



CLOSING & AUTOMATING BIOPROCESSES

Vial transfer in closed system

Mission: design & manufacture aseptic process equipment utilizing (engineering) know-how in automation, integration & digitalization

10+

**Years of
Experience**



**Single Use Equipment
Automation & Integration**

100+

Projects



**Production
Walk in Incubators**

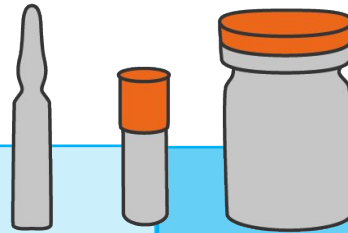
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Collaborators



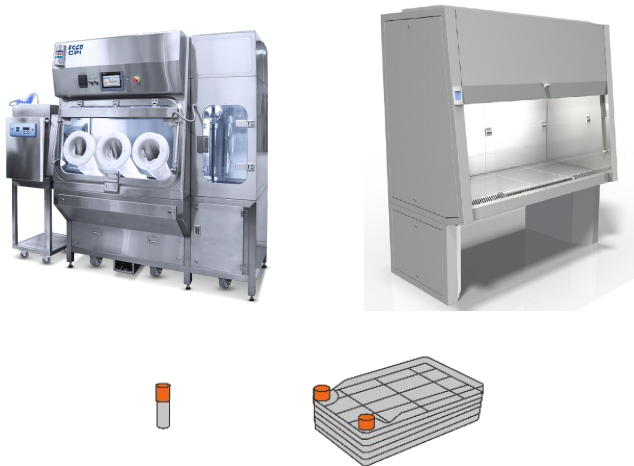
**RABS, LAF &
Grade A continuity**

Cryogenic vials sampling



Traditional Way

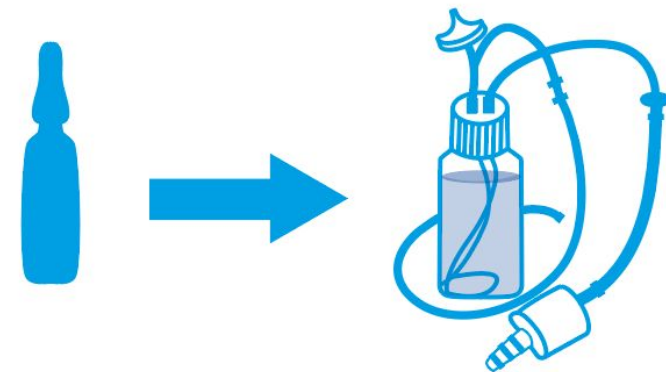
- Open system
- Manual operation
- Contamination risk
- Highly human dependent
- Affected by environmental factors (air flow disturbance)



Cryovials (glass ampoule, cryotubes, Closed Vial®) are sampled in biological safety cabinet or isolator

Now : BECARV's Solution

- + Directly sampled in a closed system
- + Closed system in C (Environment independent)
- + Low deviation (automation)
- + High reproducibility



Cryovials (glass ampoule, cryotubes, Closed Vial®) are sampled in **Aseptic Sampling Hub** to the **final container**

