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### Why isn't there a Spicy Warning Label on Every Spicy Product?

Imagine this: you are on a date with a person you like. You and your date go to Buffalo Wild Wings, which is a restaurant known for its chicken legs and their spiciness. So, being brave, you try to impress your date by trying a spicy but doable chicken wing. Not knowing what “pretty spicy” means on their menu but knowing that you can handle Taco Bell’s Diablo sauce. So you order Chipotle Buffalo seasoned wings, which is considered medium on the B-dub’s (Buffalo Wild Wings) spicy scale. Then your order arrives, and you begin to eat the wings like they are candy. Then a couple of minutes hit and you realize that the medium-spicy is way hotter than the Diablo sauce from Taco Bell you had earlier. You start to tear up from the inner burn, and you receive the disapproval of your date. This is a nonfiction story that could happen to you. This shows us how inconsistent the measurement of spicy is from restaurant to restaurant. This is not only a problem of not knowing how spicy food is in restaurants, but also marketplaces across America. Every item and entree should be labeled with the Scoville Heat Units (SHU) for the satisfaction of the consumers, for our rights to know what’s in our food, and for the safety of the people.

The satisfaction of the consumer is as important as anything else. Spicy peppers play an important role culturally here in the Americas. Originally, the chile pepper was discovered in regional parts of Bolivia and southern Brazil. Since the people of the new world were first to access the chile pepper, Vicent Gonzalez says that “It is said that chile, along with corn and

beans, were the first crops to be domesticated in these regions through the planting method known as chinampa. As a result, the use of these foods became very popular and began to be used by all of society”. Although ancient people of the Americas, so-called Incas, Mayans, and Aztecs were the first to eat these peppers, they weren’t the last.

These superfoods have spurred the desire for spice across the world. Thanks to the Columbian exchange, we have the spread of chili peppers. “While corn and potatoes grew to become staple foods in Africa and Europe respectively, chili peppers were taken to Asia by Portuguese explorers. There, they flourished in the tropical climate, and the native people started to incorporate them into their cuisine. Thus, the world was irreversibly changed.”(Thirunathan). You may ask what Thirunathan means by irreversibly changing. According to Nathan Nunn & Nancy Qian, two renowned economists write:

The capsicum has also had a significant impact on the cuisine of many other countries. In South and South East Asia, some form of pepper is used in the base of almost every dish (for example, curries). In China, cuisine in the southwest (like Sichuan, Guizhou, and Hunan) is defined by use of certain chili peppers. In Korea, a side dish of spicy kimchi is consumed with every meal. (171)

From South America, these spices spread to acquire this taste in almost every culture and tongue. Although some critics may challenge my view that chiles spread to all cultures by insisting on what Francis Lam reports, German food is not as hot as Thai food because of the politics with Protestant Reformation and Catholics. The two religions, Catholics in Portugal and Protestants in Germany did not mix well during the Renaissance. Many wars were sparked by means of Religion. Just like Portugal and Germany didn't share religion nor did they share an economy with spices. Because of this, the protestant heavy countries like Germany, England, and others

are shown on the map below don't have an established spicy food in their culture. Because of this exchange, we now have spicy Kimchi or McDonald's McSpicy Chicken sandwiches.

