

# SMAP NEWSLETTER

November/December, 2021

Salt Manufacturers Association of Pakistan's Monthly Newsletter



**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



## **Ismail Suttar**

Chairman,  
Salt Manufacturers  
Association of Pakistan

Pink salt has always been the topic of debate whether it's related to its health benefits or its origin. Many believe that pink salt is mined from the icy mountains of the Himalayas in Nepal or India. However, little is understood that the mining is done in the foothills of the Himalayas Mountains that lie in Pakistan. The issue of acknowledgment started from the division of the Subcontinent when the region of Khewra was allotted within the vicinity of Pakistan and we as a nation failed to tell the world that Pink Salt is a product produced in Pakistan. The last 70 years of ignorance have cost the salt industry and Pakistan's economy billions of dollars.

With due thanks to the incumbent Government of Pakistan, Pink Salt has been assigned a GI tag which declares it as Pink Himalayan Salt: A product made in Pakistan. This initiative has not only encouraged more business opportunities in the salt sector but is also a steppingstone in promoting the soft image of Pakistan through its products in the international market.

Pink Himalayan Salt owns the pleasure of many healing benefits especially for individuals dealing with bronchitis or irritated lungs. The salt therapy sessions especially designed for such patients helps them recover from allergies or reduce asthmatic symptoms by inhaling medicated amount of salt particles fused with air and moisture that clears the airways and fights microbes in the lungs. Moreover, people who want to enjoy flavorsome meals but are restricted to the use of salt can easily resume back using Pink Himalayan Salt as an alternative to white salt. This particular product found in Pakistan has been tested and approved by many international health care agencies that prove that Pink Himalayan Salt is composed of all the necessary minerals in the right amount required by our body to function properly hence, no harm is associated with consuming this natural mineral.

We are grateful that Pakistan is blessed with nature's bounty, and as the rightful owners, we have a huge responsibility to identify, acknowledge, and protect it with true intentions that will benefit our country in terms of economical control, and most importantly it will help the Human community at large.

I believe that the day is not far when the salt sector of Pakistan will get to play its part in boosting the national economy. Together we will work to promote Made in Pakistan. INSHA ALLAH.

## Salt Panels made using “Sun & Wind”

Salt Panels are used to attract the water molecules in the air, pollutants, pollen, bacteria, and allergens which results in making the air surroundings clean and fresh to breathe.

The use of salt for constructing salt panels is one of the hottest wellness trends, thanks to its stunning design and the plethora of health benefits it offers.

Many industries have sprung up selling salt panels to people involved in the construction business. One such building which was recently constructed was Frank Gehry's tower. In order to reduce the carbon footprint, the owners of Frank Gehry's tower for Luma Foundation in Arles had decided that the interior of the tower should use materials produced by salts such as sunflowers and algae. For building toilets, algae were used for interior finishes whereas the sunflowers stem had been turned into acoustic panels for the bars.



The toilets at the tower are finished in multicolored tiles made from algae harvested in the salt flats. Algae consume carbon dioxide to grow enormously fast. In this way, they are capturing and contain carbon dioxide. The designers of the tower, Henna Burney and Karlijn Sibbel have developed a method of growing salt crystals on metal mesh placed underwater in the extensive salins where the Camargue salt flats have been used to evaporate the mineral since antiquity.

The materials for salt panels grow itself via the process of crystallization over a period of two weeks. Humidity, temperature, wind, and rain are factors that influence the crystallization process. One of the main advantages of this process is that it does not require additional energy as it is produced naturally from the sun and wind. This results in low environmental impact which allows it to be easily integrated into industries and ecosystems. Being naturally abundant, salt was specially chosen for this project because it plays an important social, economic and ecological role in the region.

# Technological Role of Salt in Food Production

Today, the functional properties of salt in processing and production of food go well beyond taste. In fact, salt plays various technological roles in food production. Besides adding flavour to food, salt has an important role to play in safety and textural properties. For instance, it influences the growth of bacteria involved in the fermentation processes.