Aseptic Sampling Hub **Overview**

Fully validated Equipment & Disposables

1. Hardware

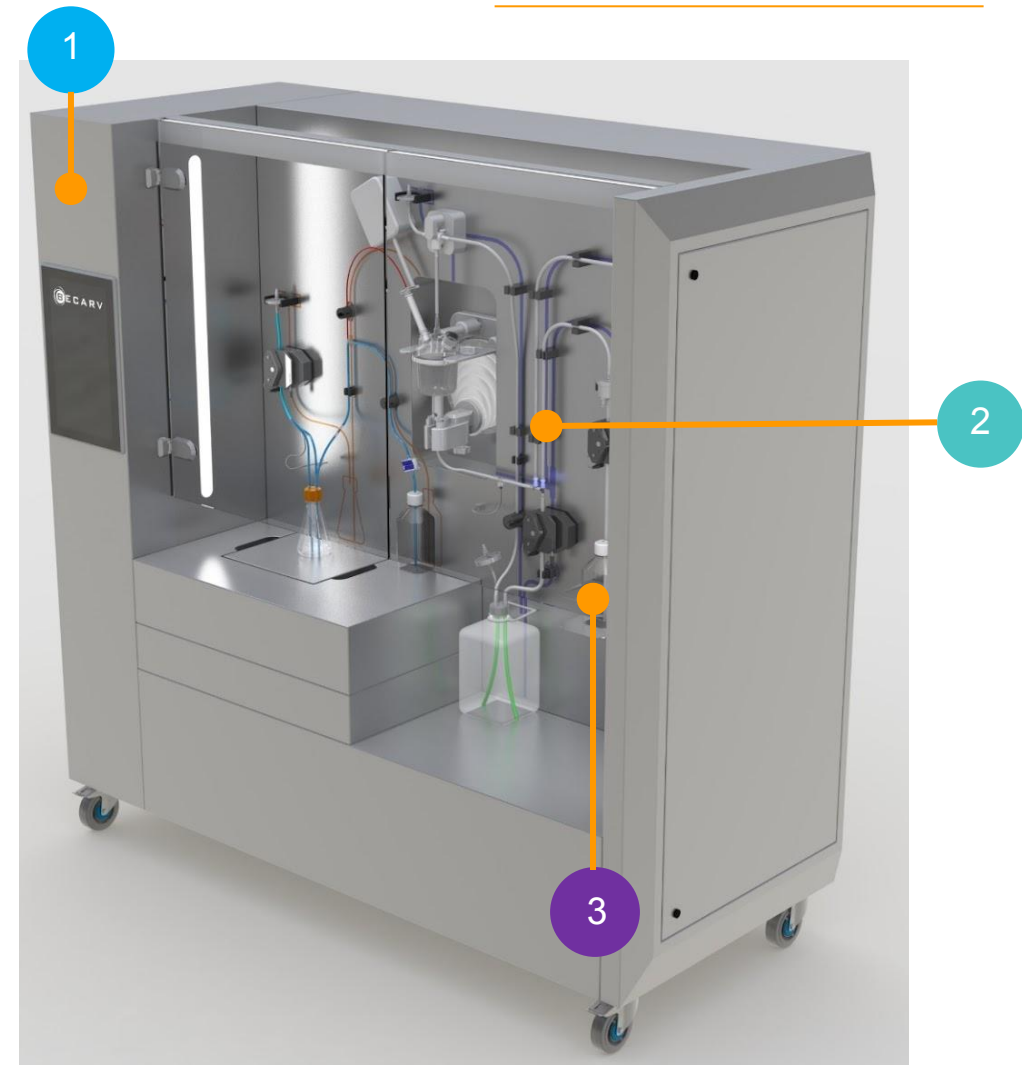
- Equipment performing automated cycle
- Connections and traceability to EBR

