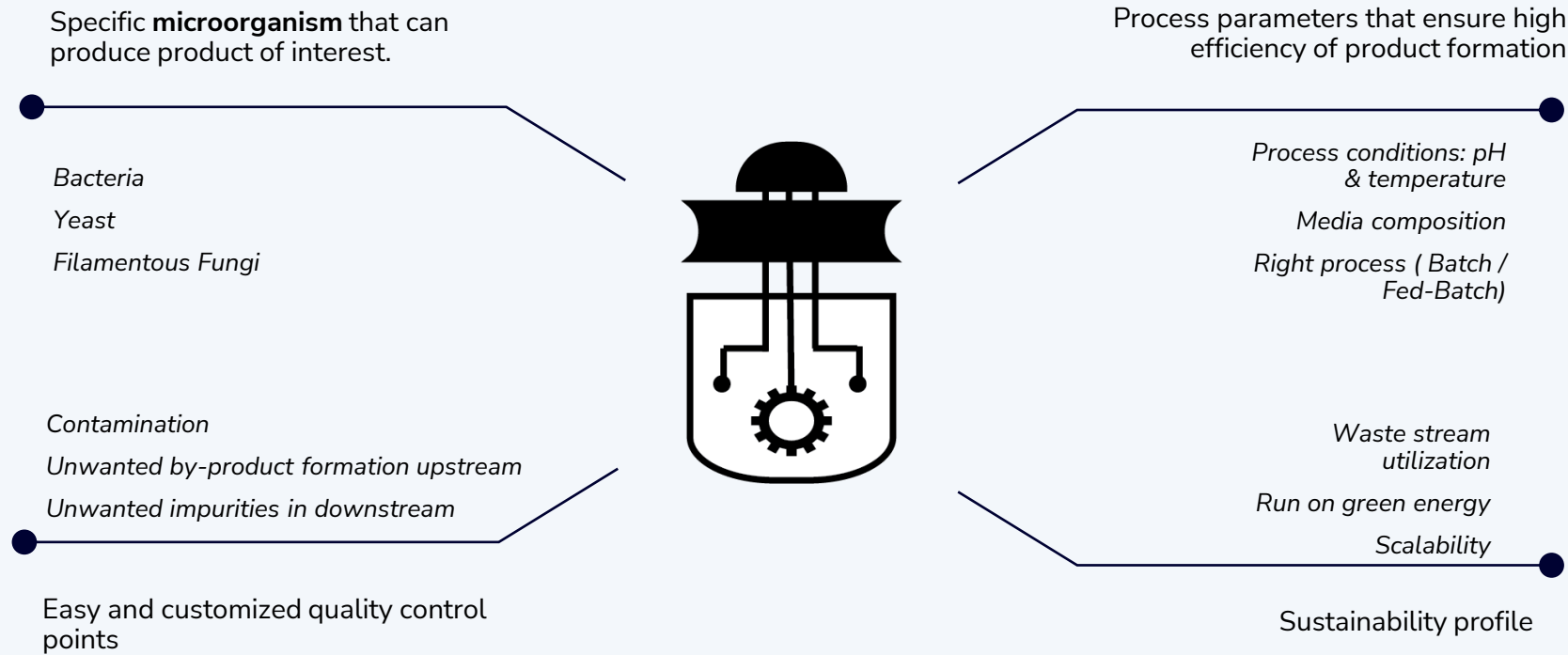


3. Harvest and purification (DSP)

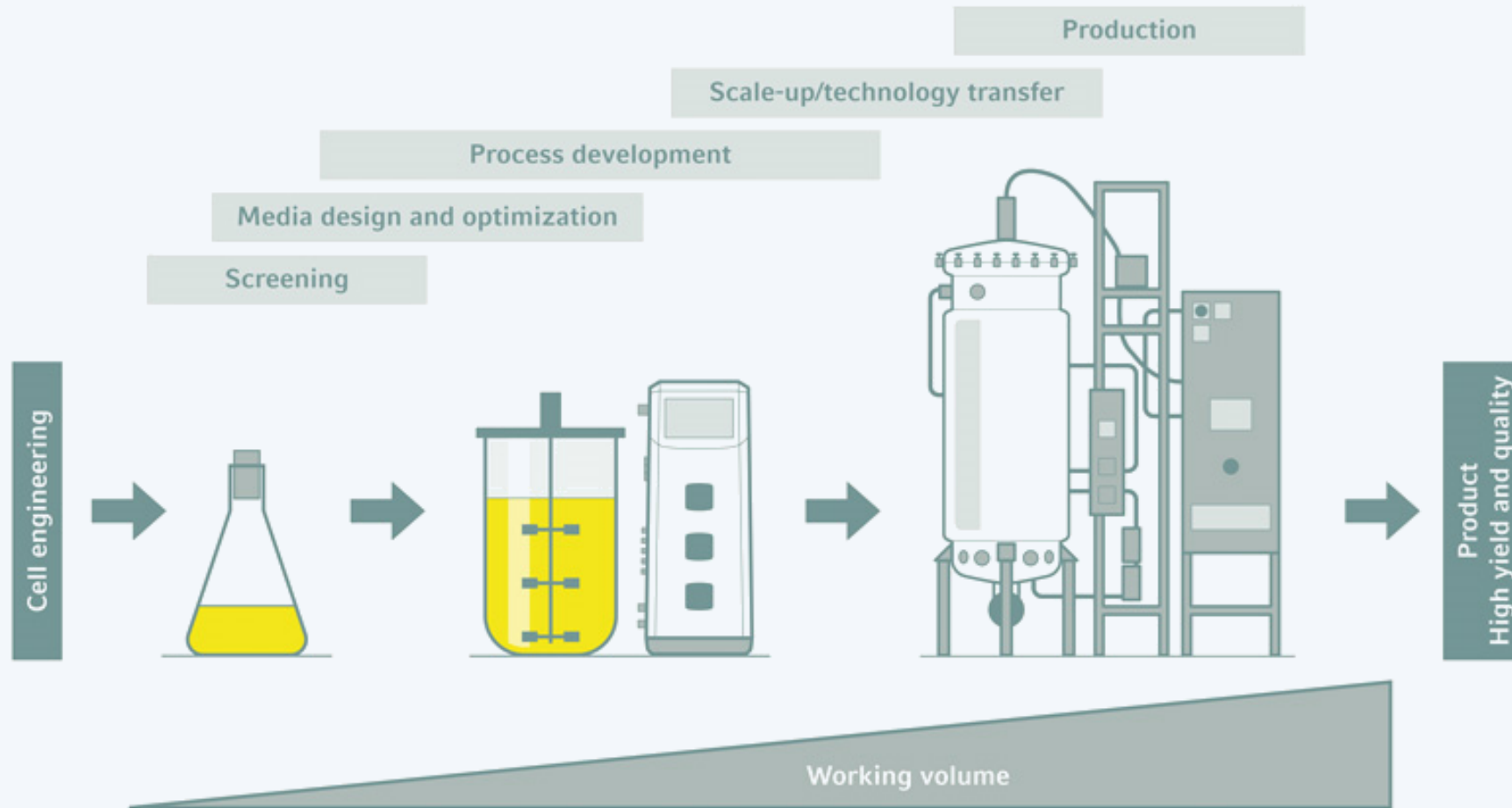
Downstream process includes purification, drying, and formulation



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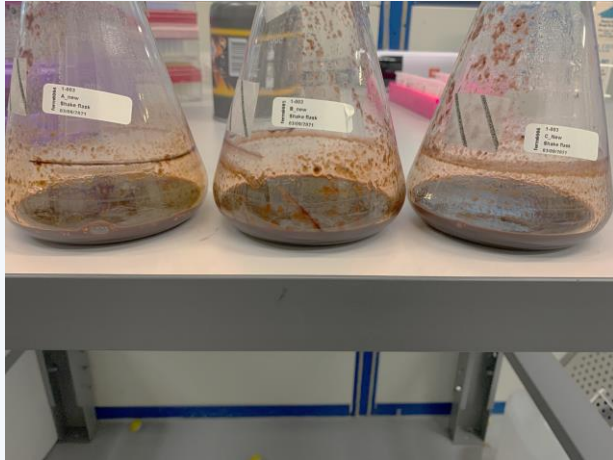


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Scale up of precision fermentation for biobased ingredients