## Salt plays several main roles in the processing of different foods

- **Meat Products** - Salt increases the water-holding capacity and improves the binding of batters in processed meats.
- **Bread** - Salt makes gluten more stable, less extensible and it influences the fermentation rate.
- **Cheese** - Salt modulates the microbiota, regulating the activity of starters, modifying enzyme activities and it affects the cheese's texture by altering protein structure.
- **Canned Foods** - Salt can be used for cleaning fish before canning.

Salt also plays a vital role as a texture enhancer. Salt modifies the structure of proteins and modifies the interaction of proteins with other components, such as water and fat, which impacts the texture of foods. For example, if the proper amount of salt is added, cheese can have more body, meat can be juicier, and fish and breads can be firmer.

Salt or better sodium chloride can also be a nutrient source for sodium, an essential nutrient needed by the body in small amounts. NaCl has a main role in cheese manufacturing, namely, regulating the coagulant, the milk proteinase and microbial enzymes.

According to research studies, low salt cheese was found to be less firm and more compressible. Also, it was found that salt content had influence on the meltability of no salted immature cheeses.

Salt is also important as a binding and emulsifying agent. The new protein structure helps to hold the product together and helps to prevent moisture and fat loss. This is very important, for example, in processed meats.

# World Wide Consumption of Salt

The largest consumer of salt is the **Chlor-Alkali Industry** which is using about 55% of the total production.

In this industry, salt is converted in to chlorine, caustic soda, and soda ash.

If salt was not converted into these Chlor-alkali products then petroleum refining, petrochemistry, organic synthesis, and glass production would not be possible.

The second-largest user of salt is humans that need approximately 10% of the total salt product to support physiological functions, eating habits, and cooking.

Approximately 10% of the salt is used for de-icing roads, to treat impurities in water, textile printing, and other small applications.

The main element that is required by various industries is sodium chloride. The value of the salt is determined by how pure it is. So the purer the salt, the better the value of the salt in the market.

## Applications of Chlor-Alkali products

Chlorine	Soda Ash	Caustic soda
Used as an antiseptic and is used to make drinking water safe and to treat swimming pools	Used as colouring agent, detergent, fertilizer	Used in de-greasing metals and making dyes an bleaches
Chlorine is excellent in killing germs	Production of glass, glass containers, fiberglass insulation	Used to in the manufacture of Paper
Used for manufacturing polyvinyl chloride(durable plastic) which is used in making water pipes, blood bags, window frames	Various cleaning products and dishwashing soaps contains soda ash	Used as drain cleaners that contain sodium hydroxide convert fats and grease that can clog pipes into soap
Used in manufacturer of various drugs that is used to treat diabetes, high blood pressure, cancer and depression	Removing stains, alcohol, and grease on clothes	Used for making soaps and detergents
Used for bleaching paper and textiles.	It can effectively clean the air	Used in water treatment plants for pH regulation



## Deregulation in Nepalese Salt Industry



Nepalis consume around 200,000 tonnes of iodized salt which is worth Rs 2.5 billion annually. Most of the salt is imported from Gujarat State in India. India sells iodized salt at Rs.18.5 per kg to dealers while the retail price is about Rs 20 per kg.

In Nepal, salt was mostly sold by Salt Trading Corporation but now many small industries have entered the salt business after the Nepalese government ended the Salt Trading Corporation six-decade-old monopoly over the iodized salt trade.

Deregulation will lead to an increase in competition in the salt business which will result in an improvement in innovation and an increase in market growth as businesses compete with each other.

According to Trade Economist, Posh Raj Pandey said: "It is a progressive move to make the business competition that will benefit consumers." Pandey is of the opinion that the government should provide equal opportunity to all the players in the market and that it should not promote any particular group in any business.

Pandey is afraid that the government might take steps to give special import licenses to certain business people for their benefit which will hamper growth in Nepal.

*Nepalese government  
open doors for  
Pakistani Businessmen*

The private sector has not been capable of capturing the markets in rural parts of Nepal because there is no profit on sale of salt in the hilly and mountainous regions of Nepal.

This move of deregulation by the government of Nepal has opened doors for Pakistani salt businessmen to enter the market by offering premium quality of salt to the Nepalese people.



