eurofins | Softlines & Leather

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TEXTILE, LEATHER, FOOTWEAR AND FASHION ACCESSORIES

Your industry, our focus

"SUSTAINABILITY, TRACEABILITY AND CHEMICAL SAFETY"

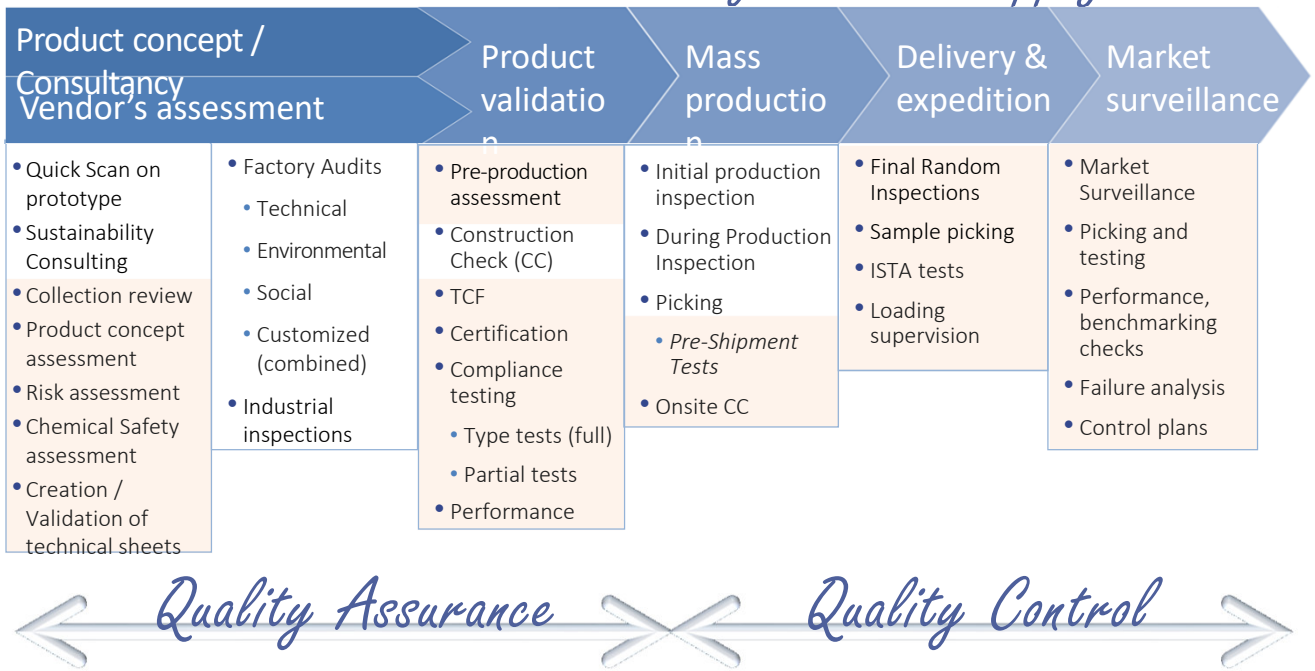
TO FOCUS ON TRACEABILITY AND SUSTAINABILITY WITH CHEMICAL-TESTING ASPECTS

Our Service Scope

Your industry, our focus

Comprehensive Portfolio

Throughout the Supply Chain



Let’s Talk About Sustainability Testing In Focus

Your industry, our focus

- RSL and Chemical Management and Chrome VI
- Non-GMO
- Organic
- Environmental Water Discharge
- Microplastic and Microfiber
- Disintegration and Biodegradability
- Eurofins | Chem-MAP Vegan Verification

VEGAN VERIFICATION FOR FOOTWEAR

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Today's Speaker

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Welcome!

Georgina Mawer
Head of Chem-MAP ® Consulting

Georgina Mawer has been with Eurofins | BLC since June 2012 and is currently Head of Chem-MAP® Consulting. Georgina works with the leather, textiles and synthetic sector in the imposition of robust chemical management systems within their supply chains. Georgina supports brands, manufacturers and chemical companies with compliance programs, due diligence procedures, trouble shooting and technical support on RSL and MRSL listed substances and the accompanying challenges. In addition, Georgina is the Technical Manager for Chem-MAP® Program; a ZDHC approved MRSL verification system where she helps to implement upstream chemical management systems within chemical companies, manufacturers, brands and retailers.

