

THE FLAVOR HANDBOOK

A REFERENCE AND PRODUCT GUIDE

kikkoman[®] 

A WORLD OF FLAVOR POSSIBILITIES

TABLE OF CONTENTS

A World of Flavor Possibilities	2
The Story of Soy Sauce	3
Naturally Brewed vs. Non-Brewed	4
Why Brewing Is Better	5
Applications: Kikkoman Soy Sauce in Action	6
Kikkoman Flavor Solutions: Soy Sauce Is Just the Beginning	7
Umami and Natural Flavor Enhancement	9

KIKKOMAN PRODUCTS

Soy Sauces (Liquid)	10
Soy Sauces (Dehydrated)	12
Natural Flavor Enhancement Products	12
Teriyaki Sauce Products	14
Asian Sauces and Seasonings	14

These days, global flavor is big news. From Asian to Latin American, Mediterranean to mainstream, a whole world of delicious innovation is redefining the way America eats.

For close to four centuries, Kikkoman has built our heritage on mastering the techniques—and applying the leading-edge technologies—that maximize flavor. You'd expect nothing less from the name that's synonymous with soy sauce. Yet while food manufacturers have long trusted Kikkoman as their leading source for the largest selection of soy sauces in liquid and dehydrated form, today's Kikkoman offers much more.

With premium and reduced-sodium options, clean-label flavor enhancers and a growing line of pan-Asian products—all designed to optimize flavor and performance across applications—Kikkoman's flavor-forward lineup supplies the finishing touch that brings product profiles into harmony, whether you're extending your line with global foods or formulating classic American favorites.

TRUSTED SOURCE, TRUSTED RESOURCE

At a time when product sourcing matters more than ever, you can trust Kikkoman's transparency. Our soy sauce is naturally brewed in state-of-the-art, HACCP-approved production facilities in Walworth, Wisconsin, and Folsom, California, using only North American-grown soybeans and wheat, 100% natural salt and pure water. Our multiple North American distribution centers ensure consistent supply, quality, flavor and safety with each shipment.

We create our products with application functionality in mind, from ensuring flavor and storage stability to understanding ingredient interactions. When you work with us, you'll share access to cross-functional R&D and production teams with onsite, timely formulation and real-world operational solutions. And with pack sizes ranging from 55-gallon drums to railway cars and tankers, we're ready for any need at any scale. Kikkoman is your trusted source for flavor expertise and your resource for product-development success. We hope you'll find this guide useful as we help you explore a world of flavor possibilities.



THE STORY OF SOY SAUCE

Would it surprise you to learn that soy sauce is more than 2,000 years old?

Modern soy sauce's ancient ancestor first emerged in China in the third century, BCE. This simple seasoning made of fermented soybeans (and later, from wheat) was used to enhance the flavor of meatless foods. It spread across Asia, eventually arriving in Japan, where craftsmen refined it into the iconic condiment it is today.

By the 1600s, the Kikkoman founding families were already brewing soy sauce in the time-honored artisanal tradition. Descendants of those families still operate Kikkoman today, making it one of the world's oldest food companies.

But soy sauce is also a 21st-century seasoning, through and through. As interest in gastronomy grows, more consumers and culinarians are coming to appreciate how soy sauce elevates flavor and balances ingredients in foods. In entrées, sauces and dressings, and even snacks, dry mixes and desserts, naturally brewed soy sauce adds the depth, richness, color and satisfying roundness that bring flavor profiles full circle without masking, overpowering or even necessarily adding a pronounced "Asian" or soy sauce flavor.

THE SCIENCE OF SOY SAUCE: A TALE OF TWO METHODS

True soy sauce is the product of natural brewing—a fermentation process that, as in the production of wine and beer, requires several months to complete. And like wine and beer fermentation, natural brewing yields soy sauce with a unique profile, with more than 300 identifiable constituents contributing to its complex, savory flavor.

The more recently developed process of chemical hydrolysis can also produce soy sauce products with speed and economy. But speed and economy come at a cost. Only natural brewing—a composite of centuries-old tradition with cutting-edge technology and strict attention to detail—creates the distinctive flavor, flavor-enhancing functionality and clean-label profile that make naturally brewed soy sauce superior.

MAKE HASTE. SLOWLY.

There is an old Japanese saying, *isogaba maware*—"make haste slowly." In other words, be restless in your quest for progress, but take the time to do it right. Kikkoman understands this like no one else. It's an idea that's built into our company name. *Kikko* means "tortoise shell" and *man* means "ten thousand." In Japanese folklore, the tortoise is a symbol of steady progress and longevity, said to live as long as ten thousand years. Our logo, designed more than three and a half centuries ago, is a hexagon representing the tortoise shell, with the character for "ten thousand" in the center—a fitting symbol for one of the world's oldest food brands.



NATURALLY BREWED VS. NON-BREWED

THE NATURAL BREWING PROCESS

Several months from start to finish

Brewing is accomplished in three distinct steps: *koji* making, brine fermentation and refining.



1. Koji making. Combine select soybeans and wheat under carefully controlled conditions. Introduce the *Koji Aspergillus* seed mold. Mature the *koji* for three days in large vats with air circulation.

2. Brine fermentation. Mix the *koji* culture with salt water to produce a *moromi* mash. Ferment for several months to allow osmophilic lactic acid bacteria and yeast to transform it into a semi-liquid, reddish-brown "mature mash" imbued with soy sauce's distinctive flavor and fragrance compounds.

