

Shimadzu Original Low Adsorption Vial

# TORAST-H Vial Series



# TORAST-H Glass Vial

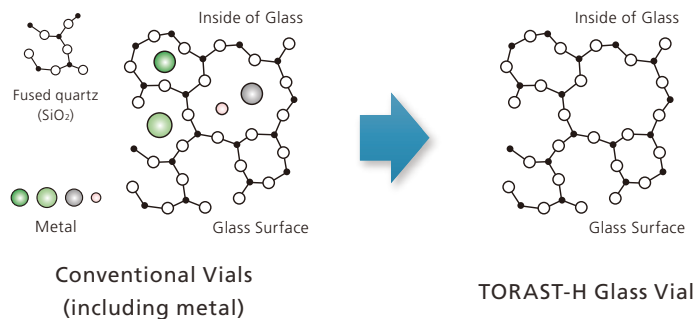
## Features

- Low adsorption vessels treated specially
- Minimized adsorption of bases, acids and neutrals
- Superior quality control



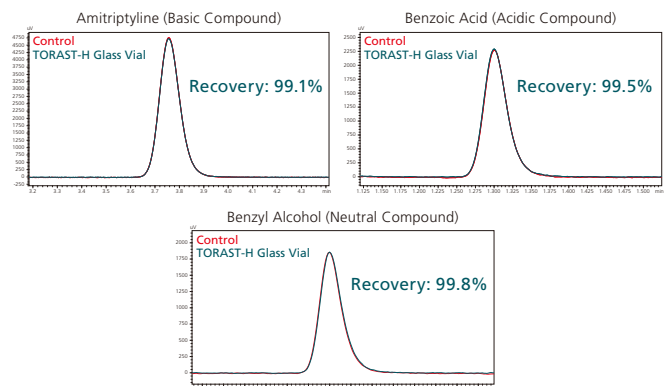
## TORAST-H Glass Technology eliminates the risk of adsorption to the glass surface of the vials

Glass, the material of vials, contains metal oxides. Oxides of metals have a high ionizing tendency to be Si-O-M (metal silanolate), which may cause ionic adsorption with basic compounds in the sample. TORAST-H Glass Technology uses special processing to remove metals from the glass and suppress adsorption of basic compounds.



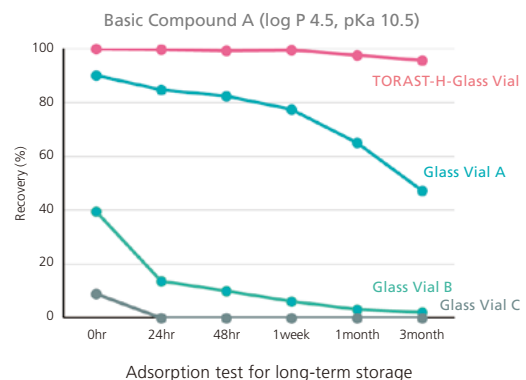
## Minimized adsorption of bases, acids & neutrals

In general, giving a positive charge to the glass surface suppresses the adsorption of the basic compounds, but conversely, it causes the adsorption of the acidic compounds. TORAST-H Glass Vials minimize adsorption of both types of compounds.



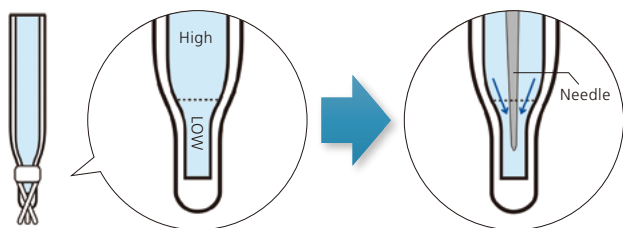
## Low adsorption for long-term storage

When a sample is stored in a general vial for a long time, the sample may adsorb into the surface of the vial, causing the reproducibility to be poor. The TORAST-H Glass Vial contains low adsorption characteristics that makes it excellent for long term sample storage.



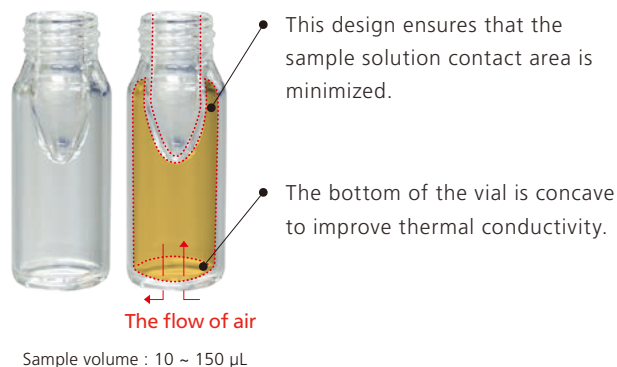
## Small-Volume Vials

Insert vials (small capacity) may produce concentration gradients at the top and bottom due to sample adsorption, causing variation over time.



