**BIOCATALYSIS**

**Equipment overview:**

**Process vessels for aqueous reactions:**
- Bench-scale reactors
- Multiple mobile reactors in the range of 20 – 1000 L
- Aerated reactors (see fermentation folder)
- Reaction vessels for slurries with high solids contents: 2 x 500 L
  - 2 x 4000 L
  - 2 x 5000 L
  - 4 x 8000 L
  - 2 x 14500 L
  - 1 x 20000 L
  - 4 x 24000 L
  - 3 x 50000 L

**Process vessels for solvent-based reactions:**
- 1 x 20 L (ATEX)
- 1 x 85 L (ATEX)
- 1 x 250 L (ATEX)
- 1 x 500 L (ATEX)
- 1 x 1000 L (ATEX)
- 1 x 5400 L (ATEX)

**Auxiliary equipment:**
- Fermenters of different sizes to produce the biocatalyst (see fermentation folder)
- Enzyme purification equipment: cross-flow membrane filtration [MF, UF, NF in different scales ranging from bench to 10000 L scale, see product recovery and purification folder]
- A variety of downstream purification equipment to purify the product of interest from the reaction mixture (see product recovery and purification brochure)
- 4 x 30000 L (ATEX, solvent)

**What we offer:**
- Scale-up and demonstration of biocatalytic processes, using purified enzyme and whole-cell biocatalysts
- Bioconversion processes (see fermentation folder)
- Process development and optimization
- Food grade production (FSSC22000)
- First series compound production and custom manufacturing at 15000 L scale
- Immobilization of enzymes and whole cells
- Aqueous and solvent-based reactions
- Production of enzymes through bacterial, yeast, or fungal fermentation
- Process design

**Expertise:**

BBEPP’s team of process and R&D engineers have built up a significant track record in the production of biocatalysts and biocatalytic conversions at lab and pilot scale. The team has demonstrated various aqueous and solvent-based reactions at an industrially relevant scale.

**For more information:** please visit www.bbeu.org
**For questions,** please call +32 9 335 70 01 or contact BusDev@bbeu.org