2. Disposable kit

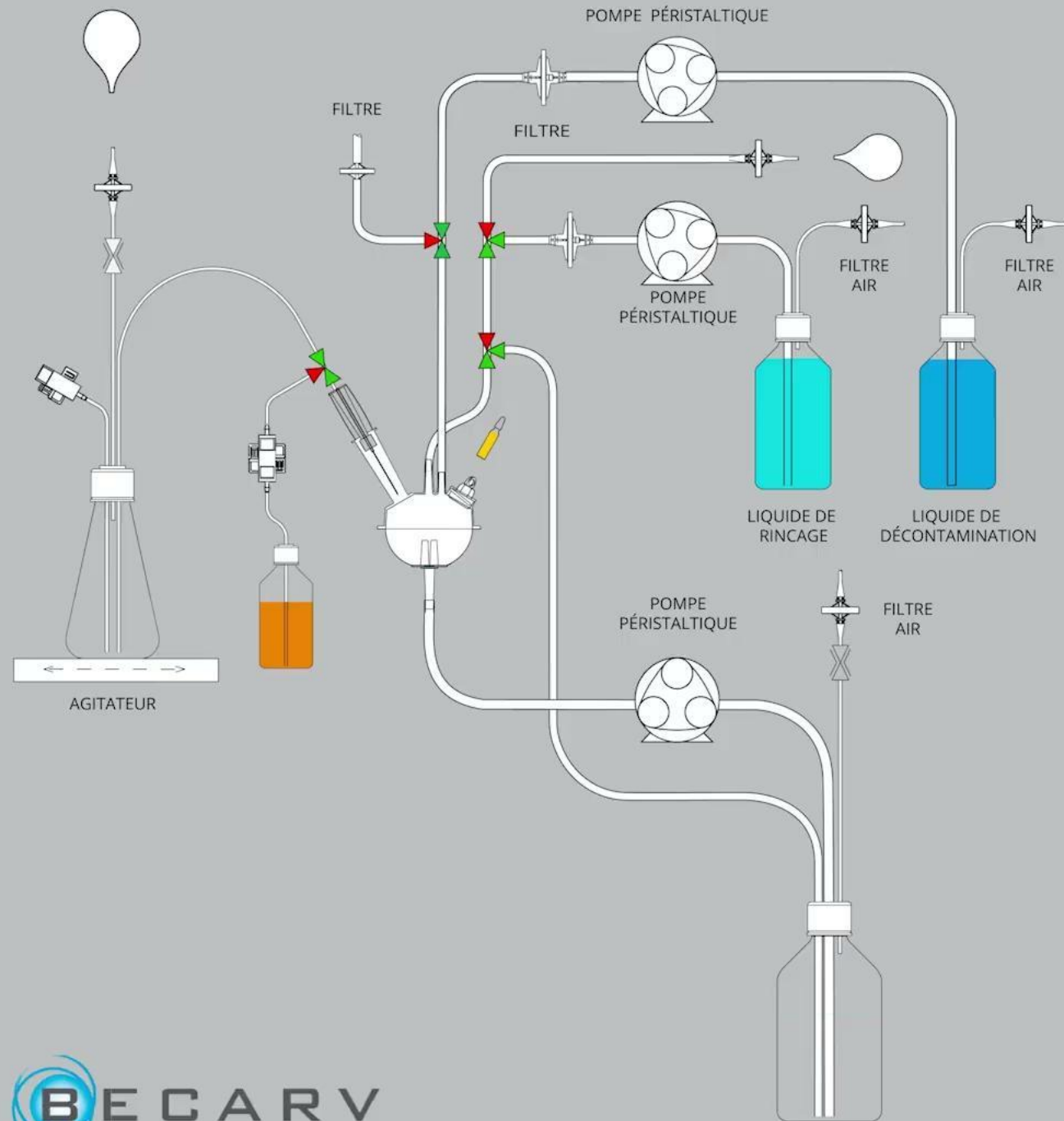
- Single-use kit, closed system
- Gamma-irradiated

3. Disinfection and rinsing agents

- Blend of Hydrogen Peroxide (H_2O_2) + Peracetic acid
- Water for injection



A new option for sampling vial content in a closed, automated, digital environment. Applications: cell culture seeding, media preparation, dosing...



Productivity

- Standardization of operations = less operator dependency & variability (robotization)
- Higher predictability & reproducibility of operations (automation)

Control & Quality

- Less contamination & batch loss risk (robotization, closed system)
- Lower deviation risks during operations (automation)
- Higher traceability of operations & simplified excursion management (digitalization)

CAPEX & OPEX costs thanks to closed system allowing for operations in grade C/D

- Reduced facility construction and/or zone maintenance costs
- Modularity of zones
- Less stringent Environmental Monitoring Control
- Lower operator gowning requirements incl. training

Safety of operators:

- Improved Environment Health Safety (e.g., robotized vial cracking)

All of which lead to time and cost gains

Thank you. Want to learn more?

Info@becarv.be

Michaël Jeanty, CEO,

m.jeanty@becarv.be,

+32 477 79 16 96



BECARV S.A.

Rue de la Griotte, 15
5580 Rochefort, Belgium

