



SMAP NEWSLETTER

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Salt Manufacturers Association of Pakistan's Quarterly Newsletter



Picking up Salt from Salt Pans

SALT MANUFACTURERS ASSOCIATION OF PAKISTAN is a non profit organization instituted to represent and protect the rights and forward fair demands of salt manufacturing community through global representation.

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Chairman's Message

As an Association, our goal is not just to take the salt sector to the next level but to give back to the communities in which we operate.

From the first day we started our journey, we have been working with all the salt stakeholders to transform the salt sector by approaching problems like never before in order for salt exporters to achieve maximum output with minimum wastage in factories.

Moreover, SMAP has taken the responsibility to explore the uncharted territories of the salt sector by conducting various pilot studies in products derived from salt such as Soda Ash and



Ismail Suttar, Chairman of SMAP

Lithium in order to diversify the product portfolio of its members. SMAP believes that this will attract foreign investment and will enable its members to heavily invest in the research domain of salt products which have been severely neglected in the past in Pakistan.

SMAP is not only focused on strengthening the relationship of its members within the association but also between SMAP and government institutions, chambers and federations.

I firmly believe that with a clear vision and dedicated team of SMAP, the salt sector will witness massive development compared to other sectors in the years to come.



Khari Salt used in Leather Industry

Microbial degradation of animal hides and skins begins immediately after slaughter when the degradable enzymes that are naturally present in live animals remain active on the slaughtered hides. Micro-organisms from air, water and sea salt will also affect the hide quality. Short-term preservation measures can be employed to slow down the rate of microbial attack during transport to the tannery.

In Pakistan, they always use Khari salt (mine salt) for the preservation of hides and skins, which naturally contains specific chemical ingredients like magnesium sulfate, sodium sulfate as well as sodium chloride.

Hence, Khari salt is very effective against micro-organisms and mostly suitable for the short-term preservation of raw hides. Moreover, the hygroscopic nature of Khari salt is very poor, hence traditionally Khari salt is known as a very suitable salt for raw hide preservation.

Rapid and appropriate curing is key in the preservation of raw hides and skins in any country in the world. Raw hides and skins should be cooled immediately after flaying in order to dissipate any remaining body heat and should be kept cool until the hide is salted. As soon as possible, the raw materials should be treated with clean salt or especially prepared salt in a quantity equivalent to no less than 35% of the green weight.

The development of a hide curing salt will provide great support and service to the leather industry of Pakistan by improving the quality of raw hides and skins and the grading of the leather during the export process. The project, if implemented in a proper way in the country, will protect the country's raw hide and skin resources from degradation during preservation, especially in the Qurbani Eid season. So with the development of hide curing chemicals instead of normal sea salt, Pakistan can expect qualitative changes in the basic quality of their raw hide and skins. The development of a specific hide curing salt for raw hide preservation will mean that Pakistan will have the opportunity to study and identify the scope for upgrading leather quality in the practical field.

Salt before exercise can help lose weight



A balanced regimen of exercise and a nutritious diet are essential components of every healthy and effective weight loss journey. The logic is straightforward: exercise frequently to burn extra fat and consume meals that hasten the process. However, what an individual consumes before and after the workout is also important.

Some meals can improve the quality of the workout if eaten shortly before it. One might have heard that eating foods high in protein, like bananas, almonds, and other similar items, before exercising or going for a run, is beneficial. But did you know that a seemingly innocuous snack like salt can also be helpful before working out? Even a tiny bit of salt might give your workout more energy.

One won't become dehydrated after a vigorous exercise session because salt assists with water retention. By consuming salt one can replace what's lost through sweat, urine, and other physiological fluids. It maintains the right balance of essential bodily fluids. When the sodium level in the blood is excessively low, a condition known as hyponatremia can develop. One loses sodium while they exercise, and the more sodium is lost, the more sodium replacement is required to lower the risk of hyponatremia.

Adults who routinely exercise tend to have hyponatremia, which if unchecked can become extremely severe. Headaches, weariness, nausea, and confusion are among the warning indications. The good news is that it can be quickly resolved by taking salt before exercising.