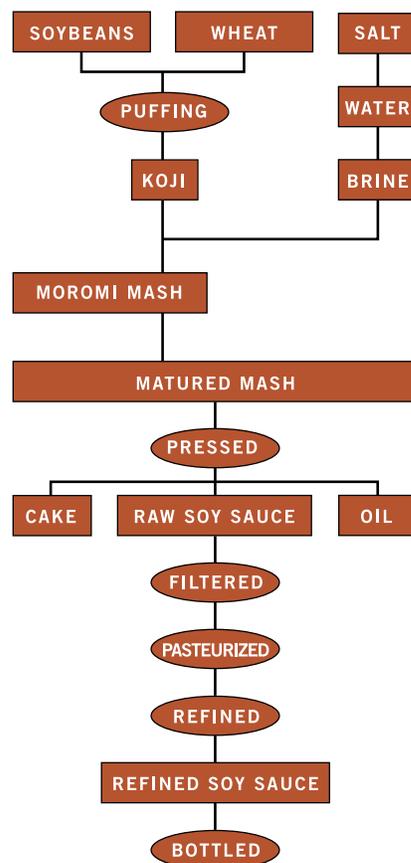
3. Refining. Separate the raw soy sauce from the "cake" by pressing through layers of filtration cloth. Refine, pasteurize and package the liquid as finished soy sauce.

THE NON-BREWED PROCESS

A matter of hours

Chemical hydrolysis involves briefly boiling soybeans with hydrochloric acid for 15 to 20 hours, until they've liberated their maximum free amino acids. Following neutralization and filtration of the hydrolyzed vegetable protein, the addition of caramel color, corn syrup and salt supplies sensory characteristics not produced during chemical hydrolysis.

THE NATURAL BREWING PROCESS



The difference is clear: Naturally brewed soy sauce is transparent, with a light amber color and wonderfully balanced flavor and aroma.



Non-brewed soy sauce is often opaque, with a harsh, overpowering flavor and a pronounced chemical aroma.

KIKKOMAN LIQUID PRODUCTS

Our extensive line of naturally brewed soy sauce products in liquid form offers you options for any formulation need. We offer reduced-sodium and preservative-free alternatives, as well as an innovative clear variety.

Beyond soy sauce, we offer a number of other sauces and seasonings, from our original teriyaki to sriracha, hot chili sauce and salted mirin in a range of pack sizes suitable for any infrastructure.



275-gal tote



55-gal drum

A CLEANER LABEL—NATURALLY

Because soy sauce has no standard of identity in the U.S., its contents must be broken out in the ingredient statement when used in a product. The differences between brewed and non-brewed soy sauces affect not only flavor and functionality but the ingredient declaration as well.

BREWED SOY SAUCE: Water, Wheat, Soybeans, Salt and less than 0.10% Sodium Benzoate as a preservative.

NON-BREWED SOY SAUCE: Water, Hydrolyzed Corn and Soybean Protein, Corn Syrup, Salt, Citric Acid, Caramel Color and Sodium Benzoate as a preservative.

WHY BREWING IS BETTER

The production differences between brewed and chemically produced soy sauce translate directly into the superior flavor and color of naturally brewed sauces as well as their cleaner label. A quick analysis of naturally brewed soy sauce's composition reveals why.

SALT: Starting with the fermentation brine, salt—in finished concentrations ranging from 12% to 18%—provides a pleasing, mildly salty taste while also encouraging proper flavor development in the resulting *moromi* mash. The salt concentration protects the finished sauce from spoilage, too.

AMINO ACIDS: During fermentation, *moromi* enzymes break down soybean and wheat protein into shorter peptides and umami-producing amino acids, including glutamic acid, aspartic acid, lysine, alanine, glycine and tryptophan. These amino acids and peptides contribute a full, robust taste to the sauce and can also act as flavor potentiators. Finished soy sauce contains between 1.5% and 1.65% total nitrogen, weight per volume (a measure of protein content), and glutamic acid is its most predominant amino acid.

SUGAR: *Moromi* enzymes convert wheat starch into glucose along with 10 other sugars that balance the sauce's saltiness and feed the yeast's production of the alcohols—predominantly ethanol—that are important aroma components in brewed soy sauce. During fermentation, reducing sugars engage with free amino acids in the Maillard reaction, allowing for the natural development of soy sauce's characteristic flavor notes and reddish-brown color.

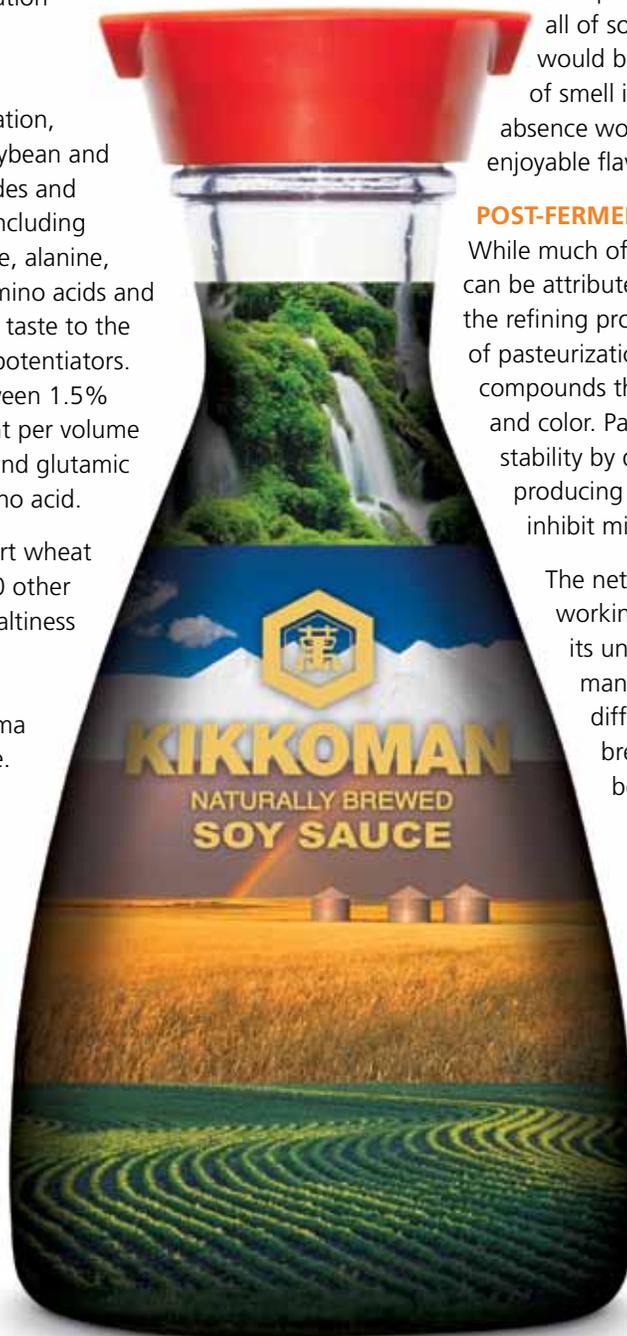
ORGANIC ACIDS: Some soy sauce sugars react with alcohols to produce more than 10 identified organic acids, giving finished soy sauce a pH of about 4.8 and a roughly 1.0% concentration of lactic acid, the most prominent acid in naturally brewed soy sauce. These acids supply the refined, rounded tartness that's emblematic of brewed soy sauce, while also acting as natural preservatives.