### ***The Protestant Reformation Map***

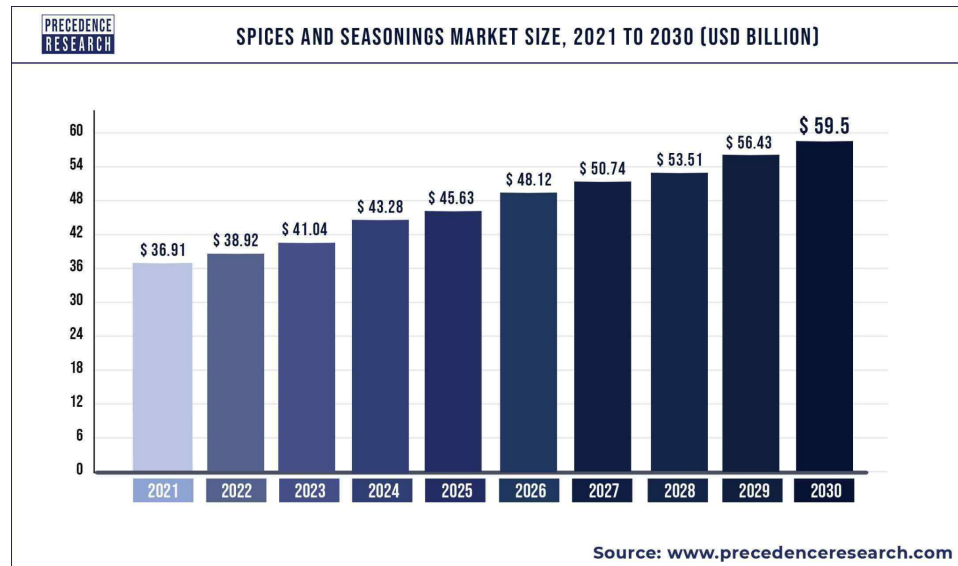


Source: The Protestant Reformation Map. Digital image. Slideplayer. N.p., n.d. Web. Apr.-May 2017. <[http://images.slideplayer.com/38/10787233/slides/slide\\_32.jpg](http://images.slideplayer.com/38/10787233/slides/slide_32.jpg)>. 04/20/23

The craze just started back in the 1600s and continues until now. Furthermore, in today's world, almost every American restaurant has a spicy option. If we take the top ten list according to the Chicago Tribune, which is 10. Buffalo Wild Wings Grill & Bar, 9. IHOP, 8. Outback Steakhouse, 7. Red Lobster, 6. Chili's Grill & Bar, 5. Applebee's Neighborhood Grill & Bar, 4. Olive Garden, 3. Texas Roadhouse, 2. Denny's, 1. Cracker Barrel Old Country Store (Sietsema). Every restaurant on this list has a spicy option. If you look up any on this list you'll find an item that is considered spicy. For example, In the Cracker Barrel Old Country Store, they have "the Spicy Chicken Sausage". Every restaurant chain that wants to grow inevitably will have an option for spice. John Schmeltzer, a Chicago Tribune writer, reassures this by saying since the increase in baby boomer's craving for strong flavors and the increase of Hispanic immigrants in the United States help sales in chili peppers production. One measure of the trend is the increase

in the production of chili peppers, which has risen from 2.8 million pounds in 2001 to 5.2 million pounds in 2005”(Schmeltzer). The changes to restaurants are here to satisfy the customers. These massive restaurant chains opened up a spicy option in order to give the wants of the generation of baby boomers. This SHU won’t just benefit the extreme end of spice enthusiasts but also the low end too. A letter to the FDA (Food and Drug Administration), complains, “on August 24, 2020, after receiving a consumer complaint that the chips were extremely spicy and recalled bags of chips labeled “Ruffles Original Potato Chips” but containing Ruffles Cheddar & Sour Cream Potato Chips on August 21, 2020, after receiving a consumer complaint”(Garcia). If a complaint that Ruffles Cheddar & Sour Cream Potatoes chips was too spicy reached the headquarters of the Food Government, what makes it a bad idea to label a product to see if it has the slightest spiciness? The knowledge of what’s in our food is crucial just as labeling what we consume.

Another example is in the movie “Ratatouille”. The antagonist of “Ratatouille”, Skinner, wants to spread his franchise into different sections. In one of the clips from the movie, one of the first ideas that Skinner has to expand is to branch out different cultural items and add spiciness to their menu if not already implemented. The unique foods we have wouldn’t be the same without these spices and peppers. This is the irreversible change, change how the world consumes, they consume with fire.



Source: "Spices and Seasoning Market size, 2021 to 2030 (USD Billion)." Precedence Research, June 2022, <https://www.precedenceresearch.com/spices-and-seasonings-market>. 1/03/2023.

