SOCIAL LISTENING



GLYPHOSATE BACKGROUND

Glyphosate as a conversation started to take off in 2013 and went viral, peaking in 2018.

Reach

The conversation is *trending down* in 2019, but the reach of these conversations is vast.

Since 2013, there have been at least **4.9M** mentions of the glyphosate, reaching more than **34.7B** accounts.

These numbers do not include associated words and topics such as "weed killer" or "Monsanto." Including those terms would increase the total mentions and their reach.

Net Sentiment

Since 2013 conversations around glyphosate have been overwhelmingly *negative* with 83.9% of accounts using some negative language in association with glyphosate.

Key Words associated with "glyphosate"

"Weed Killer" "Monsanto" "Round Up" "Food" "Bees" "France" "California" "Environment" "Health"

Of note, specific foods (e.g., oats) were not called out in the key words. There were some health focused individuals calling out products, but not enough individuals to cause a specific food product to trend negatively.

Conversations

Negative conversations largely discuss environmental and human health concerns with many suggesting corporate greed as a root cause. Some conversations suggest distrust of the science, in large part due to the association with the corporation and dissatisfaction of specific corporate business practices.

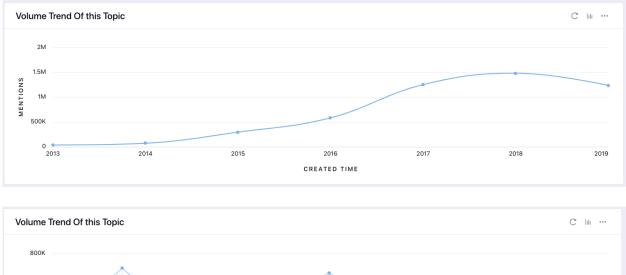


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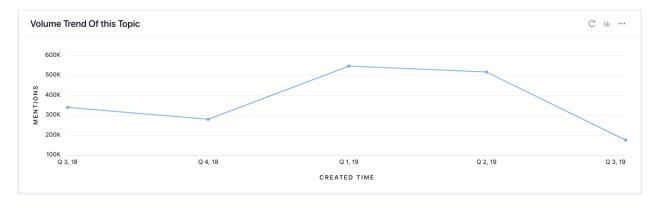


Trend

Conversation appears to trend *down* at the moment. However, there could be another spike in the conversation as settlement talks continue. Additionally, new investigative reports could reignite the conversation. *See below graph: 2013-present date, 2017-present date, year-to-date.*













GLYPHOSATE IARC

Reviewing social media conversations related glyphosate and International Agency for Research on Cancer (IARC).

Reach

Looking at data from 2015 to present dates, we see similar trends and conversations to the glyphosate background provided above; this includes a *decrease* in conversations.

Since 2015, there have been at least **1,683** mentions of glyphosate and IARC, reaching more than **6.8M** accounts.

Net Sentiment

Since 2015, conversations around glyphosate and IARC have been overwhelmingly *negative* with **93.9%** of accounts using some negative language in association with glyphosate and IARC.

Conversations

Of note, the language in the observed conversations were more negative with stronger negative word choices and reactions (e.g., more anger, frustration).

It appears people have great trust in the World Health Organization (WHO) and IARC so the information from the IARC is trusted.

Negative Conversations

Some users provided the report as a source for content they share related to glyphosate's harm. The conversations stem from trustworthy social media users (e.g., higher education level, greater expertise), however, these individuals tend to have fewer followers as a whole, thus limiting their reach.

Positive Conversations

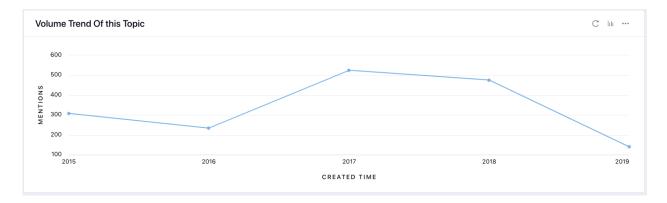
Of positive conversations (limited to a mere **6.3%** of total conversations, equal to approximately 600 total mentions), many individuals decrying the IARC report held a Ph.D. in a biotechnology, agriculture, or other related degree. They too have a smaller reach and spoke of the IARC "duping" the masses or "conspiring" against science. These messages did not resonate



with individuals on a whole and did not receive significant engagement

Trend

The IARC report continues to *decrease* over time. See below graph.



