## "USURAI"

Functional glass tumblers combine "Delicate" and "Strong" features. From Japan to the world, practical glass using a new technology named "Full Surface Ion Toughening ".



Thin glass products, which were commonly used in the Japanese food HORECA market in 2014, were delicate and beautiful glass products, but they were easily broken and could only be cleaned with hand washing. At "Toyo Sasaki Glass", although there were relatively thin glass products, the wall thickness was 1.3 mm, and there was no functional property at all,and the product did not meet market demand.

"USURAI" was developed based on the concept of developing practical products that are thin, beautiful, and have high functionality.

"USURAI" has been developed and commercialized over a period of about eight months and it has three main unique features.

First, "**Total Thin-wall Products**" By realizing an unprecedented 1.1 mm thick mouth with smooth cutting, the glass looks nice and delicate.

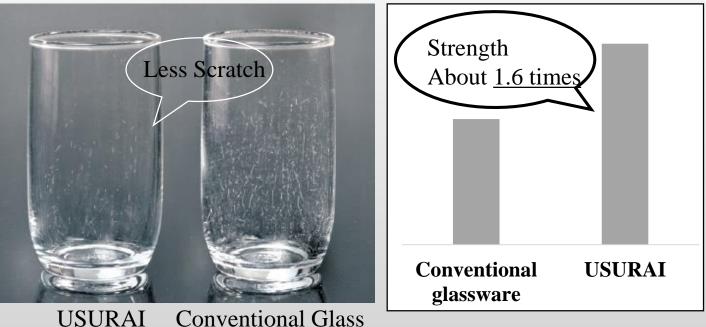
## Cut cross-section of "USURAI"

3 mm bottom thickness

## Second, "Strength Improvement"

By using an unprecedented technology called "Full Surface Ion Toughening", the strength of the product has improved, making it more resistant to cracking and scratching. In addition, cleaning with a washing machine was allowed.

Use at a restaurant for 24 months



TOYO-SASAKI GLASS JAPAN The third characteristic is "Weight reduction." "USURAI" B-21109CS (capacity 305 mm) reduced weight by about 33% compared with conventional products, making handling relatively simple.



## About us "TOYO-SASAKI GLASS"

We ,"TOYO-SASAKI GLASS", are the No.1 glassware manufacturer in Japan in terms of production volume and quality. Founded in 2002 following the merger of two Japanese oldest and largest glassware manufacturers dating back to 1878, we first commercialized and introduced toughened glassware brand "HS" line in Japan in 1967.

With long-standing traditions and sophisticated technologies, we continuously develop practical and universal designs perfectly fit for every dining and drinking scene.

We are the foremost producer of super light and thin yet durable products, using our technology second-to-none.



The line name "USURAI" is said to be a season word for "Haiku"which is Japanese poem because of its thin ice that stretches over the rice paddies and other fields in early spring. It is named for its thin, delicate appearance and Japanese style.



"USURAI" line has sold about 100,000 units annually for about three years since their launch. "USURAI" has been a classic product lineup, but it is also developing a modern size that meets the needs of the times.





"TOYO-SASAKI GLASS" will continue to create new inspiration for the world by making beautiful glass products using unique technologies from Japan.

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