

QR

Quality Review

.1



(left) The new product released on April 11th in seven new colors: five gorgeous champagne shades plus matte black and white. The brush vibrates at a rate of 16,000 strokes per minute to thoroughly clean teeth. (right) The double-edged brush, Panasonic's own unique invention, has extremely fine bristles set in the edges to meticulously clean molars and inter-dental gaps in even the most irregularly spaced teeth.

Pocket Doltz Sonic Toothbrush

Photography/ Hitoshi Yasuda... Text/ Kei Nakamura

.....
This revolutionary product has dramatically widened the market and increased users of electric toothbrushes
.....

Cleaning the teeth after lunch is one habit that Japanese women office workers (commonly known as "Office Ladies", or OL for short) would never neglect, since they are probably the most passionate in the world when it comes to cleanliness. Their reasons may be various—not brushing after lunch makes them feel uncomfortable, they're worried about bad breath, or it makes them feel refreshed—but the reality is that over half the OLs in their twenties brush after lunch.

One product that these particular young women have given rave reviews to is the Pocket Doltz Sonic Toothbrush. Sales quickly soared when it was first released in April 2010, with the company achieving its sales target of 500,000 brushes in three months. Sales broke the one million mark in six months, and 1.5 million after nine months. In just one year it became a popular product that

doubled the previous market for electric toothbrushes.

The secret to its success lay in addressing problems that had previously put women off electric toothbrushes—their being "clunky, noisy, and bulky,"—to create a product that was instead seen as "light, small and quiet."

Panasonic thus succeeded at a stroke in transforming a product that had previously been regarded as something for middle-aged men concerned about periodontitis into one that grew popular amongst women.

The company exhaustively investigated the size of OLs' cosmetic bags, and concluded that a product slightly larger than a mascara stick would be acceptable. Their first goal was therefore to create a brush that was compact in size. Next they ran repeated tests to find a comfortable noise level, and sought a design that was aesthetically similar to cosmetic goods. Initially it was bewildering for them to focus on purpose-driven rather than functionality-driven development, but it was worth the effort as they eventually created a product that grabbed the hearts of OLs. Customers' demands for functionality were still satisfied by making the brush head smaller and devising a shape that enables the teeth to receive a thorough brushing in a short time—another reason for the product's popularity.

This year an even slimmer toothbrush is being released, and with a range of seven colors, the choice will be even wider. Such a stylish toothbrush is bound to become a must for people who already use an electric toothbrush at home, and even non-users will want one for going out. Women users have showered it with praise: "It feels great because the teeth are so smooth!" "It looks cute and my mood perks up when I use it," "Brushing my teeth is fun now ♪," and "I want one for home use too." Dentists are also appreciative of the part this toothbrush has played in popularizing the habit of cleaning teeth after lunch.

How about getting one for yourself as a second toothbrush or small gift. You're bound to find you can't do without it!



Pocket Doltz EW-DS12 Open price (current market price approximately 4,000 yen). Size: H16 x W1.65 x D1.8 cm. Runtime: Runs for about three months on one AAA alkaline battery if used twice-daily (rechargeable batteries okay). The entire brush can be washed in water.

Pocket Doltz



QR

Quality Review

.2



(left) Colored fine writing pens released in November last year. This new product was designed with Japanese high school girls in mind, who love to decorate photo booth stickers, photographs and cards. Twelve colors in total. Each one is 105 yen (tax inclusive). (right) Even tiny sections of writing can be erased with the small eraser. The ink won't rub off onto the eraser either!

Frixion — the Erasable Pen

Photography/ Hitoshi Yasuda, Text/ Kei Nakamura

The Untold Story of Researchers' Persistence Behind this Worldwide Hit!

The erasable pen Frixion series was first released in Europe in January 2006, and went on to become an explosive hit product, boasting total worldwide sales of 300 million pens.

Sales in Japan commenced in 2007, but the actual development of the pen actually started 35 years before that. It began with a certain researcher who wanted to reproduce in a beaker the kind of magical transformation that turned the deep green of leaf-covered trees in summer into autumn hues overnight.

In 1975 the research inspired by this romantic notion led to the successful development of the basic technology for Metamocolor, a thermo-reactive ink that could change color in response to temperature changes.

This was achieved by combining leuco dye, color developer and discoloration-temperature regulators into one capsule where they blended evenly to form the color pigmentation. Initially, the temperature range at which colors would disappear and come back was only a

few degrees, and the temperature range for color change and restoration was also an uncertain factor. This meant the technology was not suitable for use in writing instruments, and instead was employed in glasses which had patterns that would change when cold liquid was poured in, or bath toys with writing and pictures that would disappear when put into the bath. During that time, however, researchers never gave up on their dream of creating an erasable pen.

Their biggest challenges were reducing the size of the microcapsule that contained the component ingredients, and developing a discoloration temperature regulator. The laboratory that steadily and patiently carried out this research was known internally as the "city that never sleeps." This gives you some idea of how persistent researchers were in their efforts to develop this product!

Long years of effort bore fruit in 2002 when they succeeded in reducing the size of the microcapsule to 2~3 microns. In comparison, a strand of hair is 80~100 microns in diameter, which means that the capsule was 1/40th the size of a hair strand! In the same period they also successfully hit on a new discoloration temperature regulator after a challenging R&D process.

Thus in 2005 the world's first erasable pen came to fruition. The temperature discoloration range for the Frixion ink

was sixty-five to minus twenty degrees centigrade. When writing was rubbed with the eraser in the barrel or cap of the pen, the heat generated by friction caused the ink to disappear. Writing that has been made to vanish in this way can't be made visible again unless cooled to a temperature of minus twenty degrees, so for all intents and purposes in everyday life, it disappears. The fact that no eraser rubbings are produced, as there are with ordinary erasers, is one more reason for the pens' tremendous popularity.

The Japanese are a tenacious people who revel in complex forms of writing, so it is no wonder that these researchers were able to create this dream series of Frixion pens. It's hard to know which one to try out first—the ball pens, highlighter or fine writing pens?



The Frixion Ball Knock Retractable pen was released in July last year, in red, blue and black. Seven colors were added to the lineup in March this year. Each retails for 241 yen (tax inclusive).

FRIXION