AROMATIC ESTERS: Ethanol is a critical aromatic ester in soy sauce because it combines with some organic acids to form esters similar to those that give fine wines their bouquet. Without this reaction, virtually all of soy sauce's aroma components would be missing. Because the sense of smell is so critical to taste, alcohol's absence would lead to a much less enjoyable flavor result.

POST-FERMENTATION DEVELOPMENT:

While much of brewed soy sauce's flavor can be attributed to extended fermentation, the refining process is also critical. The heat of pasteurization further develops many compounds that contribute aroma, flavor and color. Pasteurization also improves stability by deactivating most enzymes and producing organic acids and phenols that inhibit microbial growth.

The net effect of all these constituents working together gives soy sauce its unique complexity. Because so many of these key components are different from or missing in a non-brewed sauce, its flavor can never be the same.



**BORN & BREWED
IN THE U.S.A.**



APPLICATIONS: KIKKOMAN SOY SAUCE IN ACTION

From savory to sweet, Asian to mainstream...no matter what you're formulating, Kikkoman can be your key to bigger, better flavor.



BACON/CURED MEATS

Adds color, balances sweet and smoked flavor, contributes salt for curing, adds natural preservatives.



BEEF

Contributes savory flavor and aroma, adds color, helps blend spice flavors.



BREAD & ROLLS

Helps blend yeast and grain flavor notes, adds color.



CHOCOLATE

Rounds cocoa flavor, moderates sweetness; alcohol enhances fruity top notes, contributes color.



COOKIES & CAKES

Helps blend flavors and add complexity, tempers sweetness, adds color.



DRY MIXES

Adds savory notes and color; enhances aroma and flavor; granulated forms dissolve easily when prepared at home.



JERKY

Contributes salt for curing, blends spice flavors, enhances meaty flavors, contributes color, can enhance or even replace preservatives.



DRESSINGS

Adds savory flavor, helps temper vinegar, rounds spice flavors, contributes preservation to cold-filled dressings, adds color, replaces Worcestershire sauce.



SNACKS

Blends flavors of other seasoning ingredients, contributes salt, enhances color and savory flavor.

KIKKOMAN FLAVOR SOLUTIONS: SOY SAUCE IS JUST THE BEGINNING

THE ASIAN EXPERTS

Asian flavors are hotter than ever. As Americans warm to the cuisines not just of China and Japan, but of Thailand, Vietnam, Malaysia and beyond, the flavor quotient in the nation's kitchens is bound to rise.

Kikkoman's full line of liquid and dehydrated Asian sauces and seasonings—from Teriyaki and Thai Chili to Sake, Mirin and much more—provides a toolkit for building rich, full "Savor Asian" flavor across applications. Whether you're developing traditional Asian foods or adding a flavor accent to mainstream ones, make Kikkoman your first call for authentic flavor; safe, reliable products; and formulation expertise.

BEYOND ASIAN

Kikkoman sauces and seasonings not only unlock authentic Asian flavor, they also enhance flavors in applications beyond those that are specifically Asian. Use our soy sauces and our NFE (Natural Flavor Enhancer) line of products as essential clean-label flavor boosters and building blocks in everything from prepared entrées and meal kits to sauces and dressings—as ingredients or as stand-alone condiments. Our sauces are complete, balanced flavor systems that save you from sourcing hard-to-find, inconsistent ingredients from specialty suppliers. Because they're Kikkoman, you can always count on their quality, safety and availability.

Don't see the ingredient form or flavor you're looking for? Just ask. We've got the growing product line to help you meet demand.



CHICKEN

Contributes savory flavor, helps blend spice flavors, enhances aroma.



LATIN FOODS

Blends and enhances spices, enhances salt perception, "grilled" color and meaty flavor.



SOUPS & STEWS

Enhances savory flavor profile, contributes aroma, adds color.



SOY SAUCE— IN CHOCOLATE?

Surprising but true: Naturally brewed soy sauce can enhance more than just savory flavors. Recently, a chocolate ice cream syrup was developed using 10% Kikkoman Less Sodium Soy Sauce and 6% cocoa powder. The soy sauce, with its rich umami qualities and delicate salty flavor, enhanced the richness of the cocoa and depressed the extra sweetness of typical ice cream syrups. The result: a deep, nutty, roasted chocolate flavor.