Sea Salt Hair Sprays

Sea Salt Sprays is a hair-styling aid that is composed of chemical free sea salt and sea kelp. It volumizes the hair whilst also making it thicker and shinier. Sea-salt is an organic oil-absorber that soaks up all the oil and dirt that flattens the hair. It assists in keeping the hair in-style all day. Compared to regular hair sprays, they are a better and more natural alternative without the product build-up usually found in regular hair sprays.

Sea Salt hair sprays can be used by people having thin hair. It aids in adding thickness and volume in your hair where you need it the most while styling. It also gives a light hold on the hair. Typical hair sprays add a crunchy, stiff texture to your hair, sea salt hair sprays however, give your hair that light hold which makes the movement of the hair look more natural and weightless. Additionally, they are great in combatting frizzy hair and maintaining natural curls.

Always use sea salt hair sprays after shampooing and conditioning your hair for the most favorable results and you will notice the change instantly. You can also make your own sea salt hair spray at home.

Make your own sea salt hair spray:

- Heat a cup of water on the stove or microwave.
- Pour in a tablespoon of Sea salt in the warm water.
- Stir meticulously until all the salt is dissolved and there are no floating crystals.
- Next, add a teaspoon of olive or jojoba oil to the mixture.
- Add a few drops of your favorite essential oils, this is optional and is done mainly for the fragrance.
- Finally pour the liquid into a spritzer bottle with a funnel.



Sea Salt Spray

Interesting facts about Salt Water

It is a well-documented fact that approximately 71% of the Earth's surface is water. A whopping 97% of which is salt water. The remaining 3% being fresh water. As it is visible from the statistics, our planet has an abundance of Salt water yet there are loads of riveting characteristics of it, to which we are oblivious.

1. Salt Water carries electrical signals

Salt water consists of a variety of salts such as calcium carbonate, sodium chloride, gypsum etc. When the aforementioned salts are added to water, they disintegrate into smaller freely moving particles called ions. Ions are constantly in motion in the water, they carry electrical charges which subsequently aids salt water in conducting electricity.

The human body utilizes salt water to send electrical signals which assists the brain to think and the heart to beat. The body makes use of special molecules called the 'Ion Pumps' to transport and convert energy, given by the electrical signals, to potential energy for our body. A glitch in these pumps can be the cause of various diseases such as loss of hearing, renal diseases, epilepsy etc.

2. Salt Water conveys heat around the planet

Many regions in Europe and North America such as Ireland, Florida, Western Coast of Great Britain are kept toasty due to the presence of the Gulf Stream. The Gulf stream is an enormous current of swift and warm salt water which originates in the Gulf of Mexico and flows through the Straits of Florida and moves toward the North Atlantic Current.

The Gulf stream is driven by the presence of differences of the salt in the water. The current has the highest temperature and salinity. As the icebergs and glaciers freeze in winter, the surrounding water becomes highly salty. Due to the added density of the salt, it sinks to the sea floor. This in turn stirs the ocean and produces these currents. This warming effect of the Gulf stream has caused fairly large number of settlements to be made near Northern Norway.

3. Salt Water – vital in decreasing Global Warming

Many experts and scientists agree that removing carbon dioxide from the air can play a significant role in halting global warming, extreme heat and the storms that come with it. All life source on earth pumping out an approximate of 37 billion metric tons of CO₂ make this job difficult. However, salt already does this for us as it removes a quarter of the carbon dioxide produced annually.

Salt water acts like a sponge for carbon dioxide. The ions in the water react with the CO₂ in the air. Deliberately introducing large quantities of carbon dioxide to salt water (having potassium or sodium ions) can productively remove carbon dioxide from air. Machines such as flow reactors that support this phenomenon are also in the process of making. Such machines even at a small-scale represents a step forward in carbon-capturing which could be a prospective and vital strategy in countering the increasing global warming all over the world.

4. Salt Water Batteries can solve energy storage problems

Wind and solar power energy is exceedingly popular in various countries. Consequently, the need for energy storage systems like batteries are also high in demand. Lead acid batteries are used to store a high energy density. The major drawback to them are its toxic electrodes and the use of corrosive sulphuric acid.



Lithium-Ion batteries are also in use for this purpose but they are extremely expensive as it uses a special liquid which has lithium ions dissolved in it. This liquid carries charges between the negative and positive terminals of the battery. Replacing this liquid with salt water is key goal of battery research.