Also, in the same way, just as Scoville Universal unit measurement is a determining factor. So too, why is this important to you? What is this craze for spiciness? For instance, the phenomenon of spices is that their sales are on the rise. "According to EuroMonitor, sales of herbs and spices hit \$283 million in 2012, compared to \$212 million five years earlier" (Gulli). Since the early 2010s, the spice group has grown. The upward trajectory of spice sales has been happening since 2012. Looking at these statistics today, we can see positive growth in sales in the future. If we look at the chart above, it shows us the progressive increase in spice and seasoning in the future market. In other words, the desire for spicy food is only going to increase. With this augmentation, we need to label what pungency is and how much it is on the SHU scale. This adds to another reason why it is important to label the spices and foods we eat.

The sounds of a universal spiciness unit system may sound crazy, but it does exist. It's called Scoville Heat Units, or SHU, a unit system to measure spiciness or pungency (Macdonald). In other words, this measures how spicy it is with numbers from 0 to 15 million.

Critics may ask why it is needed that we measure spiciness. According to Peter F. Drucker, an early 1900 philosopher, says “If you can not measure it, you can not improve it”(Mackenzie). The idea of a better quality of spices is to have a better quality of measurement. Is needed to have a unified system to help inform the consumers in truth what they are committing to. This goes back to our safety to know how bad the sting is a.k.a how spicy is it.

To add on, pungency is the amount of capsaicin in a product or pepper. There are two components that contribute to spice. Wilbur Scoville invented it in 1912 by diluting it in sugar water as Thai chili can still be tasted after being in 100,000 drops of sugar water (Macdonald). When talking about capsaicin, is a certain compound found in peppers like habanero or cayenne not to be mistaken for ‘Capsicum’ which is a way to define all bell peppers and peppers in their respective scientific classification. This scales from 1 drop to 17 million drops of sugar water with a jalapeno pepper being from 2.5 thousand to 8 thousand SHU to a Ghost pepper being 600,000 to 1,041,427 SHU (*Chili Pepper Scoville Scale*). The scale has its effect. This gives it a reason to use SHU scale than any other scale given for this project.

Additionally, Mark Buchanan explains the effect of spicy eating saying “Resiniferatoxin, a chemical produced by the cactus-like plant *Euphorbia resinifera*, is the hottest chemical currently known, ... . A pure extract of this stuff scores 16 billion Scoville units. Eating just a gram or two would cause serious internal burns, and possibly death”(Buchanan). This saying at the end of this scale has symptoms for Death itself. Imagine yourself, buying you think generic pain pills but the side effects of one pill are burns and death. In the United States, this would be a red flag for the safety of the consumer.

Back then, the accuracy of the Scoville Heat scale was determined by five human taste testers to sense the diluted solution until the spiciness was undetectable. As we know, the human

variable is unpredictable. Toketemu, a health writer, states, “Today, a process called high-performance liquid chromatography can determine the exact concentration of capsaicin, eliminating the need for human taste testers. But the Scoville Scale is still the official measurement, used by foodies and experts alike” (Ohwovoriole). Even though the Scoville scale was first tested with humans, now it is more reliable. Showing forth that if we had a universal unit of measurement to put on for spicy, we would use the Scoville Heat Unit (SHU).

This measurement is useful because as sales of spices rise, so do the risks that come along with spicy food eating. With the thrill of the heat comes consequences too. I love to eat spicy food. I remember going to the local In-n-Out and grabbing extra peppers for home, so I could boost my “tolerance”. So, eventually, I could eat hotter peppers like habanero, cayenne, ghost, etc. I did this for my personal satisfaction. However, other people who are purchasing these types of food may not be informed of the harm it may cause someone when they consume spicy food. Now we are selling spicy food without any label showing the harm it can cause to the general public. Public safety is important, in which three cases will be shown to describe the effects of spicy/ hot pepper consumption. From a hole where it should be, a headache feels like thunder stuck and a child breaking into hives. Why can some buffalo wings pass the warning sign of death while medication can’t? From the HealthDay News, E.J. Mundell reports about a man who has a hole in his esophagus, the reason for eating a ghost pepper. Tells that on October 16, 2016, he was rushed into the ER and the medicals checked CT scans and found a 1-inch hole in the throat. He had surgery immediately and was finally released from the hospital 23 days afterward (Mundell). This man before entering into this nightmare of a state ate some pepper from only a pepper that contains 1 million SHU to receive a hole in the throat. If he would have known how much SHU the peppers he was eating, I think would have never had a hole in his