## Salt Mixes

*Can't decide what gift  
your loved ones?*

Seasoning with spices and sprinkles of salt is one of the most common ways to add flavor to your meals, especially when you cook healthier meals for your family or are trying to reduce traditional flavor makers. Even though plain salt can do the trick for enhancing flavors, adding a pinch of salt spiked with citrus or spices can really elevate your recipes. While the possibilities of having different flavor combinations are virtually endless, here you will learn top three flavored salts recipes.

### Lemon and Rosemary Salt



- 3 1/2 cups sea salt flakes
- 1/2 cup fresh rosemary
- finely zested lemon peel from one large lemon

- Preheat the oven to 100 degree celsius.
- Chop the rosemary leaves.
- Add sea salt, rosemary and lemon zest to a food processor and mix it well.
- Lay the mixture on a baking sheet and bake for 15-20 minutes in the oven.
- Remove it from the oven and it cool for 15 minutes.

### Chile-Lime-Pimentòn Salt



- 1/4 cup Pink Himalayan Salt
- 1 teaspoon red pepper flakes
- 1 teaspoon dried lime zest
- 1/4 teaspoon smoked paprika.

- Mix Pink Himalayan salt, red pepper, dried lime zest and smoked paprika using a mortar & pestle, or in a spice grinder but be careful not to pulverize the salt.
- Taste and adjust seasonings, if desired.
- Allow salt to sit for one day before using for flavors to combine.

### Garlic Herb Salt



- 1/2 cup kosher salt
- 6 cloves garlic
- 1 cup mixed fresh herbs – flat leaf parsley, thyme and sage

- Crush garlic with half of salt to form a chunky paste.
- Slowly add herbs and remaining salt and continue to chop into a fine paste.
- Spread on a parchment paper-lined baking sheet and let sit uncovered overnight or up to 24 hours until dry and crumbly.
- Store in an airtight glass jar.

## People eating the right amount of salt



Today, every single human being around the world ingests the right amount of salt. It doesn't matter if people have packaged salt or salts from restaurants foods, the amount of salt intake is always constant.

Salt which is a combination of sodium and chlorine is essential to human health. It is important to note, that after water, salt is the most consumed food ingredient. This is because, without salt, the blood in our circulatory system would simply stop flowing which would lead to death. Salt chloride helps maintain proper blood pressure while sodium allows our nerves to transmit their electrical impulses throughout our body and helps in the absorption of essential nutrients.

Our bodies need to regulate the amount of salt in order to stay healthy. If we eat a lot of salt then the body eliminates it along with all other waste materials. Likewise, excessive loss of nutrients during exercise needs to be counterbalanced by increased consumption of salt to make up for the loss. If low salt levels persist in the body then the consequences for our overall health can be very severe.

According to research findings, consuming less than half the current average can cause harm as it can lead to the development of Insulin resistance in as little as one week. Moreover, a low salt diet results in diabetes, cardiovascular failure, dehydration, unsteadiness, and death.

# Converting Hard Water to Soft Water by using Sodium Chloride

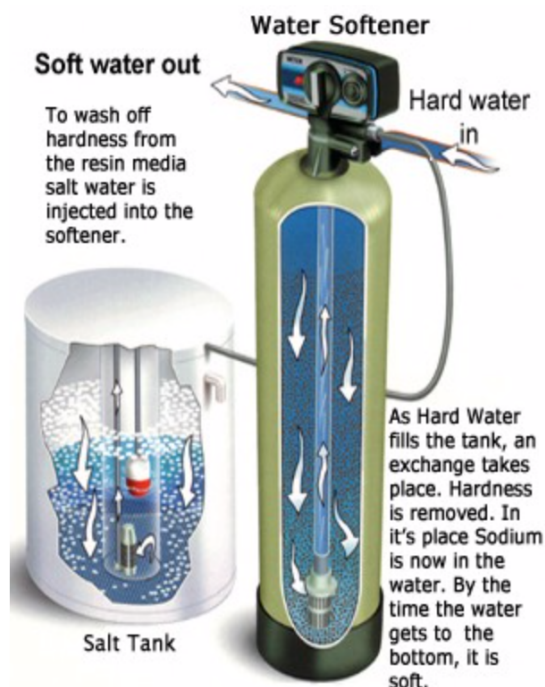
You may have heard about “hard water” which is used to describe your drinking water. If you haven’t heard about it, worry not as hard water is simply water that has high mineral contents comprising of calcium, magnesium, limestone, and chalk deposits.