Salt water has lower costs and safety issues. The conductivity of aqueous electrodes is twice that of organic ones. Such batteries are easy to manufacture and play a significant role in meeting escalating battery demands. Various countries can have a smooth supply of electricity with the maximum benefits.



Himalayan Salt Stone

Massages

Hot stone massages are traditional Chinese massage, it makes use of a hot black rocks composed of basalt. The massage therapist utilizes the stone as an extension of their hands to knead the muscles. It aids in relaxing the customers and relieving sore muscles. A Himalayan salt stone massage is similar to a regular stone massage but as the name suggests Himalayan salt stones are used instead of regular black stones.



The salt stones perform as a powerful aid in relaxing tight joints and muscles. Additionally, this trendy stone massage allows the body to soak up 84 trace minerals present in the Himalayan salt along with the negative ions from the salt, which is not only therapeutic but also assists in boosting our moods.

When the Himalayan salt stone is heated up, they give out negative ions into the environment. In turn, these ions react with the free radicals – unstable molecules present in the surroundings that are one of the causes of accelerated aging, stress and anxiety. The negative ions neutralize these highly reactive molecules and render them futile. Furthermore, Himalayan salt stones are anti-microbial which means they are anti-fungal and anti-bacterial thus when it comes in contact with the wet skin, it offers a detoxifying effect. The minerals present in these heated stones penetrate the skin and muscle tissues.

The heat from the stones also aids in improved blood circulation and blood flow which is necessary to reduce inflammation and swelling of the tissues. They also create a heightened sense of positivity with their negative ions. It is the perfect treatment for someone suffering from chronic pains, headaches or stress. Moreover, the naturally rough texture of the stone gently exfoliates the skin therefore aiding in developing a silkier and smoother skin. The salt stone itself aids the massage therapist in easing the pressure points of your body and releasing tension. Himalayan salt stones are not only a popular product amongst spa owners and wellness centers, they are also a great gift for people close to you suffering from constant back aches and stress of a tiring day.

Kosher Salt

Kosher salt is a pure salt mainly composed of sodium chloride only and is free from additives. The key point to it is that absence of iodine. It is a flat fairly large grained salt that was initially used to koshering meat by Jewish people. Its main purpose was to pull out all the blood for the koshering process. Over the years it is used by almost everyone all around the world. Its versatility, texture and taste are the reason it is a customary ingredient used by chefs around the world.

The sodium chloride present in kosher salt helps to balance the acid levels of the stomach and in turn aids in digestion and absorption of various nutrients. The antibiotic properties of it kills the contagious organisms present in our mouth. Moreover, it promotes oral health by reducing the swelling of our gums which can treat gum infections and sinus infections. It also prevents a high blood pressure which in turn averts many potential heart diseases. Kosher salt provides numerous medicinal benefits such as regulating the body temperature and fighting allergies. It also stabilizes blood sugar levels due to the absence of iodine and additives.

Kosher salt is also famously used in the culinary department. It is used in cooking as its large grains are easy to spread. It is essential when flavoring savory dishes. It enhances the taste of various dishes and snacks like steaks, caramel popcorns, fried chicken and many more. It's pure clean flavor is why it is favored by chefs all around the world. It is also the best when it comes to curing the meat without the need of any access chemicals. Kosher salt is also known to preserve and maintain the tanginess of various dishes all over the world such as kimchi (popular side dish in Korea). Due to its grain size, it is also useful in cleaning kitchen ware such as skillets. When mixed with oil, it maintains its usual abrasiveness but can easily be dissolved with water and washed off. Regular chemical cleaners which are composed of pumice or calcium carbonate leave a gritty residue if they are not cleaned properly so kosher salt is also a great alternative over here.



Long enjoyed by chefs for its taste, texture and ease of use, Kosher Salt is considered a primary ingredient that can be used to bring out the natural flavors of a wide variety of dishes. It allows you to easily control the amount of salt you add to all your cooking. The compact flakes perfectly adhere to food for ideal flavor enhancement. It is also recommended by the world's most celebrated chefs as well.

Red Hawaiian Salt



Salt has been one of the most sought-after commodities of the world for hundreds of years. It is available in almost 90 different arrays and colors. Each with its unique taste, texture and appearance. Red Hawaiian Salt also known as Alaea Salt is a traditional salt found and extracted in Hawaii. It is a natural sea salt product from Hawaii that consists of numerous minerals and nutrients that are extremely beneficial to the human body.

