

# Economically Motivated Adulteration Vulnerability Assessment Tool

**Economically motivated adulteration (EMA)** is an established threat to grocery manufacturers. EMAlert<sup>TM</sup> provides quantitative vulnerability ranking results, enabling industry to make informed decisions and develop mitigation strategies to combat the threat of EMA.



# HOW IT WORKS

EMAlert provides a quantitative estimate of an organization's vulnerability to economically motivated adulteration for each commodity included in the analysis based on a combination of characteristic attributes of each commodity and subject matter expert (SME) opinion as to how important those attributes are in predicting which commodities are more likely to be adulterated for economic reasons.



## Automated Live Commodity-Attribute Data

Characteristic attributes that drive a fraudster's decision to adulterate a commodity are continuously updated at defined intervals through numerous online websites and databases to support the best possible assessment of EMA vulnerabilities.



## SME-based Importance of Attributes

Users of the tool (SMEs) weight the attributes based on their expert opinion as to how important those attributes are in predicting which commodities are more likely to be adulterated for economic reasons.



## Behavioral Model

Understanding the behavior of fraudsters is an important part of estimating the vulnerability of EMA to the supply chain. The behavioral model translates the factors involved in fraudster decision making (the attributes) and the SME-based importance of the attributes into meaningful mathematical structures for calculation and analysis.



## Quantitative Vulnerability Results

Quantitative vulnerability results help users to effectively prioritize and rank mitigation efforts associated with economically motivated adulteration.

# EMAlert™ is the only vulnerability assessment tool capable of pulling live commodity-specific data— keeping you up-to-date with just one click!

Key Features	GMA + Battelle EMAlert	SSAFE Food Fraud Vulnerability Assessment	USP Food Fraud Database
Results Format	Interactive Quantitative/ Graphical	Static Qualitative/ Graphical	Filterable Written Articles
Number of User Inputs Required	13 (12 attribute weights + 1 uncertainty factor)	100 per commodity (50 ratings + 50 certainty ratings, per commodity)	1 – 9 (search string + up to 8 filters)
Number of Commodities Assessed per Analysis	50 (in v1.0 – easily expandable)	1	1
Relies on SME-based Inputs	yes	yes	-
Incorporates Historic EMA Incidents	yes	-	yes
Generates Results Documentation	yes (customizable)	yes (static)	-
Automatically Utilizes Up-to-Date Commodity-Attribute Data from Multiple Sources	yes	-	-
Can Store and View Past Analyses	yes	yes	-
Provides Side-by-Side Comparison of Multiple Analyses	yes	-	-
Based on World-Class Modeling Expertise Relied upon by the Department of Homeland Security	yes	-	-

## Q: Where is the application hosted?

**A:** EMAlert is hosted in the Microsoft Azure Cloud. Microsoft has leveraged its decades-long experience building enterprise software and running some of the world’s largest online services to create a robust set of security technologies and practices. These help ensure that Azure infrastructure is resilient to attack, safeguards user access to the Azure environment, and helps keep customer data secure through encrypted communications as well as threat management and mitigation practices, including regular penetration testing.<sup>1</sup>

## Q: How is each company’s data kept separate?

**A:** Each company will have its own Azure SQL database, which is only accessible through an encrypted connection string via the EMAlert application. The databases are gated behind a firewall by Azure SQL Server. These measures ensure that company data are compartmentalized and that no company data cross paths.

## Q: How do I customize the commodity list?

**A:** EMAlert comes off the shelf with 50 commodities. Companies are able to customize the commodity list (add or remove commodities) for a customization fee through Battelle. Please email [support@emalert.org](mailto:support@emalert.org) for more information.

<sup>1</sup> <https://azure.microsoft.com/en-us/support/trust-center/>

# GET STARTED TODAY!

1. Go to **www.EMAlert.org**
2. Click **Subscribe**
3. Create an **account** and/or **login**
4. Choose between **subscription packages** or **individual subscriptions**
5. Follow checkout and payment instructions
6. After payment is processed you will have access to the **Subscription Management Portal** to assign subscriptions to users; subscription holders can access the Dashboard to run analyses

If you have any questions about EMAlert and what it can do for you, contact our hotline at **800-201-2011**.

## Subscribe to EMAlert | Choose a Package...



Packages only available at time of first purchase and during annual renewal.

### Standard Subscription

\$2,500 annually per user

Standard subscribers to EMAlert have unlimited access to use of the tool which comes with the base of 50 commodities and 12 quantifying attributes.

\*Additional subscriptions purchased throughout the license period will be at a prorated price

### Premium Subscription

\$10,000 annually per user

Premium subscribers to EMAlert have unlimited access to use of the tool, which comes with the base of 50 commodities and 12 quantifying attributes. In addition to unlimited access to EMAlert, 20 hours of technical reach back support by Battelle Memorial Institute are included. Premium subscribers are also invited to an in-person annual premium user's meeting. This annual meeting includes EMAlert stakeholders from the Grocery Manufacturers Association, Battelle Memorial Institute and the food industry, giving premium users an active voice in the program and participation in future planning of EMAlert.

**Purchase Individual Subscriptions**

*“Food manufacturers place great value on the consumer’s trust in their brands. An issue that compromises the integrity of the food supply chain cannot only lose consumer trust and induce fear amongst the general public, it can represent a threat to public health. Being able to rapidly assess and understand EMA vulnerabilities so that mitigation actions can be prioritized and pursued is essential to protecting both public health and brand reputation.”*

– **Joseph Scimeca**, Ph.D., Vice President, Global Regulatory & Scientific Affairs at Cargill

## About GMA

The Grocery Manufacturers Association (GMA) is the trade organization representing the world’s leading food, beverage and consumer products companies and associated partners. The U.S. food, beverage and consumer packaged goods industry has facilities in 30,000 communities, generates \$1 trillion in sales annually, contributes \$415 billion in added value to the economy every year and is the single largest U.S. manufacturing industry with 1.7 million manufacturing workers. Founded in 1908, GMA has a primary focus on product safety, science-based public policies and industry initiatives that seek to empower people with the tools and information they need to make informed choices and lead healthier lives. For more information, visit [gmaonline.org](http://gmaonline.org).

## About Battelle

Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries. For more information, visit [Battelle.org](http://Battelle.org).

**If you have any questions about EMAlert and what it can do for you, contact our hotline at 800-201-2011.**



Battelle and EMAlert and their logos are trademarks of Battelle Memorial Institute. © Battelle Memorial Institute 2016. All Rights Reserved. ID 551 04/16

**Battelle**  
*The Business of Innovation*

800.201.2011  
[info@EMAlert.org](mailto:info@EMAlert.org)  
[www.EMAlert.org](http://www.EMAlert.org)