

Cleaning Chemicals & Sustainability

BICSc Conference
December 2024



Is Milk a Vegetable?



Evans
Vanodine
EST. 1919

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Is Milk a Vegetable?

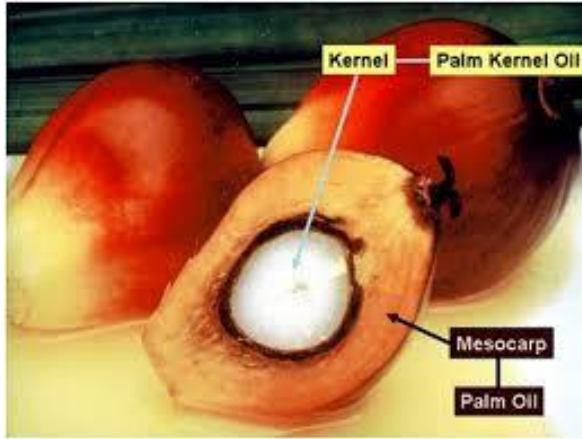


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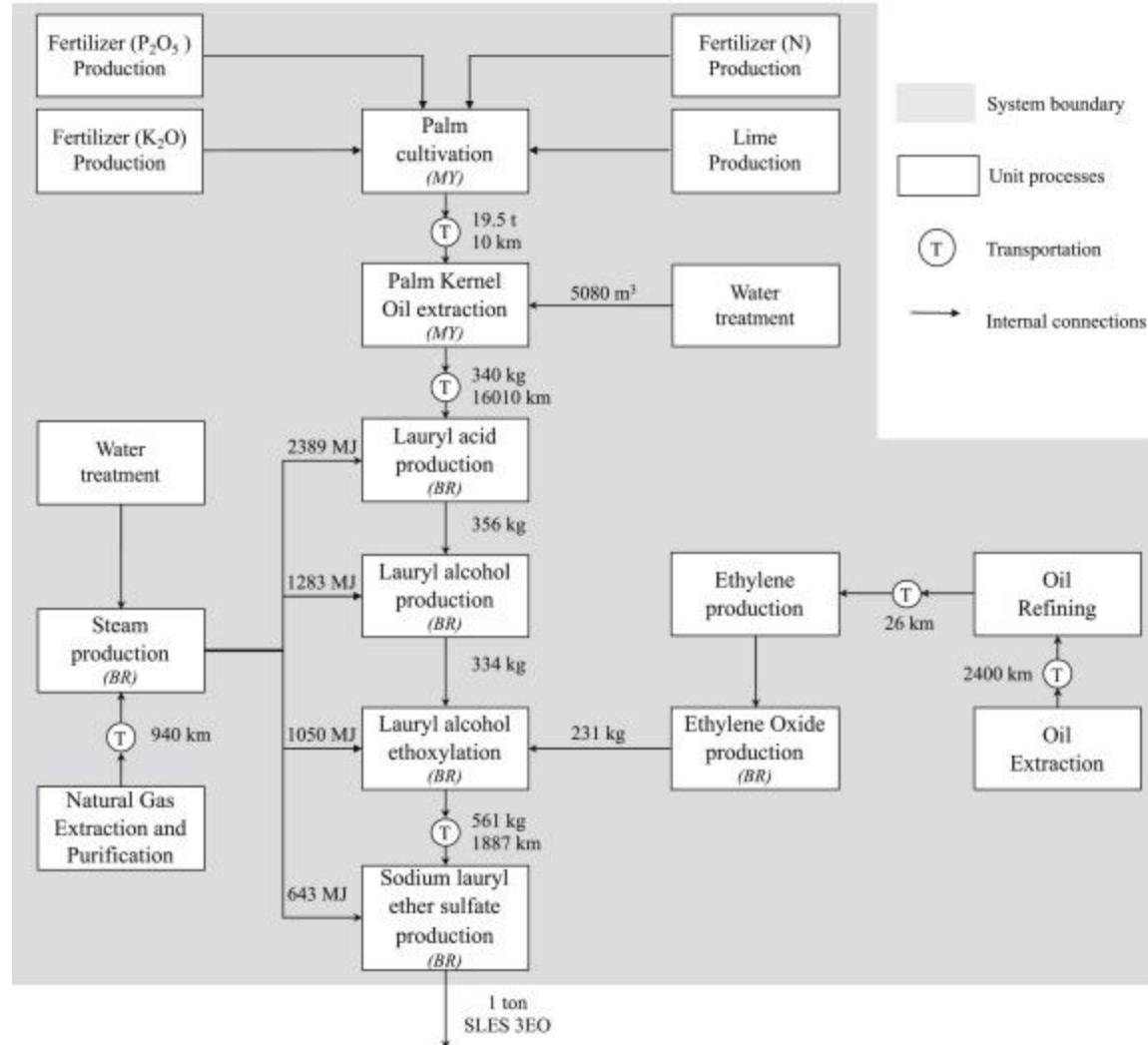
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Natural Ingredients



This is the process to create Sodium Lauryl Ether Sulphate (SLES) which is commonly found throughout the chemical and cosmetics industry where foams are required. E.g. Handwashes, shampoos & washing up liquids.