UMAMI AND NATURAL FLAVOR ENHANCEMENT

The elusive, alluring qualities of umami are what naturally brewed soy sauce is all about. It's what makes Kikkoman Soy Sauces natural flavor enhancers that boost the flavor of foods—Asian and beyond—while maintaining a clean label.

THE SCIENCE OF FLAVOR ENHANCEMENT

The overall flavor experience is a combination of several concurrent reactions in the mouth. The molecules in various foods trigger the taste receptors located on the tongue, palate and even the esophagus. While this is happening, aromas enter the nose through both the nostrils and the roof of the mouth. From there, olfactory receptors transmit odor signals to the brain, where those messages combine with signals from the taste receptors to flesh out the flavor experience further. And finally, physical perceptions in the mouth—the texture or viscosity of a food, for instance—send their own sensory messages to the brain, wrapping up the whole eating experience.

So how do flavor enhancers combine these reactions into a unified, blended experience that intensifies the overall effect? By having the right chemical composition. The science of umami teaches us that amino acids—in the ideal amounts and ratios—are critical to the umami sensation that makes foods more savory and satisfying. In fact, as much as sugar molecules interact with taste receptors to generate sweetness, glutamate salts of glutamic acid trip the receptors that generate umami.

SOY SAUCE AND UMAMI

Fermented foods like naturally brewed soy sauce contain just the right quantities of amino acids, and in the right proportions—glutamic acid being among the most predominant—to act as natural flavor potentiators and umami contributors.

But the glutamic acid found in naturally brewed soy sauce and other flavor enhancers derived from naturally brewed foods aren't the only components contributing to their flavor-enhancing capability. Umami tastants, like glutamic acid, appear to work synergistically with salt to produce an enhancing effect that is greater than the sum of its parts.

At Kikkoman, our dedication to natural brewing has made us a leader not only in producing premium-quality soy sauce, but also in advancing the state of natural flavor enhancement. Our NFE (Natural Flavor Enhancer) starts with Kikkoman Soy Sauce in which, through a proprietary brewing process, we reduce the characterizing soy sauce flavor, aroma and color while keeping the umami-generating amino acid profile intact. The result is a product that noticeably boosts savory flavor in the same way that soy sauce can, but leaves a neutral taste impression.

Boosting savory flavor cleanly and naturally is more important than ever, as consumers search for products full of flavor but free of excess sodium and "artificial" flavor enhancers like MSG and HVP. Naturally brewed Kikkoman Soy Sauce, NFE and our less-sodium products designed with higher levels of glutamic acid and total nitrogen let you boost flavor without compromising your ingredient or nutritional statement. And the more you can build flavor into your application naturally, the more you can shift away from using ingredients that are coming under scrutiny.



NFE's pale golden color works with a wide variety of products and cuisines.

SOY SAUCES (LIQUID)

Our extensive line of naturally brewed liquid soy sauce products gives you options for any formulation need. We offer reduced-sodium and preservative-free alternatives, as well as an innovative clear variety, tamari-style and gluten-free soy sauces.

From liquid to dehydrated, Kikkoman offers more naturally brewed soy sauce types than any company in the world, along with a growing line of natural flavor enhancers, prepared sauces, seasonings and condiments.

