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THE JAPANESE TABLE

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The Secrets of Taste in Japanese Cuisine

Texture

This third installment in our series on taste focuses on the textures of foods in Japanese cuisine, how they are perceived in the mouth, and how this range of diverse textures adds dimension and pleasure to the act of eating.


—
by *Tohru Fushiki*

In addition to taste and smell, a key component in Japanese cuisine is that of texture. Sometimes referred to as mouthfeel, this involves the physical feel of food experienced in the mouth, such as firm, soft, elastic or viscous. Temperature and spiciness fall into this category as well. All of these sensations are recognized by the trigeminal nerves, the terminal nerves responsible for sending signals to the brain.

Interestingly enough, it has been determined that the warmth and coldness of foods, as well as stimulus from spices, are all discerned by the same receptors within the mouth. By way of illustration, the spicy sensation of chilies or peppers and the heat sensation of temperatures over 43°C (109°F) are transmitted from mouth to brain via the same types of signals. Therefore it is indeed correct to express the spiciness of chili as being “hot,” while

the “cool” refreshing experience of mint is felt by receptors that respond to temperatures 28°C (82°F) and below.

Japanese cuisine does not use many spices or dairy products, so the breadth of taste and aroma stimuli may not be very extensive; however, as suggested by the Japanese expressions *hazawari* (“texture felt by the teeth”), *shitazawari* (“texture-feel on the tongue”) and *nodo goshi* (“the sense of food or drink passing down the throat”), there is tremendous variation in how perceptions related to textures of food can be expressed. Fumiyo Hayakawa, a researcher at Japan’s Institute of Food Research, National Agriculture and Food Research Organization, has identified 445 Japanese terms used to describe food texture and sensation, including numerous onomatopoeic words—the most in the world, as compared to seventy-seven such descriptors



Nearly transparent slices of *fugu* sashimi, accompanied by soy sauce-based dipping sauce

in the English language, 144 in Chinese and 227 in French.¹ This implies that much of the pleasure of Japanese cuisine is evoked by diverse food textures.

The textures of sashimi

There are many factors surrounding food that affect the experience of texture. Take sashimi as an example. Its preparation is relatively simple, and the seasonings and condiments used are minimal, yet the textures of sashimi vary widely depending on the size and type of fish, which allows diners to savor all sorts of distinctive taste sensations. The fatty flesh of tuna, for instance, has the velvety texture of a ripe avocado; the firm, resilient flesh of the *fugu* puffer fish is sliced thin to the point of transparency, such that the pattern on the serving plate is visible, yet its texture is still appreciated. From net to plate, the firmness of fish

flesh changes quickly over time, and, in serving their customers, chefs prepare fish in full awareness of this timing. The *yanagiba* knife used to slice fish for sashimi has a special long, finely sharpened blade that chefs make a rule to re-hone each day after use. Examined under a microscope, the surface of a slice of fish cut with such a sharp blade is very smooth, showing little damage to the flesh tissue: when eating sashimi, the tongue is highly receptive to this silken texture.

Variations in texture

This emphasis on textures in Japanese cuisine is not limited to sashimi; in fact, fish meat can take on totally different forms that present agreeable variations in texture. *Kamaboko* fish cake (cover), for example, is made by making a paste of fish meat, then shaping and steaming it. The texture of *kamaboko* can differ depending on the type of fish meat used, the firmness of the meat and the intensity of kneading the paste. *Kamaboko* is praised if its texture is described as *koshi ga tsuyoi*, meaning pleasantly springy.

In areas where it is difficult to obtain fresh fish, various dishes have been developed to highlight the varying textures of vegetables. Part of the enjoyment of bamboo shoots, burdock roots and mushrooms involves their distinctive crunchy, chewy, or soft textures when biting into them. Many pickled vegetables like daikon, cucumber and turnip also offer up a gratifying crunch when eaten. Bracken fern fronds (*warabi*) are a popular edible wild plant whose young stems present an enjoyable contrast of taut outer membrane and soft inner tissue. Some innovative chefs explore the countryside in search of wild ingredients with interesting textures.