esophagus. Another report details that a man was eating a Carolina Reaper when he started getting symptoms of ‘thunderclap headaches’, which cause the narrowing of blood vessels in the brain. After a session of these Thunderclap Headaches, he was rushed into the emergency room. Five weeks after the incident, the man returned to a normal state (Harris). Just as the pepper affected the man’s throat, the spice can affect your brain as ‘thunderclap headaches’ which need immediate treatment. This knowledge is needed for public safety and to help us be more responsible for what we are consuming. This is the importance of labeling SHU on our products.

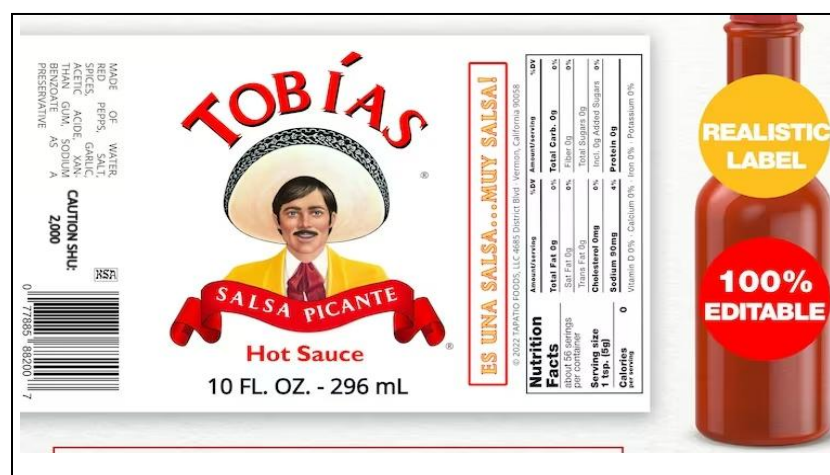
As the desire to eat spicy food increases, so does the rise of critics also. Some critics may say that we already have enough labels on our food items. Why get more? Or why add more when we should minimize the information on products? According to Jonathan Soma, a writer from Bon Appetit, answers to why could spiciness be dangerous, “A pastor and his wife, Tim, and Mary Katherine Gann, sued Steak 'n Shake in 2010 after a waiter allegedly served their son a hot sauce so spicy that he had to be hospitalized. According to the lawsuit, the appropriately named Blair’s Mega Death Sauce caused their son to break out in hives, have difficulty breathing, and be ‘[inflicted with] severe injuries to his body and permanent damages’” (bon appetit). The list of symptoms are things that could happen to anyone who eats something spicy. This is a danger to companies that invest in spicy food and will need to protect themselves against lawsuits. What other better way to protect them from a lawsuit than to label how spicy their product is?

After countless legal cases, benefits, and information, how can we see the legendary SHU scale on every product in the United States? The organization in charge of any change to the Food Label is called the Food and Drug Administration. The FDA is the Federal government's way to regulate food for the public’s safety. Recently, The FDA made an adjustment to the



common nutrition label. The changes to the nutrition label include: adjusting the serving size, highlighting the Calories, and Adjustment the Daily Value % to show more accurately your daily diet needs, They took out the section ‘Calories from fat’ (*What's new with the nutrition facts label*). If the FDA can update the label, they also have the power to enact the Scoville Heat Unit Label Act.

Just like in the olden days when the FDA asked for products to prevent food allergies for the common protection of people. Putting a label for SHU will provide safety. Do you remember the 1992 case *Liebeck v McDonald's*? Where Stella Liebeck received her coffee and received a severe burn after a spill of it. First, she later received almost 3 million dollars from McDonald's. Secondly, since the case, engineers have created a safer world for coffee like a cupholder in your car or a cup sleeve or so-called Zurf (Stout). Lastly, McDonald's has begun to put the label “Caution: Handle with Care I'm Hot” on every cup ever since to protect themselves from another lawsuit like *Liebeck v. McDonald's*. If not cautious, the legal world will take you down. Therefore, the importance of labeling items for public knowledge therefore shows the need to have Scoville Units labeled on every product.