Product Name, Code, Size	Brief Description	Applications & Benefits	Ingredients	Target Sodium Chloride Content	Weight (lbs/gal)
SOY SAUCE Code/Size: 00612 55-gal plastic drum 07003 275-gal tote 09010 Approx. 4,500-gal tanker	<ul style="list-style-type: none"> Naturally brewed "shoyu" soy sauce; produced by the action of special strains of microorganisms on soybeans and wheat during fermentation. Tart, sweet, salty flavor with beefy, brewed notes; distinctive fermented bouquet. Clear, dark reddish-brown color. Kosher certified. 	<ul style="list-style-type: none"> Versatile flavoring and coloring agent. Natural flavor enhancer. Salt replacer. Precursor for reaction flavors. Applications include: prepared entrées, including meat, poultry, vegetables and seafood; Asian and other ethnic applications; sauces, condiments, dressings and gravies; snack applications; cured meats; soups; marinades. 	Water, Wheat, Soybeans, Salt, Sodium Benzoate: Less than 1/10 of 1% as a Preservative.	13.7 ± 0.3%	9.76
PRESERVATIVE-FREE SOY SAUCE Code/Size: 00617 55-gal plastic drum 07113 275-gal tote 09050 Approx. 4,500-gal tanker	<ul style="list-style-type: none"> Preservative-free version of our regular soy sauce. No added Sodium Benzoate or other preservatives. Kosher certified. 	<ul style="list-style-type: none"> A preservative-free alternative for a wide variety of applications. Interchangeable in any formulation calling for regular soy sauce. 	Water, Wheat, Soybeans, Salt.	13.7 ± 0.3%	9.76
KF SOY SAUCE Code/Size: 00652 55-gal plastic drum 07116 275-gal tote	<ul style="list-style-type: none"> Made from non-GMO soybeans. Naturally brewed "shoyu" soy sauce; produced by the action of special strains of microorganisms on soybeans and wheat during fermentation. Kosher certified. 	<ul style="list-style-type: none"> Non-GMO labeling. A non-GMO alternative for a wide variety of applications. 	Water, Non-GMO Soybeans, Wheat, Salt.	13.7 ± 0.3%	9.76
LESS SODIUM SOY SAUCE Code/Size: 00622 55-gal plastic drum 07017 275-gal tote	<ul style="list-style-type: none"> Made from naturally brewed Kikkoman Soy Sauce through a process that reduces Sodium Chloride. 37% less sodium than regular Kikkoman Soy Sauce; sodium content is 3,300 mg/100 g (lowest of any leading brand). Flavor less salty than that of regular soy sauce; typical brewed notes from fermentation. Kosher certified. 	<ul style="list-style-type: none"> A lower-sodium alternative for a wide variety of applications. 	Water, Wheat, Soybeans, Salt, Lactic Acid, Sodium Benzoate: Less than 1/10 of 1% as a Preservative.	8.4 ± 0.3%	9.43
PF LS SOY SAUCE Code/Size: 00627 55-gal plastic drum 07015 275-gal tote	<ul style="list-style-type: none"> Made by same process as Kikkoman Less Sodium Soy Sauce. Differs from Kikkoman Less Sodium Soy Sauce in that it is preservative-free; no added Sodium Benzoate. Kosher certified. 	<ul style="list-style-type: none"> A lower-sodium, preservative-free alternative for a wide variety of applications. Interchangeable in any formulation calling for regular soy sauce. 	Water, Wheat, Soybeans, Salt, Alcohol, Vinegar, Lactic Acid.	7.9 ± 0.3%	9.35
PREMIUM SOY SAUCE (PTN) Code/Size: 00642 55-gal plastic drum 07008 275-gal tote	<ul style="list-style-type: none"> Naturally brewed premium soy sauce, produced by the action of special strains of microorganisms on soybeans and wheat during fermentation. Tart, sweet, salty flavor with beefy, brewed notes. No added Sodium Benzoate or other preservatives. Higher Total Nitrogen than regular soy sauce. Kosher certified. 	<ul style="list-style-type: none"> Natural flavor enhancer. Higher Total Nitrogen results in increased flavor enhancement. Versatile flavoring and coloring agent. Applications include: prepared entrées, meats (especially beef and aged meats), poultry, vegetables and seafood; Asian and other ethnic applications. 	Water, Soybeans, Wheat, Salt.	13.8 ± 0.3%	9.85
PREMIUM LESS SODIUM SOY SAUCE (PTN-LS) Code/Size: 00641 55-gal plastic drum 07025 275-gal tote	<ul style="list-style-type: none"> With 45% less sodium than regular Kikkoman Soy Sauce, PTN-LS is the lowest-sodium Kikkoman Soy Sauce available. Stronger soy sauce flavor, with the added benefit of less sodium than regular Premium Soy Sauce PTN. Kikkoman uses a proprietary process to remove excess salt, resulting in a soy sauce with stronger flavor and no dilution. Higher total nitrogen than regular soy sauce. Preservative-free. Kosher certified. 	<ul style="list-style-type: none"> Natural flavor enhancer. The higher amino acid and nitrogen content offers increased flavor enhancement properties. Satisfying flavor will stay strong, even through the harshest production and cooking environments. Applications include: prepared entrees, including meat, poultry, vegetables and seafood; Asian and other applications. 	Water, Soybeans, Wheat, Salt, Alcohol, Vinegar.	7.5 ± 0.3%	9.35
GLUTEN-FREE SOY SAUCE Code/Size: 00654 55-gal plastic drum 07123 275-gal tote	<ul style="list-style-type: none"> Naturally brewed using our legendary fermentation process, with rice instead of wheat. Use this high-quality soy sauce in applications where wheat cannot appear on your label. Preservative-free. Kosher certified. 	<ul style="list-style-type: none"> Use as you would Kikkoman Soy Sauce. Applications include: prepared entrées, including meat, poultry, vegetables and seafood; Asian and other ethnic applications; sauces, condiments, dressings and gravies; snack applications; cured meats; soups; marinades. 	Water, Soybeans, Salt, Rice.	14.2 ± 0.3%	9.76
ORGANIC SOY SAUCE Code/Size: 00196 5-gal plastic pail 07019 275-gal tote	<ul style="list-style-type: none"> With more and more consumers looking to organic foods, Kikkoman is proud to offer Organic Soy Sauce. Made with organic soybeans and organic wheat. Certified organic by Quality Assurance International (QAI). Meets the standards of the USDA's National Organic Program. Non-GMO. Preservative-free. 	<ul style="list-style-type: none"> Use as a marinade for meats, poultry, seafood and vegetables, and as a seasoning for sauces, stocks, casseroles and soups. Actually wakes up the flavor of other ingredients. 	Water, Organic Soybeans, Organic Wheat, Salt, Organic Alcohol (to preserve freshness).	13.6 ± 0.3%	9.83
TAMARI SOY SAUCE Code/Size: 00650 55-gal plastic drum	<ul style="list-style-type: none"> Naturally brewed like our traditional soy sauce, Kikkoman Tamari Soy Sauce is thicker, darker and stronger in taste. A touch of wheat enhances the sauce's flavor, which provides depth and balance to savory foods. 	<ul style="list-style-type: none"> Adds authentic flavor to popular Asian-style items. All-purpose seasoning for sauces, stocks, casseroles and hearty soups. Marinade for meats, poultry, seafood and vegetables. Actually wakes up the flavor of other ingredients. 	Water, Soybeans, Salt, Wheat, Alcohol (to preserve freshness), Glucose.	14.0%	10.1
PK-56 CLEAR SOY SAUCE Code/Size: 00400 4.75-gal can 00646 55-gal plastic drum 07111 264-gal tote	<ul style="list-style-type: none"> A combination of a strong, pleasing aroma with a light, golden color for versatility in formulations. Salty with sweet brewed notes resulting from fermentation. Preservative-free. 	<ul style="list-style-type: none"> Ideal for formulations in which a lighter end-product color is required. Can be used in any application that requires naturally brewed soy sauce, especially with processed meats, poultry, seafood, soups, sauces and salad dressings. 	Water, Salt, Soybeans, Wheat, Alcohol (to preserve freshness), Lactic Acid, Acetic Acid.	15.5 ± 0.3%	9.43

SOY SAUCES (DEHYDRATED)

For those applications where liquid soy sauce just won't do, Kikkoman offers a full line of naturally brewed dehydrated soy sauce products that expand your formulation options significantly—and the expertise to help you find the perfect match for your application.