One texture with a special place in the Japanese diet is that

of stickiness, expressed as *neba neba*, found in foods like okra, *natto* fermented soybeans, *mozuku* seaweed and *tororo* grated mountain yam. *Mochi* glutinous rice cakes have long been offered to the gods during the New Year, and eating them is a custom that embodies an



Natto fermented soybeans



Grilled *mochi* glutinous rice cakes



Somen

appreciation for the bounty of the divine. When *mochi* is grilled, the outside turns crispy while the inside becomes soft and elastic, a mouthfeel widely appreciated by Japanese. Another distinctive texture cherished by the Japanese is the silky smooth *tsuru tsuru*

feeling of swallowing noodles. Thin delicate *somen* noodles epitomize the expression *nodo goshi ga yoi*—the pleasurable experience of food slipping down the throat.

Returning to the world of sushi, another satisfying texture created by skilled sushi chefs involves the rice itself. The vinegared rice used in making sushi seems well-packed on the surface and holds together long enough to keep its shape from plate to mouth; but once placed in the mouth, it quickly—and gracefully—disintegrates gently, imparting an almost elegant sensation. This textural technique distinguishes the true professional sushi chef.

I feel that Japanese cuisine deliberately pursues opportunities to explore the textures of food in many ways. Our food culture has evolved to relish the texture of a variety of ingredients, all the while sustaining a harmony of flavors underpinned by simple, umami-rich dashi. ◆

1. Fumiyo Hayakawa, "Kotoba de Arawasareru Shoku no Kansei-Tekusucha Yogo wo Chushin-ni" (Words expressing food sensibilities—focus on texture terms), in *Shoku no Gendai Shakairon* (Theory of food in contemporary society), vol. 2 in the series *Fuoramu Ningen no Shoku* (Human food forum), ed. Tohru Fushiki, (Tokyo, Rural Culture Association Japan, 2022), 80.

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On the cover *Kabocha* squash, featured in *Spirit of the Seasons*, page 5; and sliced *kamaboko* fish cake.

Author's profile

Tohru Fushiki was born in 1953 in Kyoto. He holds a PhD from Kyoto University and specializes in food and nutrition science. From 1994 he served as professor on the Faculty of Agriculture, Kyoto University, where since 2015 he has been professor emeritus. He has served as professor at Ryukoku University since 2015, and vice president of Koshien University since 2021. His many publications include *Mikaku to Shiko no Science* (Science of sense of taste and food preferences; 2008); and *Dashi no Shimpri* (Mystery of dashi; 2017).

Expressway to Food and Fun

Japan's national expressways comprise some 9,000 kilometers of mostly tolled highways. Along these motorways lies a comprehensive network of over 850 service areas (SAs) and parking areas (PAs) where weary drivers can unwind and find some refreshment. These convenient rest spots are typically simple pull-off areas, some with limited amenities such as restrooms, gas, basic food options or traffic information—but in recent years, many have evolved as retail, cuisine and entertainment complexes where travelers can park and dine on local delicacies or browse markets for fresh regional produce.

The busiest of Japan's SAs, with parking space for over 400 vehicles, is Ebina SA in Kanagawa Prefecture, where drivers can stop for gas and sample the city's renowned melon breads. At the unique Umihotaru PA, built on an



Asari clam burger, Umihotaru PA

artificial island midway along the Tokyo Bay Aqua-Line Expressway in Chiba Prefecture, motorists may be tempted to brake for *shio* ramen noodles with *asari* clams or an *asari* clam burger—surrounded by stunning 360-degree views of Tokyo Bay. Ashigara SA in Shizuoka Prefecture, one of the largest in Japan, incorporates a hotel, a public bath—and even a dog park with agility equipment.

“Highway Oases” are the latest expressway trend, one that involves leisure parks and other attractions attached to SAs and PAs. These expanded Oases are also accessible from public roads. One of the most popular is Kariya Highway Oasis in Aichi Prefecture. Known for its luxurious rest rooms, it has become a destination on its own, complete with an amusement park, Ferris wheel and hot spring,

*Highway Oases
are the latest
expressway trend*



Kariya Highway Oasis

while its food court offers up Nagoya specialties like *misokatsu* pork cutlet. Travelers enjoy scenic views of Mt. Fuji at the Fujikawa SA in Shizuoka Prefecture, connected to a major commercial facility called Fujikawa-Rakuza that features a planetarium, exhibition gallery, restaurants and farmers market. Kawashima SA is linked to Oasis Park, a large multiplex leisure park in Gifu Prefecture, where visitors can experience an aquarium or explore a giant maze in a water eco park. With imaginative options like these, Japan's revamped SAs and PAs are tempting locals and passing motorists alike to pull over and do more than just get gas and coffee by enjoying a relaxing highway “getaway.”