Natural Ingredients

Naturally Occurring vs Natural Origin / derived

As seen on the previous slide the natural ingredients still have to undergo some form of processing to get the ingredient required.

The type of processing used would deem whether the ingredient can still be defined as naturally occurring or of natural origin.

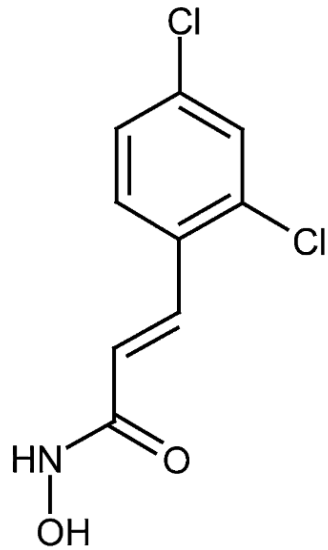
Naturally occurring - Extraction by manual means eg filtration or cold pressing where the chemical is not altered in any way. Squeezing aloe vera plant to obtain the gel.

Natural origins / derived – undergo a process which changes the chemical make up of the ingredient, eg fermentation. Fermenting sugar and oil to produce sophorolipids.

Natural Chemicals are less toxic

This is a common **misconception**.

The toxicity of a chemical depends on the structure and dose - not the origin.



- This is one of the most toxic substances known
- It is natural
- It is produced from bacteria

Clostridium Botulinum –
Causes botulism a lethal form of food poisoning.

In low doses it is more commonly known as:
Botox!

Toxic

Toxic in terms of classification of chemicals can fall under 2 sections, human health and aquatic.



Depicted by the above pictograms and Hazard phrases such as:
H301 – Toxic if swallowed.
H411 – Toxic to aquatic life with long lasting effects.

How do I choose

It isn't easy!

- **Assess** the task at hand, what is the result you are wanting to achieve.
 - Right product = Right result 1st time = Lower impact / higher productivity.
- Look for **data**.
 - Where companies are making claims on their products, they should have data to support. Biocidal – EN test reports, Biodegradability – conditions for.
 - Choose a supplier that offers a partnership where they will freely share this information with you.
- When looking at chemicals is there a concentrated option available.
 - Concentrated products can support a circular economy and have a lower impact.
- Be wary of claims that sound too good to be true.
 - Greenwashing can make things seem better than they are.

Sustainable Cleaning



Right product = Right first-time result = Lower impact / higher productivity

Benefits of Concentrates

- vs Evans standard products



1x 5L e:dose =
83 cases of
6x750ml RTU

Saving 38Kg
plastic

13Kg less
cardboard



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Trigger words

Challenge and fact find why these words are being used and always request the data behind them.



Natural
Eco / Environmentally Friendly
Vegan Friendly
Sustainable

These have no legal meaning – would require 3rd party references & data behind the reasons for using these phrases.

Eco / Environmentally friendly cannot be used on Biocidal Products under Article 69.

Symbols and certifications

What to look for.

There are many symbols and certification schemes noted on cleaning products. Ensure the products / companies have a registered, third-party verified labelling and certifications. Examples of verified and none verified below.



Can you identify the real and fake

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Lifecycle

When assessing products a company should consider the full **Lifecycle** of the product. Also including where the raw materials are coming from.