Alaea salt is an unrefined sea salt that has been mixed with Hawaiian volcanic red clay, this gives the salt a terracotta or brick red color. The salt is rich in iron oxide from the volcanic clay with a slightly earthy smell and a ten-year shelf life. The Hawaiian Island of Kauai is the main region from where this salt is mined and extracted. For many years it has been routinely used to also cleanse, bless and purify temples, homes and tools. This salt became particularly in the 20th century when it was used to cure salmon and has been since then used in kitchens beyond the Islands.

Hawaiian Red salt is extremely rich in minerals and is composed of approximately 80 different naturally occurring electrolytes and minerals including magnesium and potassium, which aid in regulating the blood pressure and keep the bones healthy. The ancient red alaea salt is also found in many face scrubs and masks which can be soaked up by the skin. It assists in improving the skin complexion and making it soft. When combined with coconut or olive oil it aids in purifying the skin by removing the dirt and grime trapped in the skin. Additionally, it also detoxifies the skin. Its balanced concentration of sodium is why it is favored by salt conscious consumers.

Small amounts of harvested red alaea enrich the sea salt with iron oxide including this unique product into a source of digestible iron. It's distinct, robust flavor which makes it a valued ingredient in many dishes. Hawaiian red salt retains its special qualities throughout cooking which allows the cook to use it moderately and get an equally fulfilling taste which suits their palate. It is used to season various recipes such as prime rib, sashimi (popular dish in China and Korea) and pipikaula (Hawaiian beef jerky).

Why Do Cows & Deers Need Salt

A salt lick also known as mineral licks are places where various animals go to lick essential minerals from a deposit of salt and other minerals. Salt licks can be naturally occurring and artificial both. Natural salt licks are as the name suggest natural deposits of salt which are used by animals to fulfill their daily dietary requirements of salt. Artificial salt licks however are made by farmers mostly in which they place a large slab of salt in farms so that pastures and livestock can lick it. The block may be mounted on a platform so that domesticated animals do not eat dirt along with salt, ensuring the hygiene of the salt licks itself.



Salt licks provide animals with magnesium, potassium, zinc, sodium and many other minerals which encourage healthy growth and development. Some people also use salt licks to attract wildlife, some animals are purely attracted to them which allows people to photograph these animals. Marine biologists also use salt licks to track populations. The immense popularity of natural salt licks with illustrates the ways in which wildlife naturally seek out nutrition which necessary to them and is potentially essential to their existence.

Mineral licks are necessary for many animals, namely cows. Cows need salt to perform primary metabolism and other bodily functions. Milk cows require salt in their diet to make milk and beef cows need it to gain weight. Moreover, salt is also needed by them to maintain their nervous systems and bones. It aids with blood clotting and movement as well. A low salt diet in cows can cause miscarriages, infertility and restlessness in cows. Cows with low salt in their bodies can force them to take up irregular diet habits such as not eating at all which in turn can cause weakness or eating everything in view whether it be grass or dirt or plastic. It is often over looked but salt is a vital nutrient required by cows, long periods without salt can be detrimental for them.

Deers are another example of animals who require salt in their diets. Sites containing salty mineral deposits have dietary benefits for deers as it aids in the production of hydrochloric acid which is a main part of digestion. People also mix other types of medicine in salt licks, deers for example, might be fed birth control to keep them from proliferating in areas where there are few predators. Different types of deers require different amounts of salt in their diets. White-tailed deers need salt during spring and summers. Deers especially require salt and other minerals in spring time for healthy bones and growth, it also gives them a dopamine rush.

Salt licks are necessary for animals' mainly herbivores. They provide them with sufficient minerals that satisfy their body criteria but also boosts milk production and wool production in cows and goats.

Smoked Salt



It is considered to be perfect for adding a genuine smoky taste to BBQ rubs, soups, and cocktails. Plus, it's suitable for vegetarians; applewood smoked salt makes a great alternative to bacon bits. There are different types of smoked salts sold all over the world. Apple wood smoked salt is one of the favorites around the world, the sweet apple wood is used to smoke the cold salt. It is fantastic with various seafoods for like shellfish and salmon etc. Cherry wood smoked salt is another popular type, pure salt that has been smoked over Maine cherrywood fire. The end product is a sweet smoked salt that is free from the harshness and bitterness. The last public preferred is Hickory smoked salt, the sea salt is carefully smoked over a hickory wood fire to make this rich salt; the result is a robust, savory, peaty salt with a lovely hickory scent.