Product Name, Code, Size	Brief Description	Applications & Benefits	Ingredients	Target Sodium Chloride Content	Weight (lbs/gal)
DEHYDRATED SOY SAUCE SN-1 Code/Size: 05146 50-lbs carton	<ul style="list-style-type: none"> Spray-dried instant soy sauce powder made from naturally brewed Kikkoman Soy Sauce. Meaty, rich, concentrated soy sauce flavor with pronounced brewed bouquet. Golden-tan, free-flowing powder. Maltodextrin used as carrier in spray-drying process. Kosher certified. 	<ul style="list-style-type: none"> Excellent flavor retention during heat processing and freezing. Heat fusible. Dispersible and soluble in water. Reconstitution: 1 part SN-1 Soy Sauce to 1 1/3 parts water. Reconstitute for use in any application calling for naturally brewed soy sauce, or use directly in dry formulations. Applications include: powdered mixes and concentrated bases for soups, bouillon, sauces, dips, seasoning rubs, condiments, snack coatings and cured meat products. 	Soy Sauce (Wheat, Soybeans, Salt), Maltodextrin, Salt.	32.0 ± 2.0%	n/a
DEHYDRATED SOY SAUCE KS-32 Code/Size: 05114 50-lbs carton	<ul style="list-style-type: none"> Similar to SN-1, with a slightly less intense soy sauce flavor. Kosher certified. 	<ul style="list-style-type: none"> Same as SN-1. Reconstitution: 1 part KS-32 Soy Sauce to 1 1/3 parts water. 	Soy Sauce (Wheat, Soybeans, Salt), Maltodextrin, Salt.	32.0 ± 2.0%	n/a
DEHYDRATED SOY SAUCE HN-1 Code/Size: 05175 50-lbs carton	<ul style="list-style-type: none"> Spray-dried from naturally brewed Kikkoman Soy Sauce. Premium quality soy sauce powder with more intense, concentrated soy sauce flavor than regular dehydrated soy sauce. Kosher certified. 	<ul style="list-style-type: none"> Excellent flavor retention during heat processing and freezing. Reconstitute for use in any application calling for naturally brewed soy sauce, or use directly in dry formulations. Reconstitution: 1 part HN-1 Soy Sauce to 1 1/3 parts water. 	Soy Sauce (Wheat, Soybeans, Salt), Maltodextrin.	33.0 ± 2.0%	n/a
DEHYDRATED SOY SAUCE KF-1 Code/Size: 05186 50-lbs carton	<ul style="list-style-type: none"> Made from non-GMO soybeans. A non-GMO version of SN-1. Maltodextrin, as the carrier used in the process, is also made from non-GMO corn. Kosher certified. 	<ul style="list-style-type: none"> Non-GMO labeling. A non-GMO alternative for a wide variety of applications. Reconstitution: 1 part KF-1 Soy Sauce to 1 1/3 parts water. 	Soy Sauce (Wheat, Soybeans, Salt), Maltodextrin, Salt.	32.0 ± 2.0%	n/a
DEHYDRATED SOY SAUCE KFRS-50 Code/Size: 05139 50-lbs carton	<ul style="list-style-type: none"> Made from the highest-quality reduced-salt soy sauce, which is made from non-GMO soybeans. Maltodextrin, as the carrier used in the process, is also made from non-GMO corn. Contains 50% less salt than SN-1 and KS-32. Kosher certified. 	<ul style="list-style-type: none"> Instantly dispersible. Excellent flavor retention during heat processing and freezing. Less susceptible to caking. Less dusty. Reconstitution: 1 part KFRS-50 Soy Sauce to 1 1/3 parts water. 	Soy Sauce (Wheat, Soybeans, Salt, Vinegar, Lactic Acid), Maltodextrin, Salt.	16.0 ± 2.0%	n/a
GRANULATED SOY SAUCE Code/Size: 08610 50-lbs carton	<ul style="list-style-type: none"> Produced from naturally brewed Kikkoman Soy Sauce. Easily blended with other ingredients. Kosher certified. 	<ul style="list-style-type: none"> Instantly dispersible and soluble in water. Eliminates dusting during production. Less susceptible to caking. Reconstitute for use in any application calling for naturally brewed soy sauce, or use directly in dry formulations. Reconstitution: 1 part Granulated Soy Sauce to 1 1/3 parts water. 	Soy Sauce (Wheat, Soybeans, Salt), Maltodextrin, Salt.	32.0 ± 2.0%	n/a
GRANULATED GLUTEN-FREE SOY SAUCE Code/Size: 05154 50-lbs carton	<ul style="list-style-type: none"> Dehydrated gluten-free soy sauce. Naturally brewed using our legendary fermentation process, but without including wheat as an ingredient. Kosher certified. 	<ul style="list-style-type: none"> Use this high-quality Soy Sauce in applications where wheat cannot appear on your label. Instantly dispersible and soluble in water. Eliminates dusting during production. Less susceptible to caking. 	Soy Sauce (Soybeans, Rice, Salt), Maltodextrin, Salt.	32.0 ± 2.0%	n/a

NATURAL FLAVOR ENHANCEMENT PRODUCTS

In liquid and powdered form, Kikkoman NFE (Natural Flavor Enhancer) boosts flavor while allowing for sodium reduction of up to 50%. Developed with Kikkoman's proprietary fermentation technology, this clean-label savory booster has a neutral taste, light color and strong umami characteristics.