From Shake flask



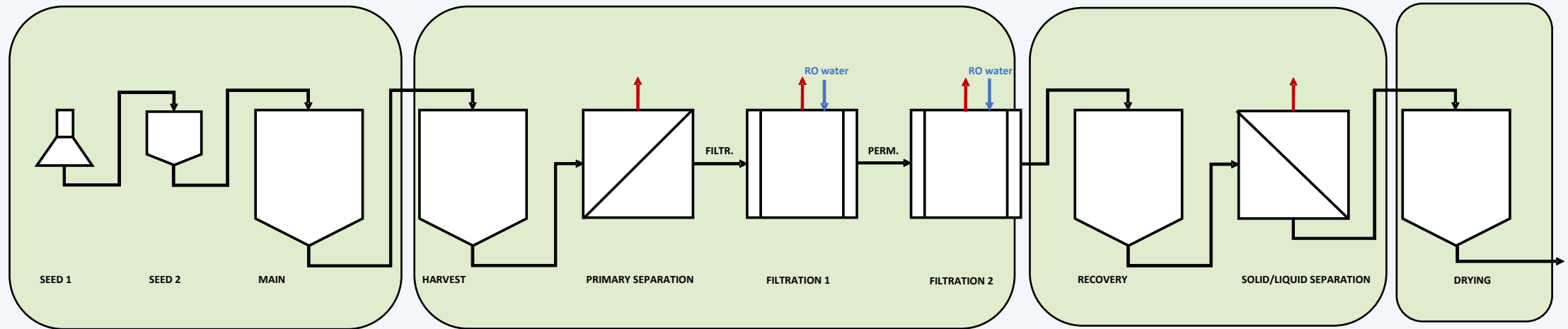
To Seed



To production



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Fermentation

Biomass removal and purification

Recovery

Drying

Time

5-7 days

2-3 days

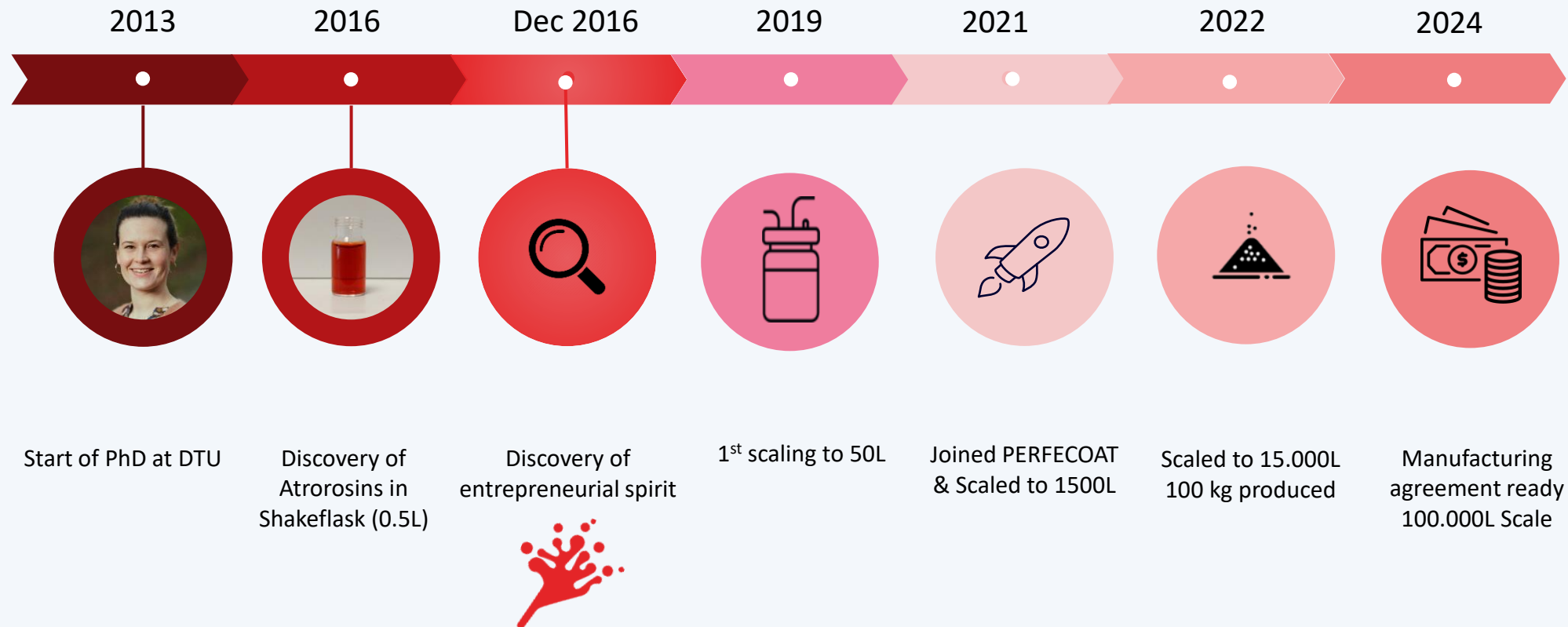
1 day

2+ days

Process principles

- Fed-batch process
- Continuous process
- Decoupling point
- Multiple tanks may be required
- Pool batches to dry

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Chromologics

Pioneering natural food colors



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Formulation & Testing

Reality Check for New (Greener) Ingredients



13 May 2024, 13:00–14:00 CET
Free Webinar



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