

Stockholm 2025-04-07

Subject: Response to A.I.S.E. Letter on ethanol reclassification – the need for innovation and realism in hand hygiene policy

To the European Commission, Ms Ursula von der Leyen, President
DG SANTE, Ms Stella Kyriakides, Commissioner for Health and Food Safety
DG ENV, Mr Stéphane Séjourné, designate Executive Vice-President for Prosperity and Industrial Strategy
Jessika Roswall, Commissioner, Environment, Water Resilience and a Competitive Circular Economy

Cc: Members of the CARACAL Committee

We write in response to the letter dated 8 November 2024 by A.I.S.E. concerning the proposed reclassification of ethanol. While we recognize ethanol's historic role in infection prevention, we urge the Commission and CARACAL to consider a broader and more forward-looking perspective that fully aligns with the objectives of the EU Chemicals Strategy for Sustainability and the Zero Pollution ambition.

Ethanol is not harmless. Its widespread use as an active substance in hand sanitizers carries well-documented chemical and physical hazards, including flammability, inhalation risks in enclosed environments, and adverse dermatological effects. These risks persist even when ethanol is used in products with a well-meaning purpose. In fact, products are not always used as intended, nor are they universally safe under all exposure routes.

A Swedish survey found a significant increase in reports of hand eczema among healthcare workers during the pandemic, something that can be linked to the intensified focus on hand hygiene. 36% of respondents reported experiencing eczema, and when asked about the cause, 42% believed the symptoms were due to increased use of ethanol-based hand rubs, while only 14% attributed the issue to more frequent handwashing with soap and water.

Ethanol evaporates within seconds, limiting its residual effect. In contrast, there are alternative biocidal formulations already on the market—including alcohol-free solutions—that are demonstrably more effective against a broader spectrum of pathogens and retain efficacy even after drying, offering prolonged protection and greater infection control.

Swedish healthcare now recommends alcohol-based hand sanitizers instead of handwashing, which is a dangerous development for patient safety, as many healthcare workers experience

skin problems due to ethanol. Hand sanitizers should complement – not replace – soap and water. Ethanol producers market their products as gentle, allergy-friendly, free from carcinogenic substances, moisturizing, and safe. However, as anyone who has used alcohol based hand sanitizers knows, this is far from the reality.

The notion presented by A.I.S.E. that no viable alternatives exist is simply inaccurate.

During the pandemic, ethanol shortages led to a “dog-eat-dog” market, with skyrocketing prices and stockpiling behavior. Meanwhile, several non-ethanol-based products remained available at normal prices throughout the crisis and contributed to infection control without straining supply chains or posing fire risks.

Moreover, the innovation potential with ethanol is very limited. Increasing the ethanol concentration reduces contact time but increases risks. Lowering the concentration reduces efficacy. In contrast, next-generation formulations using as little as 0.1% active substances (such as phenoxyethanol, quats etc. in specific matrix solutions) can already match or outperform ethanol in efficacy, and allow increased potency in future pandemics by adjusting concentration up to just 0.2%—a scalability ethanol does not offer.

Ethanol also has long-term consequences on the skin microbiome and barrier function. As the skin is a critical part of the immune system, repeated exposure to drying solvents increases the risk of infection by compromising this first line of defense. Dry and cracked hands are harder to clean and more susceptible to colonization by pathogens. Notably, 8 out of 10 infections are transmitted via hands.

The transport sector is phasing out ethanol, moving towards more sustainable alternatives. Similarly, other industries such as paint production and cleaning products are following suit by replacing ethanol with water-based solutions. These industries are recognizing the benefits of reducing reliance on ethanol, not only for environmental reasons but also for improving safety and health outcomes. By shifting to water-based formulations, these sectors are embracing innovation while aligning with sustainability goals.

This should also be a natural development for hand disinfection. Ignoring the hazardous properties of ethanol will only prolong the shift toward more sustainable solutions. It's essential that the hand hygiene industry embraces alternatives that prioritize both safety and sustainability.

Finally, during the pandemic, Swedish healthcare authorities stockpiled massive quantities of ethanol-based hand rubs for preparedness. These products are now expired and being incinerated, resulting in unnecessary emissions, waste of taxpayer money, and environmental burden from both production and destruction.

It is time to reframe the conversation. Ethanol may be familiar, but familiarity is not the same as safety or sustainability. We urgently need broad innovation in hand hygiene—not status quo defenses of legacy substances.

We encourage the Commission to include ethanol under appropriate hazard classifications and to actively support and incentivize the development of safer, more sustainable, and more effective alternatives. This is not only a matter of compliance—it is a matter of public health resilience and environmental responsibility.

Choosing water-based products rather than ethanol-based alternatives minimizes water usage in production and offers a more sustainable solution. This approach not only reduces environmental impact but also ensures safer and more effective products for consumers. By prioritizing water-based formulations, industries can move toward a greener future while maintaining high standards of hygiene and safety.

Some of the best things in life are water-based, including our brain, which is approximately **75% water**, and our heart, which is about **73% water**. Coffee, one of the most beloved beverages, is about **98% water**.

Similarly, the best hand hygiene solutions should also be water-based, offering a safe, effective, and sustainable alternative to ethanol.

Sincerely,

Anders Karlsson
Chairman BGHR

BGHR (The Swedish Industry Association for Hygiene and Cleaning) is an advisory organization that serves companies within the hygiene and cleaning products sector. Operating in an industry where innovation has been limited, BGHR helps its members share and promote their innovative solutions in compliance with relevant regulations. The association is dedicated to driving progress towards more sustainable and effective practices in the hygiene and cleaning sector, advocating for greater innovation and development in a market that has traditionally seen little change.

References

Letter from A.I.S.E

<https://aise.eu/app/uploads/2024-11-08-A.I.S.E.-letter-on-the-reclassification-of-ethanol.pdf>