There are many adverse effects of hard water such as dry, itchy skin when soap residue doesn’t fully come out of your skin, reducing the life span of clothing as hard water leaves stains on them, and the formation of scum when hard water comes in contact with dishes.

Around the world, water softeners are being used as they act as filtration units to convert hard water to soft water. The water softeners eliminate calcium and magnesium present in the water by the chemical and physical methods in a controlled way to reduce the ill effects of the hard water over the end-use application.

Water Softeners have a brine tank that has hard water containing minerals that flow through a bed of spherical resin beads which are charged with sodium ions when Sodium chloride (solution of Salt) is added. Resin beads are negatively charged whereas calcium and magnesium have a positive charge. Since, opposite charges, the negative charge of minerals attracts the positive charge, making them cations. As the hard water passes through the resin, the beads grab hold of the minerals ions and remove them from the water. As a result, hard water is converted to soft water which flows out into our homes.

Increasing awareness of health issues (cardiovascular diseases, cancer) has resulted in high demand for water softeners around the globe.



In 2019, the water softener market that used salt held the largest share in the India Water Softener Market. The global water softeners market is projected to reach \$3,570,40 million by 2025.

The water softeners market is segmented into North America, Europe, Asia Pacific, South and Central America, and the Middle East & Africa. There are lucrative growth opportunities for manufacturers of water softeners in the Asia Pacific due to the presence of a potential consumer base and increasing product demand from household and industrial sectors.

Moreover, the existence of cheap labor and manufacturing facilities coupled with flexible trade regulations across the Asia Pacific are expected to provide ample opportunities to the international market players operating in the water softeners market.

# Road Salt And The Environment

The single most important winter maintenance material is Rock Salt. According to the research conducted by Marquette University, it was found that during winter storms the roads turn to ice, and de-icing them with salt saves lives, reducing accidents by 88 percent and injuries by 85 percent.

Road salt is also important to the local economy as it prevents costly winter shutdowns of the roadways.

Moreover, a study by Global Insight for the American Highway Users Alliance found that it cost as much as \$700 million per day in both direct and indirect costs if roads are impassable due to snowstorms.

For about 40 years, the Salt Institute has promoted the latest environmentally-friendly technologies and sustainable practices in road salt management, from storage to snow-fighting operations. Also, the Salt Institute has long supported research on how best to protect the environment.

An in-depth research study by environmental researchers at the University of Waterloo and Environment Canada examined the groundwater monitoring data and found that the chloride levels were reduced by half when best practices were employed.

*Rock salt  
Declared  
Eco  
Friendly*

In another study researchers at the Guelph University found that snowmelt runoff from major stormwater outfalls could be collected and recycled to reduce chloride peaks in the streams without adversely affecting road safety.

The Salt Institute, which represents North American salt producers, will continue to support safe and sustainable snow-fighting that both promotes public safety and mobility and protects the environment.



# Himalayan Salt Cave Therapy



Since the early 19th Century, Halotherapy is inspired by the rituals practiced in European salt mines. Salt rooms simulate the natural environments of those authentic salt caves.

Around the globe, Himalayan Salt spas and Salt rooms have imported over 30,000 pounds of salt from the Himalayan Mountains of Pakistan to create a unique climate similar to natural salt caves.

In a salt room, a device called a halo-generator grinds salt into microscopic particles and releases them into the air of the room. Once inhaled, these salt particles reach our bloodstream and produce biochemical reactions that increase levels of serotonin (one of the chemicals behind feelings of happiness), helping people to alleviate depression, relieve stress, and boost daytime energy.

Moreover, people that are exposed to negative ions in a salt room indicate an increase in energy, stamina, achieving optimal weight and a decrease in blood pressure.

Research studies show halotherapy can improve respiratory conditions and various skin conditions, including psoriasis, eczema and acne. It's also been shown to ease smoking-related symptoms such as coughing, wheezing and shortness of breath.

