

## Tech Offer:

# SQUEEZE CAP – Viscous Liquid Dispenser Attachment



## Technology Overview

The **SQUEEZE CAP** (Patent Reference Number: PCT/SG2019/050248) is a nozzle attachment for rigid bottles designed to dispense high-viscosity liquids like sauces and creams. It addresses common dispensing issues such as clogging, slow flow, and poor control by combining a flexible nozzle with a one-way valve mechanism..

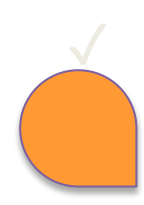

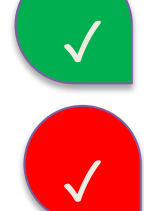

## Technology Features & Specifications

- **Flexible Nozzle:** Made from food-safe silicone or rubber, allowing expansion and contraction under pressure.
- **One-Way Vented Valve:** Prevents backflow and air bubbles, ensuring smooth and consistent dispensing.
- **Tapered Design:** Guides liquid flow precisely, minimizing splatter.
- **Adjustable Flow Control:** Twistable ring enables variable flow rates for different liquid types.

## Benefits

- Efficient and mess-free dispensing of thick liquids.
- Enhanced user control and hygiene.
- Easy to clean and compatible with standard rigid bottles.
- Adaptable across multiple industries and product types.
- Enables full use of bottle contents, reducing waste.

## Possible Collaboration Mode

-  R&D Collaboration
-  Licensing
-  IP Acquisition
-  Test-Bedding

## TRL Level :

TRL 4 – Multiple prototypes of the SQUEEZE CAP have been developed, and laboratory or bench-scale testing has been conducted, but the system has not yet been validated in a simulated or operational environments that reflect actual use cases.



Figure 1: The Schematic diagram of the Squeeze Cap

## Originating School:

School of Design & Environment

## Potential Applications

- Food service, beverage syrups, personal care, bath products, pharmaceuticals, arts & crafts, DIY, industrial packaging, automotive maintenance.

## Market Opportunities

- **Good & Beverage Packaging:** Growing at 5–6% CAGR, driven by demand for convenience.
- **Personal Care & Cosmetics:** \$30B+ global market seeking innovative dispensing.
- **Medical & Pharmaceutical Packaging:** CAGR of 6–7%, emphasizing hygiene and precision.
- **Industrial & Household Products:** \$50B+ market for ergonomic application tools.

Market figures and growth rates are based on publicly available industry reports and estimates. Actual market performance may vary depending on regional trends, regulatory changes, and evolving consumer preferences. These projections are intended for informational purposes only and do not constitute financial or investment advice.