



J I C C G O U R M E T

As part of the launch of **Japan Information & Culture Center (JICC), Embassy of Japan's JICC Gourmet**, we will be offering a JICC Gourmet limited newsletter series. We hope that this educational newsletter series can help you learn more about various intriguing and lesser known elements of Japanese food culture.

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JICC Gourmet Newsletter #2:

Umami: The Fifth Flavor

You may have heard the word umami used by a chef on one of your favorite cooking shows, or perhaps you found a recipe that included it in a description. Or maybe you watched the J-Film "Le Chocolat de H" where chocolatier Hironobu Tsujiguchi uses umami rich ingredients to create his gourmet chocolates. In fact, the word umami is now commonplace in conversations about tasty food, but you may occasionally find yourself wondering about this popular buzzword's origins and meaning. In this newsletter, we will delve into the discovery of umami in Japan and its presence in the history and evolution of Japanese cuisine.

Umami Science

In the simplest sense, the word **umami** (旨味 うまみ) is used in the Japanese language to describe 'deliciousness,' but the origin of the concept of umami is far more complex. In fact, there is no English word that completely captures its meaning. However, in the food science world, umami (うま味 うまみ) is now considered the **'Fifth Flavor' in food palatability** (after sweet, salty, bitter, and sour), and it refers to a **savory, meaty, and sometimes broth-like taste** that cannot be replicated by a combination of the other main flavors (Yamaguchi and Ninomiya, 2000). The Umami Information Center describes its three main properties as: a taste that coats the tongue, a lingering aftertaste, and increased salivation. Extensive research by Japanese scientists concluded that the flavor originates from foods rich in **glutamic acid and/or two ribonucleotides**: inosinate (common in meats and shellfish) or guanylate (common in plants).

A Brief History of Umami



Although the term umami has only recently entered the culinary lexicon in the United States, **the term was actually coined in 1908**, when Professor of Chemistry at Tokyo Imperial University (now Tokyo University), **Kikunae Ikeda**, successfully extracted the first sample of monosodium L-glutamate from dried **kombu** (昆布 こんぶ), or kelp. From this extraction, he confirmed that **foods rich in glutamic acid** like kombu are the true origin of the umami flavor. Professor Ikeda went on to patent this extracting method and with Suzuki Pharmaceutical Company produced a flavor seasoning product, "Ajinomoto," that is still seen on grocery shelves to this day (Ohkoshi). (Left image: Professor Ikeda)

However, before Professor Ikeda's discovery, umami-rich dishes were already a staple in **wa-shoku** (和食 わしょく), Japanese food. One of the oldest known staples and the base of many traditional dishes is **dashi** (出汁 だし), a soup stock made from simmering ingredients high in umami such as kombu and **katsuo-bushi** (かつお節 かつおぶし), dried bonito fish. In addition, ancient documents such as the Code of Taiho (703) from the Asuka Period (538-710) suggest the use of **kokubishio** (穀醬 こくびしお), a type of food substance made from salt-pickled, fermented grains similar to that used to make modern shoyu, or soy sauce, and miso, or soy bean paste. (Right image: dashi broth)



Natural Sources of Umami in Wa-shoku

As an island nation that experiences hot, humid summers, Japan has historically relied on **ingredients from the sea and fermented ingredients** rich in umami to create many of the traditional dishes still beloved in Japan to this day.

Broth Ingredients:



Kombu- (昆布 こんぶ) Kelp and 'sea vegetables' are a common ingredient in wa-shoku. Kombu is used mainly in its dried state to create broth like dashi. Sometimes kombu is also used as an ingredient in Japanese soups like *oden*, a hearty winter stew.