Smoked Salt is sea salt that has been infused with smoke from untreated wood. It has been warmed over this wood for 2 to 14 days which gives the salt a rich and smoky flavor which makes it highly beneficial. The resulting smoky aroma largely depends on the type of bark free wood that we smoke the salt on. The most suitable wood types used for this process are apple, hickory, maple, cheery, alder and mesquite wood.

Smoked salt is perfect for boosting the salinity of cuisine also adding the smokiness of burnt wood. It is a great source of micronutrients found in sea salt and is good for the digestive system. The sodium content is good for the nervous system and transmitting electrical signals to other parts of the body. Sprinkling this salt over roasted meats, BBQs and vegetables. Moreover, it is the perfect cooking partner if you don't have a BBQ grill. If you want to add that smoky grilled flavor to your meat and seafood, consider adding this salt to your food. It is also a viable option not only with gourmet foods but also with snacks like peanuts and grilled cheese sandwiches and salads. People around the world prefer using it in soups, stews and marinades that require that rich satisfying smoky taste. In western countries smoked salt is also used on the rim of cocktail glasses.

Halotherapy

Halotherapy is a form of salt therapy that involves breathing in salt particles present in the air. It is considered to be the treatment to several diseases that include asthma, chronic bronchitis, and allergies. Moreover, it is believed that salt therapy can also alleviate cough, shortness of breath, depression and anxiety. In the 12th Century in Eastern Europe, there was a custom of visiting salt caves for remedial purposes. However, in the 1840s it was observed by a Polish physician, that salt miners were unusually healthy and had little to no respiratory conditions. Research exhibited that the salty air that was breathed in by the miners aided in keeping their lungs free from allergies and infections.

Halotherapy is usually done in salt rooms that are similar to spas. Salt rooms can either be passive or active. Active Salt Rooms consist of a special machine called the 'Halogenerator' to which salt is added. This contraption breaks down the salt to microscopic particles that are dispersed into the air which circulates the salt room. Passive Salt Rooms, however, don't utilize any such gadgets. Instead, such salt rooms are packed with different types of salts mainly Himalayan Salt. The walls are even made out of salt bricks and made to depict a salt cave. The salt in such rooms is kept at a controlled temperature to bring out the desired effects.

Salt therapy itself has 2 methods – Wet methods and Dry methods. The dry methods are known as Halotherapy. It is done in salt rooms or man-made "salt caves" which are prevented from being humid. Additionally, the temperature in these rooms is kept closer to 20°C. Once the salt is breathed in, it absorbs the toxins and irritants present in our lungs. Salt behaves like a sponge for the bacteria and impurities present on the surface of our skins. Furthermore, salt is also known to produce more negative ions which are put together to make serotonin, a chemical that is essential in improving our mood. Wet Salt therapy Methods include gargling salt water, bathing in it and using it for nasal irrigation.

There are certain conditions in which Halotherapy is not suitable. A person should avoid it or at least consult a doctor before practicing it if they have an open wound, fever, heart problems etc. It can help ease various disease and is overall relaxing for people. A lot of research is still being done on Halotherapy; a considerable number of facts are still waiting to be uncovered.

Dishwasher Salt



The notion of adding salt to dishwashers seems quite odd, the whole purpose of a dishwasher is to clean the gunk and grease from our dishes rather than coating it with more. For the dishwasher to provide the best possible outcomes, it would have to work in optimal conditions, these conditions also include using dishwasher salts which improves the condition of the utensils after every wash. When utilized in the correct manner, dishwasher salt can enhance the unit's ability to remove tough stains from your dishes, in turn allowing you to enjoy clean and spotless dishes. It prevents limescale build up which is very much visible on glassware making them look dirty even though they have just been cleaned.