The lower sample has a large contact area with the insert vial and low concentration due to retention.

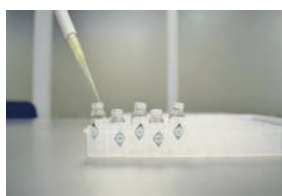
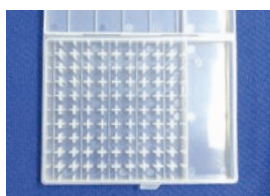
Sampling increases temporarily the recovery rate because the upper sample flows into the lower part.



Small-volume vials have a large contact area; therefore, the rate of loss due to adsorption is greater than with a standard vial. TORAST-H Glass Vials shows dramatically less adsorption compared to other small-volume glass vials.

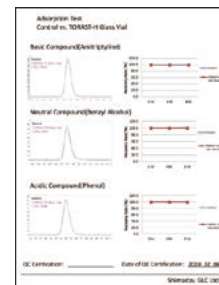
## Medical Grade Packaging Materials

Reduce the adhesion of organic substances from the packaging and the formation of organic layers.



## Superior Quality Control

- Hydrolytic Class 1; 51 expansion Borosilicate
- Comes with quality certificates for lot management.
- Shape inspection of vials, septa and caps.
- Low adsorption performance testing for basic, acidic and neutral compounds.



## Product Information

P/N	Color	Volume	Cap	Septa	Qty.
370-04300-01	Clear Glass	1.5 mL	Screw, Black	PTFE/Silicone	100
370-04300-02				Preslit PTFE/Silicone	
370-04300-03	Amber Glass			PTFE/Silicone	
370-04300-04				Preslit PTFE/Silicone	
370-04301-01	Clear Glass	150 $\mu$ L		PTFE/Silicone	
370-04301-02				Preslit PTFE/Silicone	
370-04301-03	Amber Glass			PTFE/Silicone	
370-04301-04				Preslit PTFE/Silicone	

- Avoid sunlight and store at room temperature.

# TORAST-H Bio Vial

## Features

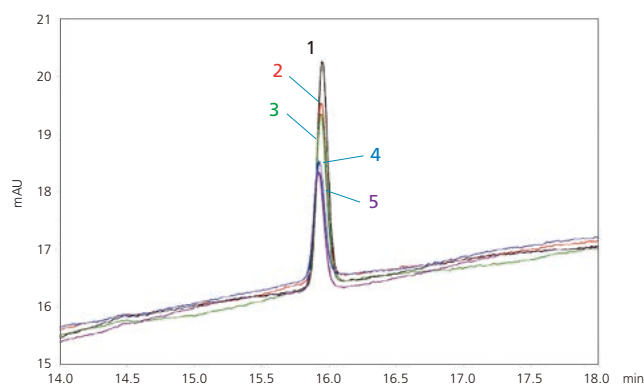
- Prevents the adsorption of organic compounds
- Reduces the adsorptive loss of the precious sample
- Ideal for peptide and basic compounds analysis



## Reduces the adsorption of peptides

The peptide used as a medium molecule pharmaceutical product is likely to be adsorbed on the polypropylene resin by the hydrophobic interaction. The TORAST-H Bio Vial prevents the adsorption of organic compounds.

No.	Vial Type	Sample Vol. (μL)	Recovery (%)
1	TORAST-H Bio Vial	200	100
2	Glass Vial by Company A	1500	81.1
3	Glass Vial by Company B	1500	78
4	PP Vial by Company B	200	52.1
5	PP Vial by Company C	200	53.3



Adsorption test on Ghrelin with various type of vials

# TORAST-H 96well 500 RU

## Features

- Low adsorption polypropylene 96-well plate
- Prevents the adsorption of organic compounds
- Reduces the adsorption loss of the precious sample
- Ideal for peptide and basic compounds analysis



## Product Information

Name	P/N	Volume (μL)	Material	Qty./Unit
TORAST-H Bio Vial with cap	370-04350-00	300	Polypropylene	100
TORAST-H 96well 500 RU	370-04100-01	500		10
TORAST 96well Silicon Mat	370-04020-01	-	Silicon	50

• Avoid sunlight and store at room temperature.

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