Unlike the *Liebeck v. McDonald* case where they changed the industry through a lawsuit, the means we can change the law and regulation is through petition. The goal would be to get

over 300,000 signatures across the United States. Once implemented, each restaurant and item in the store will have this SHU scale. As shown, in the image above the label will not take a lot spaced. For example, we will use a hot sauce bottle from Tobias. The label on the bottle usually displays the ingredients, barcode, title, nutrition values, and amount the container contains. The SHU scale would be placed between the Barcode and the ingredients. Other hot sauces would follow the same format as indicated. If a product does not have a clear location to place the SHU scale, then they will let their creative department decide where to locate the SHU label. Then for the Restaurant, the Scoville Heat Units would be placed by every item on their menu or a



reference. For example, here is an updated version of Buffalo Wild Wing that would apply this to their chicken wing section. The image to the left displays the original menu (the menu of the nonfiction story). As shown, the scale goes from 'Smilin' to 'Sizzlin' to 'Scream', which does not give an accurate calculation of the actual capsaicin continents for each wing. While the image to the right would be the new and improved Buffalo Wild Wing menu. This new menu still contains the old artistic scale of 'Smilin', 'Sizzlin' and 'Scream' but now shows the SHU

scale. The SHU scale is properly placed according to the actual measurements of each chicken wing. For example, The Parmesan garlic Chicken would be in the range of 10,000 while the Blazin' Chicken wing is considered on the Scoville Scale as 500,000. Other restaurants would adjust the following to provide the public with proper measurement of spice.

In conclusion, the world of spiciness has always fascinated people, with its roots connected to the Americas. Whether it be Capsicisin or the pungency that attracts us to these torture-fill peppers, people crave the satisfaction of knowing much pungency it has. With the surge in popularity and consumption of spicy foods, the need for accurate measurement is evident. Otherwise, more health emergencies such as burning through the esophagus, thunderclap headache, or breaking into hives may occur. These complications mean that corporations could lose lawsuits just like the Liebeck v. McDonald's. Therefore, labeling the pungency of these products gives the public better knowledge of what we are eating makes it important. Even though there is more to learn about the history of spiciness and pungency, SHU should be labeled on every product sold to the public. While it may not be labeled exactly as shown above in the images, it is crucial in this new culture of the importance of information to have it labeled somehow. So next time a person goes on a date, they don't embarrass themselves by eating a chicken wing that's too spicy.

## References

- Buchanan, Mark. "Some like It Hot." *Nature Physics*, vol. 16, no. 1, 8 Jan. 2020, pp. 112–112.,  
<https://doi.org/10.1038/s41567-019-0766-3>.
- Center for Food Safety and Applied Nutrition. "What's New with the Nutrition Facts Label."  
*U.S. Food and Drug Administration, FDA*, 2 Feb. 2022,  
<https://www.fda.gov/food/new-nutrition-facts-label/whats-new-nutrition-facts-label>.
- "Chili Pepper Scoville Scale." *Scoville Scale*, scovillescale.org , 14 Feb. 2023,  
<https://scovillescale.org/chili-pepper-scoville-scale/>.
- Garcia, Edmundo. "Warning Letter CMS #611243." Received by Mr. Steven Williams, *FDA*,  
*FDA*, 1 Dec. 2020,  
<https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/warning-letters/frito-lay-inc-611243-11242020>. Accessed 20 Apr. 2023.
- Harris, Richard. "The Super-Hot Pepper That Sent a Man to the ER." *NPR*, NPR, 16 Apr. 2018,  
<https://www.npr.org/sections/thesalt/2018/04/16/601976815/the-super-hot-pepper-that-sent-a-man-to-the-er>.
- Gonzalez, Vicent. "Why Do They like Hot Chili so Much in Mexico? ." *Howlanders Blog*,  
*Howlanders*, 28 Dec. 2020,  
<https://www.howlanders.com/blog/en/mexico/hot-chili-mexico/#:~:text=If%20there%20is%20something%20more,even%20to%20pre%2DHispanic%20times>.