Farmers market (above) at Fujikawa-Rakuza
At left, Kariya Highway Oasis souvenir shop

Parboiling

Daikon and Pork

Parboiling is a basic food preparation technique in Japanese cooking, intended to elicit clean flavors and remove unsavory smells from ingredients. In this second article on parboiling, we focus on daikon and pork. Parboiling removes the distinctive smell of daikon and helps it absorb flavor; parboiling pork not only eliminates its gamy smell, but extracts *aku* and excess fat as well. ●

Daikon

1. Take a daikon roughly 12 cm / 5 in. diameter. Cut it 20 cm / 8 in. in length, and then into lengthwise quarters. Thickly peel skin* (top), then cut into random wedges (bottom).
2. Place the wedges in a pot and add just enough rice water** to cover; bring to a boil, then reduce to low and simmer for about 15 minutes until daikon is soft and easily pierced with a skewer, as shown below.



3. Remove from heat, rinse daikon with cold water and pat dry.

* The remaining daikon peels can be thinly sliced and sautéed to make kimpira dishes or pickled to make Japanese tsukemono.

** Water used to rinse rice prior to cooking. If rice water is unavailable, plain water may be substituted.

Pork shoulder

1. Cut pork shoulder into bite-size pieces.
2. Place pork and a few slices of ginger in a pot, adding just enough water to cover. Bring to a boil, reduce to low and simmer for about 15 minutes (right).
3. Remove from heat and drain. Rinse the meat with cold water and pat dry.



Parboiled daikon and pork simmered in dashi, soy sauce and other seasonings

Kabocha

南瓜



Simmered kabocha squash

Featured on our cover is

kabocha squash. *Kabocha* was first introduced to Japan in the sixteenth century as an exotic vegetable from the Cambodia region (from which the term “*kabocha*” is derived). This traditional vegetable, called *Nihon kabocha* (Japanese *kabocha*), has a bumpy skin and soft, watery flesh. However it is the highly popular *seiyo kabocha* (Western *kabocha*), or winter squash, that dominates the market today. The *seiyo kabocha* was originally imported from the US in the nineteenth century and is characterized by smooth skin and very sweet flesh.

Most *kabocha* is harvested in summer and autumn, but turns sweeter in autumn and winter after a post-harvest ripening period. Highly nutritious, it is rich in beta carotene, potassium, fiber and antioxidants, and can be stored for long periods.

In Japan there is a notable tradition of eating *kabocha* on the day of the winter solstice, to symbolize hope for good health in the coming cold months. *Kabocha* can be enjoyed in many different ways, and features in roasted and simmered dishes as well as in tempura. ●

Sushi Salad with Marmalade-Soy Sauce Dressing

Serves 3 as an appetizer

231 kcal Protein 12.3 g Fat 4.4 g
(per serving)

Dressing

- 2 T grain vinegar*
- 1 T Kikkoman Soy Sauce
- 1 T orange marmalade
- 6-8 boiled prawns, peeled and deveined
- 1 can flaked tuna in water or oil (1 can = 140 g / 5 oz.)
- 250 g / 1 ½ C cooked rice at room temperature
- Baby leaf mix
- Daikon sprouts or broccoli sprouts for garnish

1 Combine vinegar, soy sauce and marmalade in a small bowl. If marmalade is lumpy, smooth with a fork; if it contains large pieces of peel, cut into small pieces. Mix well and let stand at room temperature for at least 1 hour.

2 Cut the prepared prawns into 8-10 mm / 0.3-0.4 in. pieces. Remove excess water or oil from the tuna.

3 Spoon out 1/2 C cooked rice onto each of three individual plates and spread flat. For each serving, evenly portion out the baby leaves atop the rice, place a dollop of tuna in the middle, then arrange the prawns over the baby leaves. Garnish with sprouts.

4 Gently drizzle the marmalade-soy sauce dressing over the salad before serving.**

* Apple vinegar or white wine vinegar may be substituted.

** Adjust amount of dressing to taste.

Recipe by Michiko Yamamoto



A mix of soy sauce and vinegar is used as a versatile sauce in Japan. With its elegant citrus aroma, the addition of orange marmalade transforms this sauce into a unique dressing that elevates the dish into a sushi-like taste experience.



Authentic sesame tofu is made using sesame seeds and kuzu starch. This alternative version combines sesame paste, gelatin and soy milk to create a healthy and simple dish easily made at home.