Spa Finder (the largest independent spa market research and media company) accurately predicted that salt therapy was going to be a top 5 growing trend in 2021, and while the industry is rapidly growing, it is becoming more known for the valuable benefits dry salt therapy provides to people, from young to old, as a safe, effective and alternative way of being well.



## Expectant Moms Needs **Iodine** for Healthy Children

Expectant moms already have plenty to worry about including keeping up with medical appointments and setting up a nursery. However, one very easy and vitally important thing to do for a healthy baby is to make sure pregnant and nursing women get enough iodine.

Iodine is an essential element in healthy human life, enabling the function of thyroid glands to produce needed hormones for proper metabolism. When children in the womb don't get enough iodine from their mother, fetal brain development is impaired.

During pregnancy, iodine deficiency can cause a child to develop learning disabilities and mental retardation as well as developmental problems affecting his speech, hearing, and growth.

"Pregnant women need to increase their iodine intake," says Dr. Elizabeth Pearce, associate professor of medicine at Boston University School of Medicine.

"Pregnant women and women of childbearing age should eat a varied diet rich in iodine-containing foods, such as fish and milk, and should **choose iodized salt over non-iodized salt**.

# Increasing demand for Sulphate of Potash (SOP)

Potash is a trading name applied to the salt of potassium salts which is commonly known as Potash of Sulphate.

Potash fertilizers are both inorganic compounds that are usually derived from the potassium salts of plants or from sodium ions obtained by electrolysis.

With the rapid increase in population, the demand to improve crop productivity is increasing which is driving the growth of the potash fertilizers market. Potash fertilizers are being used in various crops such as fruits and vegetables. This is also resulting in an increase in the demand for potash fertilizers.

Moreover, manufacturers are now focussing on increasing the production capacity of potash which will fuel the growth of the market.

Canada's Nutrien Ltd, the producer of potash fertilizer has decided to expand its annual production capacity by 5 million tonnes after 2023.

Furthermore, the Asia Pacific is projected to gain significant growth over the forecast period which is the result of the strong presence of the agriculture industry in the region.



Increasing awareness among farmers about enhancing productivity has resulted in farmers adopting advanced farming practices and tools which is creating demand for potash fertilizers.

In most developing countries, agriculture is the primary source of livelihood for about 58% of the population.



## Gourmet salt to witness rapid growth by 2028

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Gourmet salts are high-quality salts used in cuisine to enhance texture and flavor. Gourmet Salts contain high mineral content and have better solubility.

Usually, these salts are blended with all types of spices and herbs in order to enhance the flavor of spices. Gourmet salts can be found in bakery savory, poultry, and sea salt.

One of the most widely salt is known as the "Fleur de sel" which is used in food products such as meat, vegetables, and salads.

Moreover, Gourmet salt is used in canned food products in order to preserve them for a longer period of time.

The rise in the demand for gourmet salt is the result of an increase in the living standards of consumers. These salts go through various stages such as harvesting, packaging, and labeling which makes them more expensive than table salt.

The consumption of gourmet salts such as fleur de sel is observed in European countries such as France and Spain. During the projected period from 2021 to 2028, America is projected to grow at the highest growth rate.

# Multiple Benefits of Salt Lamps

Salt lamps are light bulbs that have varying wattages placed within blocks of rock salt of varying sizes. They act as "natural ionizers" and are gaining popularity among millennials. An ionizer produces ions which are atoms and molecules having negative or positive charges caused by the uneven number of protons to electrons.

According to research studies, there are diverse benefits of salt lamps. For instance, salt lamps emit "boundless amounts" of negative ions, which counter the positive ions that both surround us and make us feel bad.

Salt Lamps  
emit boundless  
amounts" of  
negative ions



Moreover, the ions offer protection from airborne toxins that could be floating around us, and the ions lower high blood pressure, reducing the chance of heart attacks and strokes.

Adding to this, salt lamps are considered to strengthen your bone, regulate your body pH, and balance the water content in your body.



**The SMAP Newsletter** is published monthly by the Salt Manufacturers Association of Pakistan and distributed free of charge by individual mailing. The Newsletter is distributed to email subscribers and appears on the SMAP website ([www.smap.org.pk](http://www.smap.org.pk)).

The Newsletter welcomes feedback, new information, and relevant articles on all aspects on salt industry.

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