Overall

The IARC report was as a source that provided validity to the outgoing media activities around glyphosate, rather than a catalyst to the glyphosate conversation.





APSARTAME BACKGROUND

Below is background data from the past 12 months to provide context for the social interactions around the paper, "*EFSA's toxicological assessment of aspartame: was it even-handedly trying to identify possible unreliable positives and unreliable negatives?*".

Reach

Aspartame received **144,944** direct mentions that reached **397.7M** accounts. This is a significant *decrease* in mentions and reach from previous years with a **41.77%** *decrease* in mentions and a **60.66%** *decrease* in reach.

Net Sentiment

The social media users observed have an overwhelmingly *negative* perception of aspartame with **75%** of the observations including some negative connotations in the messaging.

Key Words associated with "Aspartame"

"Diet Soda" "FDA" "Whey Protein" "Stevia" "Coke" "Coca-Cola" "Coke Zero" "Diet Coke" "Cancer" "chewing gum"

Of note, PepsiCo and Pepsi branded products were not talked about by name in conversations, however, Coca-Cola and Coca-Cola branded products are called out by name with negative connotations.

Conversations

Negative conversations discuss aspartame and an association with cancer. Some individuals expressed a desire for aspartame to be replaced by stevia because stevia is "natural" therefore "safer."

Trend

Interestingly, the conversation over the course of the past year has remained flat with a noticeable decrease in conversation from July to the present date. *See below graph*.





ASPARTAME PAPER

Below is background data from the past 2 months around the paper, "EFSA's toxicological assessment of aspartame: was it even-handedly trying to identify possible unreliable positives and unreliable negatives?".

Reach

The paper received **49** mentions with a reach of **43,022** accounts. There is not a strong metric to compare this paper against. However, as you can see from aspartame's year-to-day "net sentiment," there is not a significant portion of the population reacting and/or sharing this paper.

Net Sentiment

The social media users observed are overwhelmingly *positive* with 87.7% of users associating this paper with positive feelings and words suggesting they support this paper and its conclusions.

Key Word associated with the paper

"Unreliable"

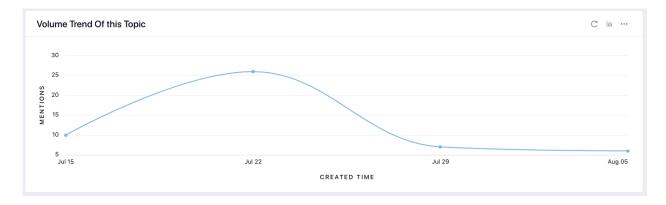
There's only one associated word with this topic as the reach and engagements are limited. That said, based on the limited observations, it appears that some individuals do not trust the current EFSA process and do not believe the toxicology assessment was performed in a fair manner.





Trend

The conversation does not appear to be picking up momentum and mentions appear to *decrease*. See below graph.



Comparison between BMC metrics & Sprinklr

After running searches for the paper, the metrics pulled by our system and the metrics pulled by BMC, our data shows fewer engagements. However, we can see the reach and impact of what has been shared providing better context for the information.



WILL ASPARTAME TREND?



When comparing aspartame to other viral trends a number of factors need to be present for an ingredient to take off on a large scale.

Glyphosate, for example, is of great public interest due to the high-profile and high-payout lawsuit. The themes of corporate greed and conspiracy resonate with people and therefore make excellent media coverage.

Additionally, glyphosate as an ingredient touches on nearly every aspect of the food and the ecosystem, therefore making it significantly more relevant to more individuals and advocacy groups including, but not limited to, water, agriculture, human health, social justice, and animal and insect well-being.

While aspartame does meet some of the general requirements for taking off as a story, we do not believe it will go significantly viral unless aspartame is the focus of a lawsuit that goes to trial, there is suggested evidence that aspartame could be causing a substantial negative impact to not only human health, but the environment as well, or it's the target of a large-scale ban.

The Center for Research on Ingredient Safety at Michigan State University is a collaborative initiative between academia, government, non-governmental organizations, and industry to provide research-based information to the global community.

Join the conversation on Twitter @CRISbits or by emailing us at <u>cris@msu.edu</u>.

