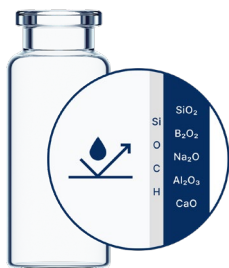




# EVERIC<sup>®</sup> Iyo

## Pharmaceutical glass vial with hydrophobic coating to avoid fogging



- For stability reasons, more than 50 % of all biologic drugs are lyophilized.
- Fogging is a widely known undesirable phenomenon that occurs during lyophilization, which results in elevated levels of rejects.
- Overfilling vials to compensate for drug loss through unsatisfactory residual emptying after reconstitution leads to higher costs.
- EVERIC<sup>®</sup> Iyo is unique in combining hydrophobic behavior and the avoidance of free silicone.
- Inner coating is applied using patented and proven plasma impulse chemical vapor deposition (PICVD) technology.
- An additional "release criterion" has been specifically developed.



Si-O-C-H layer  
applied via PICVD



Layer thickness  
of ~ 40 nm



Long-term  
layer stability



Coating bonds covalently  
to the glass substrate



Suitable for  
depyrogenation



Dense coating  
(i.e. non-porous)



Contact angle for water  
> 90° (hydrophobic  
surface without silicone)



Stable after  
washing process



Compliant with all current  
standards, such as Ph. Eur,  
USP, JP and CP



### No fogging

Particularly suitable for antibody-  
drug conjugates (ADCs) thanks to  
hydrophobic inner surface



### Elegant Iyo cake

Reduced rejects due to  
improved Iyo cake aesthetics



### Improved emptying

Less residual volume so  
no overfilling necessary

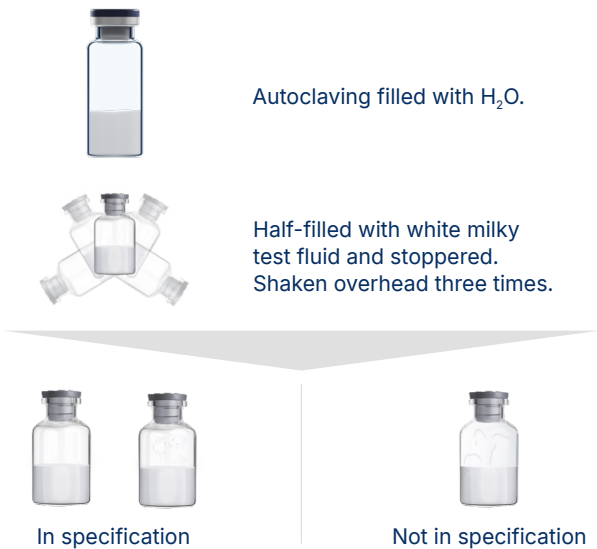


### Drug stability

No free silicone thanks to  
residual free technology

**SCHOTT**  
**PHARMA**

Release test: Drain-off test for hydrophobicity



Verifications: No fogging and elegant lyo cake



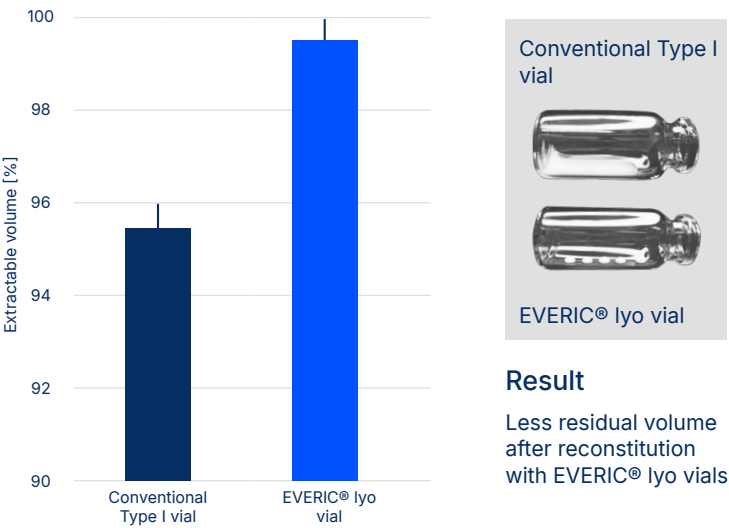
Method

10R vials Type I glass and EVERIC® lyo vials.  
5.0 ml formulation dried in 10R vials with different surfaces.  
0.15 mg/ml human growth hormone, 40 mg/ml mannitol, and 10 mg/ml sucrose. Phosphate/glycine buffer (pH 7.0).  
Sterilization using 0.2 µm PES Filter, 25°C, 30 min.

Result

Less cake disruption and dry material pulling from the edge with EVERIC® lyo vials.

Verifications: Improved emptying



Verifications: Stress tests have proven stability

		EVERIC® lyo 10R	EVERIC® lyo 15R	EVERIC® lyo 10R, depyrogenated	EVERIC® lyo 15R, depyrogenated
ca. 5 mm*	average	103	102	99	101
	stand. dev./range	± 2 / ± 4	± 2 / ± 4	± 2 / ± 5	± 2 / ± 4
ca. 15 mm*	average	102	102	98	100
	stand. dev./range	± 2 / ± 5	± 2 / ± 4	± 2 / ± 5	± 1 / ± 3
ca. 25 mm*	average	106	103	101	101
	stand. dev./range	± 4 / ± 9	± 1 / ± 3	± 3 / ± 5	± 1 / ± 3

Method

EVERIC® lyo vials: 10R vial (> four years of storage) and 15R vial (three months storage). Contact angle measurement at three lateral positions (bottom, middle, and neck area)\*: Reference vs. depyrogenated (30 min at 330 °C). 15 vials measured per sample type.

Result

All analyzed vials show hydrophobic behavior with stable contact angle > 90°. No significant differences were observed for different storage times.

General ordering information											
Quality level	TopLine with additional release test										
Packaging	<ul style="list-style-type: none"><li>Tray with optional divider</li><li>Pre-washed and pre-sterilized: adaptiQ® (tray, cup nest)</li></ul>										
Palletizing	Standard Euro pallet (1200 x 800 mm) contains 15–27 layers of nine trays each										
Formats	2R	3R	4R	6R	8R	10R	15R	20R	25R	30R	50R
Pieces per tray (non sterile)	344	344	344	186	186	154	154	95	95	95	40

Many configurations are available in small quantities as “Fast Track Articles”.

Visit our Online Shop or speak to your sales representative for more information.