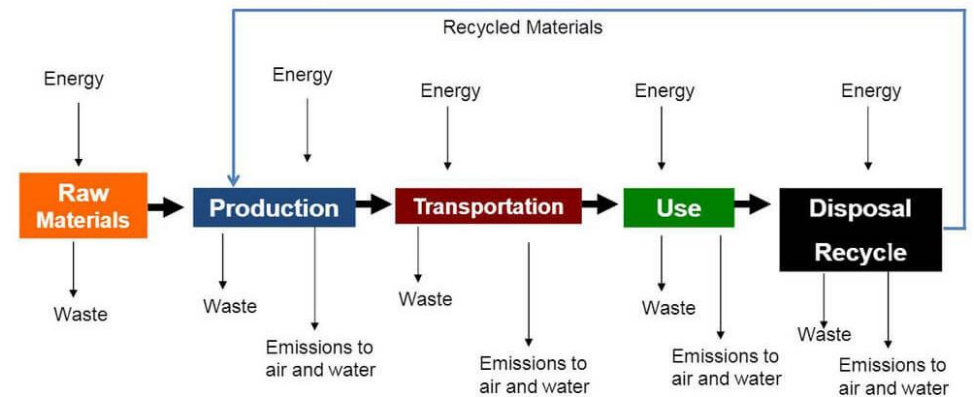
Plant derived vs petrochemical

A study in the Journal of Surfactants and Detergents* found that analysing the fatty acid source of a fatty acid used in alcohol ethoxylate production the carbon emissions were lower for the petrochemical version compared to the palm kernel oil. (petro – 2.97kgCO₂e, palm 5.27kgCO₂e)

Why? – land use change, wastewater treatment from the palm oil mill and end of life treatment for the empty fruit bunches.

Conclusion – don't assume the naturally derived is always better, check lifecycles.

*Comparison of Oleo- vs Petro-Sourcing of Fatty Alcohols via Cradle-to-Gate Life Cycle Assessment
J. Shah



Regulations

BPR

Biocidal Product Regulation requires manufacturers to prove all product claims are accurate.

For each product there are multiple test requirements based on the intended application and market.

The guidance, regulations and test methods are continually evolving to keep pace with new technology.

The aim of enforcement is to ensure the **products placed on the market can be trusted and the companies selling them maintain high levels of integrity.**

The complexity of the regulations is expected to lead to a rise of fraudulent claims.

Buyers need to beware

Extracts from Peter Thistlethwaite CHSA whitepaper

EU Green Claims Directive (impacts)

Legislation from Europe is combating **Greenwashing, enhancing customer trust and promoting sustainability.**

Companies must use **clear, evidence-based** criteria to substantiate environmental claims.

Transparent labelling and **adherence to ISO14024 third party verified labelling claims** (Ecolabel, Green seal) will be allowed. (no unaccredited labelling schemes).

Although EU legislation, it is likely to impact UK business.

CMA Green Claims Code (UK)

Brought in to **deter and highlight Greenwashing** in the UK.

Useful criteria for making accurate green claims on products.

Being familiar with the code will aid in spotting Greenwashing.

The CHSA code of practice includes compliance with this code.



The Future of Sustainable Cleaning



Regulatory Compliance and Sustainability

Adapting to stricter environmental regulations

Stricter and new EN test compliance for existing formulations

BPR will authorise actives used and dossiers of products containing these actives

Shift towards verified eco-label certifications, eg EU Ecolabel, Green Seal

Improved product formulations

Safer, more effective cleaning agents with reduced environmental impact

Incremental improvements in biodegradability and toxicity profiles

Circular Economy in cleaning chemicals

Cleaning products and their containers are designed to be refilled, reuse, recycling

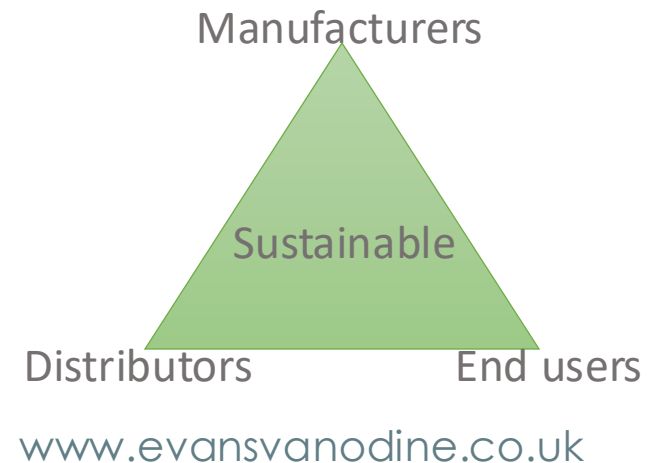
Closed loop systems for chemical recovery

Summary

Sustainable cleaning relies on many aspects:

- Secure **partnerships** with reputable manufacturers who will provide all the information requested and that you can have open and honest conversations with.
- **Training** is essential – training for the users of the products needs to have more emphasis on the correct products to ensure adherence to Health and Safety and efficiencies.
- Stay **informed** and be an intelligent customer, with trade media posts, trade publications, legislations and you supply partner.

Sustainability is a partnership and we all need to work collaboratively.





Thank you

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