



To Salt or Not to Salt?

by Pamela Manley

Just what is it about those tiny flakes and granules that just make our taste buds wake up? Perhaps it is the fact that our bodies need and crave salt. It acts as a catalyst for many involuntary functions in our bodies such as the communication between the brain and nerves, the contraction of muscles and much more.ⁱ The need for salt is almost instinctive.

A picture of of rock salt. Courtesy of <http://www.saltinfo.com/>

Salt can be used for a number of other things instead of just flavoring the food we eat. It acts as a preservative in our food, softens the water we drink and de-ice frozen roads. This multi-talented mineral can be traced back as far as recorded history and most likely predates any written record. Sometime around 2700 B.C., the first known writing on pharmacology was written. In it was over 40 types of salt and different ways to mine it.ⁱⁱ By 2200 B.C., the Emperor of China had taxed salt to the point where it became a substantial source of China's income.ⁱⁱⁱ

It was in the time of the ancient Greeks that the term "worth your salt" is thought to have originated. At this time, slaves were traded for salt. Often salt was used as a form of currency and not just for slaves. Romans would pay their soldiers in part with salt – a *salarium*, in fact – which is where we derive our term of salary. Salt has

affected history for thousands of years.^{iv}

Salt also has medicinal value as well. The term "rubbing salt in the wound" actually derived from a battlefield practice of salting a wound to prevent infection.^v And when you are in the hospital and in need of fluids, it is a salt-fortified saline solution that is administered.

Regardless of the thousands of applications for the mineral, we mostly think of food when we hear the word 'salt'. Its applications when teamed with food are quite numerous as well. But there are a few that are noteworthy.

We all scream for ice cream

When making ice cream, one of the most essential ingredients that isn't even added to the edible portion is rock salt. It is a form of salt that is not safe for human consumption, but is extremely important when making the ice cream environment of the churn very cold. Generally, without going into a lot of chemical prose that would make any head spin, salt is Sodium (Na) and Chloride (Cl). When these molecules dissolve into the hydrogen and oxygen molecules of the water, they take up room and prevent the formation of crystals – ergo, ice.^{vi} So the water will remain in its liquid state at a lower temperature. (This is what helps ice melt on the roads during winter, too.) So, salt can lower the temperature when sprinkled on the ice rendering a suitable atmosphere for the production of ice cream.

How to boil water.

A watched pot never boils. And a watched pot with salted water boils even slower. Adding salt to water will increase the boiling point.^{vii} Just as the sodium and chloride molecules nudge their way into the water molecule to slow down the freezing process, those same molecules prevent the water from escaping into steam. This is why the boiling point is increased.

But you have always heard that if you want your water to boil faster, you should add salt, right? Well, it's a bit of a minor misunderstanding. The water doesn't boil faster, but since the boiling point is higher, your food would cook more quickly. However, the amount that the temperature is raised is nothing to write home about.

As for adding salt to you water for boiling pasta, blanching vegetables and the like. Go ahead! Whatever you are cooking will take on the flavor of the salted water. Chef Dann Reid at Andrew's 228 recommends a cup of salt to every gallon. "It should taste like the sea," he says.

Just for flavor

Sometimes, food just needs a little help. Salt can help. It intensifies the flavors of the food when added. However, there is a delicate balance. Too much salt can override and absolutely destroy flavor. Adding salt in small portions and tasting after each one can help you to achieve balance and become one with your dish, grasshopper.

Buck and Clyde Seasoning Mix

by Todd Misener
via Andrews 228

1 cup fennel seeds
1 cup whole coriander
¼ cup whole black peppercorns
½ cup sea salt

1. Place all ingredients in a coffee grinder.
2. Grind to a coarse consistency.

Per Serving (excluding unknown items): 5 Calories; trace Fat (23.6% calories from fat); trace Protein; 1g Carbohydrate; 1g Dietary Fiber; 0mg Cholesterol; 452mg Sodium. Exchanges: 0 Grain(Starch); 0 Lean Meat; 0 Fat.

ⁱ <http://www.saltinfo.com/>

ⁱⁱ http://alliance.la.asu.edu/azqa/lesson_file/atrid/40SaltHandout2.html

ⁱⁱⁱ http://alliance.la.asu.edu/azqa/lesson_file/atrid/40SaltHandout2.html

^{iv} http://alliance.la.asu.edu/azqa/lesson_file/atrid/40SaltHandout2.html

^v <http://www.siftocanada.com/saltbookframe.html>

^{vi} <http://newton.dep.anl.gov/askasci/chem99/chem99029.htm>

^{vii} <http://www.isd77.k12.mn.us/resources/cf/ExmSciProj.html>