Gulli, Cathy . “A Burning Sensation.” *Maclean’s*, vol. 127, no. 1, Jan. 2014, pp. 44–45.

EBSCOhost,

search.ebscohost.com/login.aspx?direct=true&db=asn&AN=93417138&site=ehost-live.

Lam, Francis. “How Chili Peppers Conquered the World (or at Least Most of It).” *The Splendid Table*, Pepper Party, 11 July 2018,

<https://www.splendidtable.org/story/2018/07/11/how-chili-peppers-conquered-the-world-or-at-least-most-of-it#:~:text=Famously%2C%20peppers%20are%20native%20to,area%20is%20where%20they%20originated.>

Lillywhite, Jay M., et al. “Spicy Pepper Consumption and Preferences in the United States.”

*HortTechnology*, vol. 23, no. 6, Dec. 2013, pp. 868–876.,

<https://doi.org/10.21273/horttech.23.6.868>.

Macdonald, James. “The Science of Hot Chili Peppers - Jstor Daily.” *JSTORdaily*, JSTOR, 1

June 2017, <https://daily.jstor.org/the-science-of-hot-chili-peppers/>.

MacKenzie, Gray. “If You Can't Measure It, You Can't Improve It: Lessons from Peter Drucker.”

*GuavaBox*, GuavaBox, 19 July 2018,

<https://guavabox.com/if-you-cant-measure-it-you-cant-improve-it/>.

Mundell, E.J. “‘Ghost Pepper’ Burns Hole in Man's Esophagus.” *HealthDay*, Consumer Health

News | HealthDay, 30 May 2022,

<https://consumer.healthday.com/general-health-information-16/emergencies-and-first-aid-news-227/ghost-pepper-burns-hole-in-man-s-esophagus-715951.html>.

Nunn, Nathan, and Nancy Qian. "The Columbian Exchange: A History of Disease, Food, and Ideas." *Journal of Economic Perspectives*, vol. 24, no. 2, 2010, pp. 163–188.,

<https://doi.org/10.1257/jep.24.2.163>.

Ohwovoriole, Toketemu. "All about the Scoville Scale." *Nature's Path*, Nature's Path, 16 Aug. 2021,

<https://www.naturespath.com/en-us/blog/all-about-the-scoville-scale/#:~:text=Scoville%20heat%20units%2C%20also%20known,be%20diluted%20by%20sugar%2Dwater>.

Schmeltzer, John. "Hot 'n' Spicy Mcchicken Pulled from McMenu." *Spokesman.com*, The Spokesman-Review, 30 June 2009,

<https://www.spokesman.com/stories/2006/jul/19/hot-n-spicy-mcchicken-pulled-from-mcmenu/>.

Sietsema, Tom. "America's Top 10 Chain Restaurants Ranked." *Chicago Tribune*, 28 Mar. 2019,

<https://www.chicagotribune.com/dining/ct-americas-top-10-chain-restaurants-ranked-20171213-story.html>

Soma, Jonathan. "Hot Dockets: A Brief History of Chile Pepper Lawsuits." *Bon Appétit*, Bon Appétit, 7 Mar. 2014,

<https://www.bonappetit.com/entertaining-style/trends-news/article/chile-pepper-lawsuits>.

Stout, Hilary. "Not Just a Hot Cup Anymore." *The New York Times*, The New York Times, 21 Oct. 2013,

<https://www.nytimes.com/2013/10/21/booming/not-just-a-hot-cup-anymore.html>.

Thirunathan, Praveena. "The History of Spicy Food: Food History & Tradition |." *Science Meets Food*, Institute of Food Technologists, 22 Aug. 2019,

<https://sciencemeetsfood.org/history-spicy-food/>.