NFE-L NATURAL FLAVOR ENHANCER Code/Size: 00619 55-gal plastic drum	<ul style="list-style-type: none"> Mild aroma, balanced, brothy flavor—and 10% less sodium than regular soy sauce. Label NFE-L as "naturally brewed soy sauce." With no added MSG or HVP for a clean ingredient statement. Preservative-free. Kosher certified. 	<ul style="list-style-type: none"> Enhances the flavor of any food. Use in place of MSG, HVP and yeast extracts to keep your labels clean and consumer friendly. Use for soups, dressings, snacks, meats, bakery, desserts and sauce formulations. Liquid delivery format makes metering and storage a snap. 	Water, Soybeans, Wheat, Salt, Alcohol.	12.2 ± 0.3%	9.6
NFE-P DEHYDRATED NATURAL FLAVOR ENHANCER Code/Size: 05451 50-lbs carton	<ul style="list-style-type: none"> Dehydrated version of Kikkoman Natural Flavor Enhancer. Mild aroma, balanced, brothy flavor—and 10% less sodium than regular soy sauce. Label NFE-P as "naturally brewed soy sauce." With no added MSG or HVP for a clean ingredient statement. Preservative-free. Kosher certified. 	<ul style="list-style-type: none"> Enhances the flavor of any food. Use in place of MSG, HVP and yeast extracts to keep your labels clean and consumer friendly. Use for soups, dressings, snacks, meats, bakery, desserts and sauce formulations. Especially suited for chicken, turkey and other poultry. 30% less sodium than dehydrated regular soy sauce. 	Soy Sauce (Soybeans, Wheat, Salt), Maltodextrin.	22.0 ± 2.0%	N/A
NFE-PY DEHYDRATED NATURAL FLAVOR ENHANCER Code/Size: 05453 50-lbs carton	<ul style="list-style-type: none"> Dehydrated version of Kikkoman Natural Flavor Enhancer, with added yeast extract. Mild aroma, balanced, brothy flavor—and 10% less sodium than regular soy sauce. Label NFE-PY as "naturally brewed soy sauce." With no added MSG or HVP for a clean ingredient statement. Preservative-free. Kosher certified. 	<ul style="list-style-type: none"> Enhances the flavor of any food. Use in place of MSG and HVP and to keep your labels clean and consumer friendly. Use for soups, dressings, snacks, meats, bakery, desserts and sauce formulations. Especially suited for enhancing flavor and lowering sodium in bread. 30% less sodium than dehydrated regular soy sauce. 	Dehydrated Soy Sauce [Soy Sauce (Soybeans, Wheat, Salt), Maltodextrin], Yeast Extract.	22.0 ± 3.0%	N/A

TERIYAKI SAUCE PRODUCTS

Kikkoman defined the flavor of teriyaki for American palates when we introduced the nation's first bottled teriyaki sauce in the 1960s. Today our teriyaki products are still made with naturally brewed soy sauce, premium wines, vinegar, sugar and Asian seasonings. They are ready to use as complete flavor systems or as versatile bases.

Product Name, Code, Size	Brief Description	Applications & Benefits	Ingredients	Target Sodium Chloride Content	Weight (lbs/gal)
TERIYAKI SAUCE Code/Size: 01402 55-gal plastic drum 07101 275-gal tote	<ul style="list-style-type: none"> An authentic marinade/sauce made with naturally brewed Kikkoman Soy Sauce and other select ingredients. Salty, tart, sweet and spicy, with pronounced soy aroma and wine bouquet. Clear, dark reddish-brown color. Kosher certified. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Well-balanced, authentic teriyaki flavor. Applications include: teriyaki and other Asian entrées; barbecue, steak and other sauces; flavoring marinade for beef, poultry, seafood; curing marinade for meats; sauces for vegetables. 	Soy Sauce (Water, Wheat, Soybeans, Salt), Wine, Sugar, Water, Vinegar, Salt, Spices, Onion Powder, Succinic Acid, Garlic Powder, Sodium Benzoate: Less than 1/10 of 1% as a Preservative.	9.2%	9.6
DEHYDRATED TERIYAKI SAUCE NS Code/Size: 05256 50-lbs carton	<ul style="list-style-type: none"> Made from Kikkoman Teriyaki Sauce with Maltodextrin as the carrier. Golden-tan powder with characteristic teriyaki sauce notes. No sugar added. Kosher certified. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Well-balanced, authentic teriyaki flavor. Reconstitution: 40% Teriyaki NS, 10% Sugar, 50% Water. Applications include: dry mixes for marinades and rubs; meat products including jerky. 	Teriyaki Sauce [Soy Sauce (Wheat, Soybeans, Salt), Wine, Vinegar, Salt, Onion Powder, Spice Extractives, Succinic Acid, Garlic Powder], Maltodextrin, Salt. Contains Sulfites.	27.1 ± 2.0%	N/A
PRESERVATIVE-FREE TERIYAKI SAUCE Code/Size: 01417 55-gal plastic drum	<ul style="list-style-type: none"> Preservative-free version of our regular teriyaki sauce. No added Sodium Benzoate or other preservatives. Kosher certified. 	<ul style="list-style-type: none"> A preservative-free alternative for a wide variety of applications. Interchangeable in any formulation calling for regular teriyaki sauce. 	Soy Sauce (Water, Wheat, Soybeans, Salt), Wine, Sugar, Water, Vinegar, Salt, Onion Powder, Spice Extractives, Succinic Acid, Garlic Powder.	9.2%	9.6
LESS SODIUM TERIYAKI SAUCE Code/Size: 01409 55-gal plastic drum	<ul style="list-style-type: none"> This product contains about 50% less salt than regular Kikkoman Teriyaki Sauce. Kikkoman Less Sodium Teriyaki Sauce is produced with naturally brewed Kikkoman Soy Sauce and other select seasonings for a uniquely flavored product. This product can be used alone or as a foundation in developing other products. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Well-balanced, authentic teriyaki flavor. Applications include: teriyaki and other Asian entrees; barbecue, steak and other sauces; flavoring marinade for beef, poultry, seafood; curing marinade for meats; sauces for vegetables. 	Soy Sauce (Water, Wheat, Soybeans, Salt), Sugar, Water, Wine, Vinegar, Modified Corn Starch, Xanthan Gum, Salt, Spice Extractives, Garlic Extract, Dextrose, Citric Acid, Sodium Benzoate (less than 1/10 of 1% as a Preservative), Disodium Inosinate, Disodium Guanylate.	4.5 ± 1.0%	9.51

ASIAN SAUCES AND SEASONINGS

Beyond our core products, we offer an extensive line of specialty Asian sauces and seasonings, including a variety of seasoned rice wines. Like all Kikkoman industrial products, our Asian sauces contain no added MSG and are made with Kikkoman's long tradition of quality.

