

Solutions for reduced carbon footprint in mAb manufacturing

Greenhouse gas emissions and global warming



- Urgent need to limit global warming.
- The biopharma industry must accelerate emission reduction .

Life cycle assessment



- Measures the environmental impact of products and processes.
- Allows identification of impact hotspots, i. e. activities that have highest negative impact.
- Supports making informed decisions.

Solutions for reducing carbon footprint



- Process intensification.
- Renewable energy sources.
- Modern chromatography resins.
- Buffer and storage solution optimization.

Considerations during implementation



- Cleanroom size and allocation.
- Chromatography resin capacity and lifetime.
- Carbon intensity of various buffer, CIP and storage solution chemicals.