

BrewCycle™

Waste beer recovery

“No Drop Wasted.”

Technology

During beer production, around 2–4% excess yeast is generated and removed, causing significant beer loss of up to 400 mL for every litre of yeast discarded. Since beer production is highly water-intensive (about 3.5 L of water per litre of beer), this loss also represents substantial wasted water and resources. With growing concerns about water scarcity, breweries face increasing pressure to reduce waste and improve resource efficiency. The invention introduces UV sterilisation as a solution to recover and reuse beer lost during yeast removal. UV treatment permanently inactivates microorganisms without affecting the beer’s taste, colour, or texture, allowing the recovered beer to be safely reintroduced into production. This environmentally friendly, low-maintenance method supports sustainability goals, reduces costs, and minimises water waste in the brewing process.

Market need

The brewing industry faces growing pressure to improve water efficiency and reduce product losses due to rising water scarcity, stricter environmental regulations, and increasing production costs. A significant volume of beer and water is wasted during the yeast removal process, resulting in both economic and environmental inefficiencies. Breweries need a practical, low-cost solution that enables recovery and reuse of beer without compromising its quality or safety. Technologies that promote water and resource conservation while maintaining product integrity have strong commercial potential in both large-scale and craft breweries.



Features

- UV Sterilisation System designed to disinfect and recover beer lost during yeast removal.
- Uses ultraviolet light to inactivate microorganisms by damaging their DNA.
- Preserves beer quality, ensuring no change in taste, colour, or texture.
- Environmentally friendly and low maintenance compared to other methods.
- Easily integrated into existing brewery processes for continuous or batch operation.



Benefits

- Reduces beer and water waste, directly lowering production costs.
- Conserves water and minimises wastewater discharge.
- Eliminates chemical disinfectants.
- Supports regulatory compliance and improves brand reputation through responsible waste management.
- Increases profitability by recovering beer that would otherwise be lost.



Industry

Manufacturing

Potential applications

- Beer recovery and reuse during yeast removal in large-scale and craft breweries.
- Water conservation by reducing water loss associated with discarded beer.
- Sustainability initiatives for breweries aiming to meet environmental regulations and reduce operational costs.
- Quality-preserving process integration ensuring recovered beer maintains taste, color, and texture.
- Resource-efficient production supporting circular economy practices within the brewing industry.

Creator

Dr JBJ Dewar

Stage of development

Prototype

Intellectual property

Patent Protection

Desired relationship

Co-development, Investors