STIR-FRY SAUCE Code/Size: 02069 55-gal plastic drum	<ul style="list-style-type: none"> A perfectly balanced combination of Kikkoman Soy Sauce, sherry, garlic, oyster extract and authentic Asian seasonings. Pre-thickened and ready to use "as is," saving time and labor, giving you consistent results every time. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Complements beef, chicken, seafood and vegetables. Perfect for popular rice bowls and noodle bowls. 	Soy Sauce (Water, Wheat, Soybeans, Salt), Sugar, Water, Modified Food Starch, Wine, Vinegar, Garlic Powder, Oyster Extract, Cultured Whey, Spices, Sodium Benzoate (less than 1/10 of 1% as a Preservative), Succinic Acid, Disodium Inosinate, Disodium Guanylate.	7.7%	9.68
HOISIN SAUCE Code/Size: 01543 50-lbs pail	<ul style="list-style-type: none"> Classic Asian cooking sauce and condiment. Made with puréed plums, miso and soy sauce. Currently, contracted production only for 50-pound pail; see our sales representative. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Adds sweet-savory flavor and attractive reddish-brown color to glazes for proteins and vegetables. Ideal in rice bowl and noodle applications. Adds flavor to vinaigrettes, sauces and marinades. 	Sugar, Water, Miso (Water, Soybeans, Rice, Salt), Plum Puree, Naturally Brewed Soy Sauce (Water, Wheat, Soybeans, Salt), Garlic, Caramel Color, Modified Food Starch, Fermented Wheat Protein, Vinegar, Salt, Spices, Xanthan Gum and Citric Acid.	3.7 ± 0.2%	n/a
THAI STYLE CHILI SAUCE Code/Size: 01547 50-lbs pail	<ul style="list-style-type: none"> Balance of mildly spicy chilies and garlic in a sweet, tangy sauce. Currently, contracted production only for 50-pound pail; see our sales representative. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Adds sweet heat and authentic Southeast Asian flavor to stir-fries and other prepared entrées. Excellent dipping sauce for prepared appetizers, such as egg rolls and dumplings. Base for dressings and marinades. 	Sugar, Water, Chili Paste, Garlic, Vinegar, Modified Corn Starch, Salt, Fermented Wheat Protein, Cayenne Pepper, Extractives of Paprika, Citric Acid, Xanthan Gum.	2.3 ± 0.2%	10.5
PLUM SAUCE Code/Size: 01551 50-lbs pail	<ul style="list-style-type: none"> Also referred to as "Duck Sauce." Sweet and tangy, with notes of plum and sugar. Currently, contracted production only for 50-pound pail; see our sales representative. 	<ul style="list-style-type: none"> Ready to use "as is" or as a foundation for other product formulations. Ready to use as a dipping sauce for prepared appetizers. Adds flavor and color to marinades, dressings and protein glazes. Provides sweet-savory appeal in prepared noodle bowls and rice bowls. 	Sugar, Water, Plum Puree, Vinegar, Ginger, Salt, Modified Food Starch, Fermented Wheat Protein, Citric Acid, Xanthan Gum.	2.3 ± 0.2%	n/a
SALTED MIRIN Code/Size: 05980 55-gal plastic drum	<ul style="list-style-type: none"> Produced from sake and other select ingredients. Full-flavored sweetness with fermented notes. Contains alcohol. Kosher certified. 	<ul style="list-style-type: none"> Flavoring ingredient for Asian applications, including teriyaki. Enriches flavor and adds sweetness. Lends an attractive glaze to prepared foods. 	Water, Dextrose, Rice, Corn Syrup, Salt.	n/a	9.75
SALTED SAKE Code/Size: 05990 55-gal plastic drum	<ul style="list-style-type: none"> Rice wine produced through a fermentation process. Fruity aroma and wine flavor. Contains alcohol. Kosher certified. 	<ul style="list-style-type: none"> Flavoring ingredient for Asian applications. Enriches flavor in a variety of applications. Can be used to replace cooking wines. 	Water, Rice, Salt.	1.5%	8.39
SUSHI VINEGAR Code/Size: 02096 5-gal cubepack	<ul style="list-style-type: none"> Versatile and easy to use, it is milder in flavor than other vinegars. Kosher certified. 	<ul style="list-style-type: none"> Ready to use "as is" for sushi rice. The well-balanced acidity is excellent as an addition not only to Asian but also to Hispanic, European and American dishes. 	Rice Vinegar, Water, Sugar, Salt, Diluted with Water to 4.1% Acidity (41 Grain).	8.0%	10.0



WE'RE HERE FOR YOU.

With state-of-the-art production facilities in Walworth, Wisconsin, and Folsom, California, and more than 10 distribution centers throughout North America, Kikkoman can assure prompt service and product availability. And that's just the beginning. Behind our products lies a long-standing commitment to the prepared foods industry. So whether you need product samples, a custom blend, technical support or a creative partner in new product development, visit our website or contact us.

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