Katsuo-bushi- (かつお節 かつおぶし) dried bonito fish. Created through the process of stewing the fish, smoking it and finally drying it in the sun while repeatedly applying and scraping off mold to ferment it. This results in a wood-like block of smoky, umami-filled fish to be shaved into flakes used in Japanese stocks like dashi or as toppings on foods such as *okonomiyaki*, or Japanese-style savory pancakes. (Photo by サフィール CC BY-SA 4.0 via Wikimedia Commons)



Shiitake mushrooms- (椎茸 しいたけ) While fresh shiitake mushrooms are used in a variety of ways, *hoshishiitake* or dried shiitake, are mainly used in the creation of variations of dashi and have the highest concentration of umami flavor.

Fermented Ingredients:

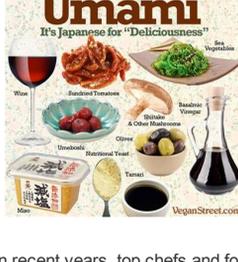
Shoyu- (醤油 しょうゆ) soy sauce, a ubiquitous ingredient in most Japanese dishes to give it a salty and umami taste. Shoyu is made by combining soybeans and grains with *koji* mold and allowing it to ferment. It is not only used in cooking or broths, but also as a condiment for dishes like sushi. It can also be used in sweet and savory glazes on mochi, or Japanese rice cakes, such as *mitarashi dango*.



Miso- (味噌 みそ) fermented soybean paste, used in a variety of different dishes in Japan, but perhaps the most famous being the classic bowl of soup that often accompanies meals in Japan. It is made by mashing *daizu*, or soybeans, and adding salt and koji mold to ferment the paste. There are many varieties of miso, from red to white as well as regional specialties.



New Uses of Umami



Umami ingredients are not limited to just those used in wa-shoku; **the international culinary scene is finding new ways to utilize these flavor-packed ingredients** in innovative and delicious ways. In the vegetarian/vegan world, foods high in umami such as nutritional yeast, tomatoes, mushrooms, and fermented foods like miso and soy sauce assist in creating meals with natural, meat-like replacements and can also make vegetarian food more satisfying to even those more skeptical of meatless cooking.

In recent years, top chefs and food bloggers in Japan and around the world have begun to incorporate umami-rich ingredients into their desserts as well. **Miso cookies are a trendy, popular dessert option in the foodie world** for their deep but not overly sweet flavor. Soy sauce companies in Japan like Yamakawa Jozo, based in Gifu prefecture, have concocted **soy sauce specifically for ice cream** to give vanilla ice cream a 'caramel-like' flavor. Hironobu Tsujiguchi, a world-renowned pâtissier and chocolatier featured in the J-film documentary "Le Chocolat de H," also highlighted umami in sweet desserts through his **"DNA Chocolate:" chocolate containing glutamic acid** from a fusion of fermented foods from Japan and around the world such as miso and mirin, or Japanese (cooking) rice wine.



Above image: Vegan umami guide. (Photo by veganstreet.com)
Left image: Hironobu Tsujiguchi's 'Umami Noir' truffle from the 2014 Salon du Chocolat collection "DNA=Umami." (Image from lcdh.jp © 2019 "LE CHOCOLAT DE H" 製作委員会)
Middle image: Tamariya Yamakawa Jozo's ice cream soy sauce. (Image from tamariya.com)
Right image: Chocolate chip miso cookies by Hapa Nom Nom. (Image by hapanom.com)

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MORE ABOUT JICC GOURMET

Food is such an important expression of culture, and Japan expresses its unique culture through food in a vibrant and joyous way. From commonly known staples like ramen and sushi to lesser known foods like shojin ryori, or Buddhist cuisine, Japan has a wide range of food culture and tradition to explore. That is why we are excited to introduce JICC Gourmet.

This ongoing series will explore Japanese food through newsletters, films, lectures, and other related events. Creating a sense of community has always been important to us and food is something that we all can connect with and share. This simple idea is what inspired JICC Gourmet.

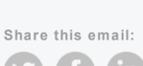
To learn more about JICC Gourmet related film screenings, events, and activities [click here](#).

Let us know what you enjoyed most from this newsletter on social media with #DCJICC!



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