This unique type of salt is used to refresh and strengthen the dishwashers water softening system. A dish washer needs soft water to give clean dishes perfectly without any water spots. Hard water, however has a high concentration of calcium carbonate which causes limescale build-up on our utensils. Furthermore, it will also damage and renders the appliance useless in a short amount of time, in some cases it also increases the electricity bill.

Research shows that hard water can cause people to develop eczema- a skin condition that causes dry, irritated and inflamed skin. That is precisely why it is necessary to soften the water present in the dishwashers to remove magnesium and calcium ions from the water to soften it. Many dishwashers have a separate compartment for dishwasher salt and indicators to signal you when the machine needs to be topped with salt.

Dishwasher salts are granulated and crystallized large grains of sodium chloride. It has no additional additives. This however, doesn't mean that it is suitable for consumption in place of table salt. This salt has large granules which are thicker which don't clog the drains of the dishwasher and don't interfere in the units working. Not every type of salt can be used instead of dishwasher salt as this special salt with its own specific characteristics and properties such as its large granules and composition. Using other salts in the dedicated compartment of dishwasher salt will wreck the water softening system of the dishwasher.

Pickling Salt and it's Substitutes

Pickling salt also known as “Canning Salt” is simply pure salt (sodium chloride) that has no additional additives and anti-caking agents unlike regular salt. It is cut as a fine grain to allow it to be dissolvable in water. The addition of additives makes this salt cloudy when added to water. As the name suggests it is mainly used to preserve and aid in the fermentation of pickles and some other canned products. Whether we want to make fermented or unfermented pickles, the pure form of this salt aids in keeping the liquid of the pickles clear and prevents them from turning dull and tasteless.

As stated by the Pennsylvania State University Extension “In fermented sauerkraut (a type of fermented cabbage – one of the national dishes of Germany) and pickles, pickling salt doesn’t only enhance the flavors of these celebrated dishes but also allows the growth of desired bacteria which are vital for them while hinders the maturation of others”. Pickling salt is also used in Turkey brines and due to its sticky and fine texture it is also great for flavoring popcorns and tortillas.

When substituting one type of salt for another, we cannot simply interchange their measurements. The consistency, composition and qualities are different for each salt type. The grain size varies for each of them so the tablespoon of one doesn’t necessarily measures up to for the other. Table salt or regular salt has additives which although do not influence the taste of the brine or pickles but does make the solution cloudy. On the other hand, sea salt is safe to use according to the sodium concentration but they measure out different by volume in comparison to canning salt. The grain size is dramatically different in size and shape making it difficult it to use for canning pickles.

The most suitable salt in place of pickling salt is Kosher salt. Although the grain size does vary but not by that much and with the correct measurements it can work as the best possible replacement for pickling salt. Kosher salt is the same as pickling salt when it comes to taste, it intensifies the flavor of the pickles making them rich and juicy in the solution. Due to the absence of anti-caking agents in it, there is no fear of it turning the solution of the pickles salty. A cup of pickling salt is approximately equal to 1 ½ cups of kosher salt – this measurement is recommended by the University of Wisconsin Cooperative Extension.

The bottom line is that pickling salt is the best when it comes to conserving and maintaining the sour flavor of pickles and other products. Kosher salt and regular salt are good substitutes for it as the second and third option respectively. Each salt type is unique from the other, giving them all different characteristics and benefits. They clearly all have their own area of expertise.

Why Use Salt When Cooking Rice?

It is very difficult to imagine a pantry or kitchen without our personal favorite staple food – Rice. The staple food shows up in various dishes of numerous cuisines, be it Korean gimbap, Italian risotto, or Asian biryani. Whether it's brown, jasmine, basmati, or black rice, almost every kitchen has a bag of rice lying around in the cabinets. Considering how omnipresent it is, cooking rice perfectly is quite difficult.

**Add salt to rice
to prevent over
bloating !**



One of the most troublesome parts of cooking rice right is putting just the right amount of seasoning. One should think about cooking rice like cooking pasta in the sense that adding salt to cooking rice is non-negotiable if you want the starch to come tasting anything but bland. It is recommended to add ½ teaspoon or 1 teaspoon of salt to every cup of rice you cook. Adding salt to rice can prevent over-bloating of the rice due to over-absorption of water, and perhaps prevent grain damage. Dissolving salt in water slows down the cooking of the rice itself by increasing the temperature at which the swelling of the rice will begin.



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