Sesame Tofu

Serves 6

92 kcal Protein 5.7 g Fat 6.1 g
(per serving)

- 120 ml / 1/2 C dashi stock
- 7 g / 1 T gelatin powder
- 360 ml / 1 1/2 C soy milk
- 3 T white sesame paste
- 2 t Kikkoman Soy Sauce

Dashi soy sauce

- 2 T dashi stock
- 1 T Kikkoman Soy Sauce
- Wasabi paste to taste

1 Combine the dashi stock and gelatin powder in a small saucepan and mix well. Allow to stand for about 5 minutes.

2 Warm the soy milk in a saucepan over medium heat. Remove from heat just before boiling. Place the white sesame paste in a bowl and gradually pour the warmed soy milk over it while stirring; add 2 t soy sauce and blend well until the texture is completely smooth.

3 Warm the saucepan with the dashi-gelatin from Step 1 over medium-low heat and stir until the gelatin is completely dissolved. Pour the liquid gelatin into the bowl of sesame-soy milk and stir until well blended.

4 Moisten the inside of a mold* with water. Pour the mixture into the mold. Allow to cool down, then refrigerate for 1 to 2 hours until set (see photo).

5 After the sesame tofu has set, run a knife around the sides of the mold to loosen and remove the tofu. Cut it into 6 pieces and serve in individual shallow bowls.

6 Combine the ingredients for the dashi soy sauce. Pour a little around the bottom of each serving of sesame tofu and garnish on top with a small dab of wasabi.

* This recipe uses a typical Japanese-style square mold about 12 x 14 x 4 cm (5 x 5.5 x 1.5 in.). The mold size can be flexible, as long as it can hold about 600 ml / 2 1/2 C of liquid; 6 ramekins or small individual cups may also be used.



Recipe by Kikkoman Corporation

1 C (U.S. cup) = approx. 240 ml; 1 T = 15 ml; 1 t = 5 ml



KCC Food Culture and Cooking Workshops

For over 40 years, Kikkoman Corporation has been holding KCC Food Culture and Cooking Workshops at its KCC Hall in Tokyo. These workshops feature global culinary experts, chefs and other food professionals who share food culture and cooking from Japan and around the world, and provide information and insight into a range of everyday foods and dishes. Through their demonstrations and entertaining talks, KCC workshops introduce cooking tips and explore recipes that can be easily made at home.

These workshops are designed to pass on traditional Japanese food culture, discover new delicious experiences and create value through the international exchange of food culture. KCC workshops were originally held for onsite audiences, but recently, Kikkoman has begun to live stream them on YouTube and upload shorter YouTube versions on its website, so they can be viewed by anyone (both in Japanese only). Here we introduce two recent KCC Cooking Workshops.



Nishime simmered satoimo taro, carrot, bamboo shoots, prawns and anago conger eel, prepared by Chef Takahashi



Above, clockwise from left by Chef RÁCZ are meatballs in tomato sauce, palacsinta and goulash

New Year's Nishime

Chef Yoshihiro Takahashi is fifteenth-generation successor to the renowned Hyotei in Kyoto, a 400-year-old *ryotei* (*ryotei* are refined and exclusive Japanese-style restaurants). In a KCC workshop held in December 2021, Chef Takahashi presented the classic dish *nishime*, as well as how to prepare dashi. *Nishime* is a Japanese dish prepared by simmering vegetables and other ingredients until the broth is fully absorbed; it is typically part of *osechi ryori*, the traditional auspicious foods served during the New Year. Chef Takahashi demonstrated techniques used

at his *ryotei* that enhance the flavor of each ingredient, as well as cutting and presentation methods that make a dish more visually appealing.

Hungarian Homestyle Cooking

Chef Gergő RÁCZ is head chef at the Embassy of Hungary in Tokyo. In May 2022, he presented three typical Hungarian homestyle dishes: goulash, a traditional stew seasoned with paprika; classic Hungarian meatballs in tomato sauce; and palacsinta Hungarian-style sweet crepes. Chef RÁCZ carefully explained various cooking methods, including how to handle the timing for adding individual ingredients, and how to

make thin crepes. For the goulash recipe, the chef used Kikkoman Soy Sauce and Manjo Mirin, which go well with both vegetables and meat. Chef RÁCZ also talked about Hungary and its foods to better familiarize the audience with the country and its cuisine.

Through activities such as KCC Food Culture and Cooking Workshops, Kikkoman continues to share the food cultures of Japan and the world while conveying the joys of cooking. 🍎

KCC Workshops YouTube versions, Kikkoman website (in Japanese)



<https://www.kikkoman.co.jp/kcc/archive/index.html>