Agenda

Please type questions using the ‘Q&A’ function in zoom. These will be answered at the end of the presentation

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Let’s talk about…

- Defining Veganism
- Supply Chain Challenges
- Verification Methods
- Eurofins | Chem-MAP Vegan Verification
- Q&A

NOT ADVOCATING ONE MATERIAL TYPE OVER ANOTHER

Definitions

What does ‘Vegan’ actuallyy mean?

- The stringency with which veganism is approached varies between individuals meaning that it is difficult to provide a single, universally-accepted definition.
- The extent to which something is *“animal free”*, and whether it uses *“zero animal by-products”*
- Dietary Vs Lifestyle

Statistics

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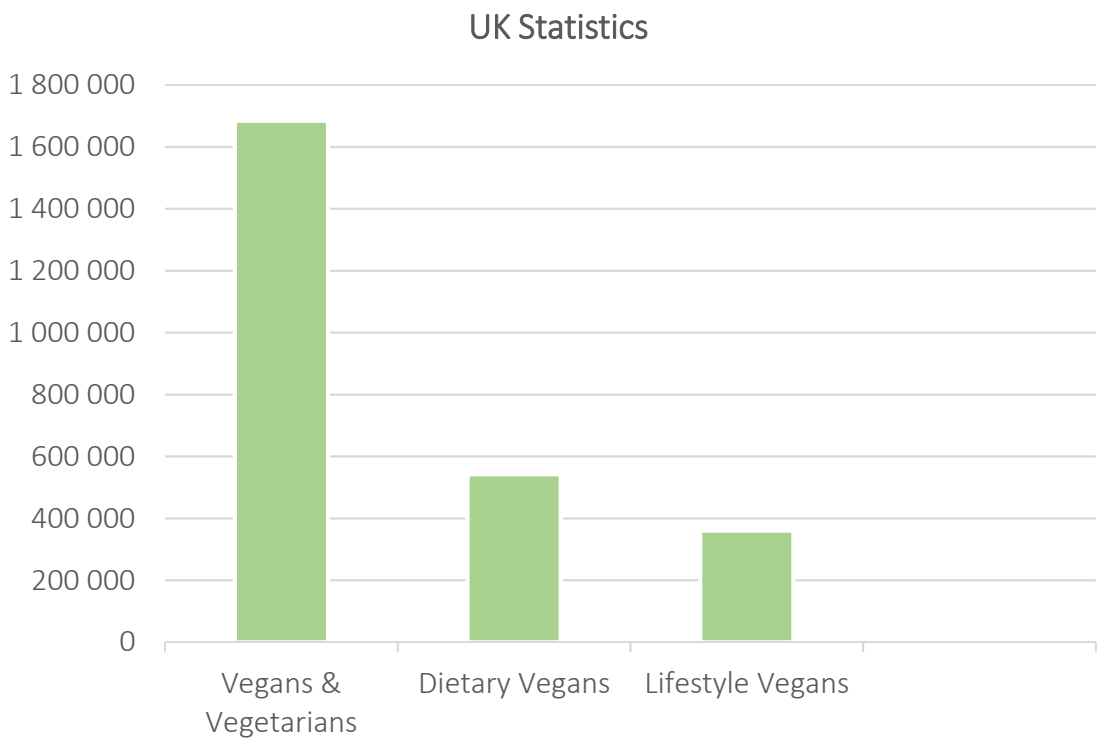
Let's look at some figures…



Statistics

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Let's look at some figures…

- **Spend:** Sales of meat free/vegan items increased by **14%** to **£352.1m** Y.O.Y to Aug '18
- "**Veganuary**": 168,542 people signed up in 2018 of which **84%** were female
- **Conversion**: **68%** of the people who have converted to a vegan diet did so in the **past 5 years**
- **Meat Eaters: ¼** of meat eaters plan to reduce their meat consumption across the next **12 months**
- **68%** of British 18–24-year old's say they either follow or are interested in a **plant-based diet**

The Impact of Social Media

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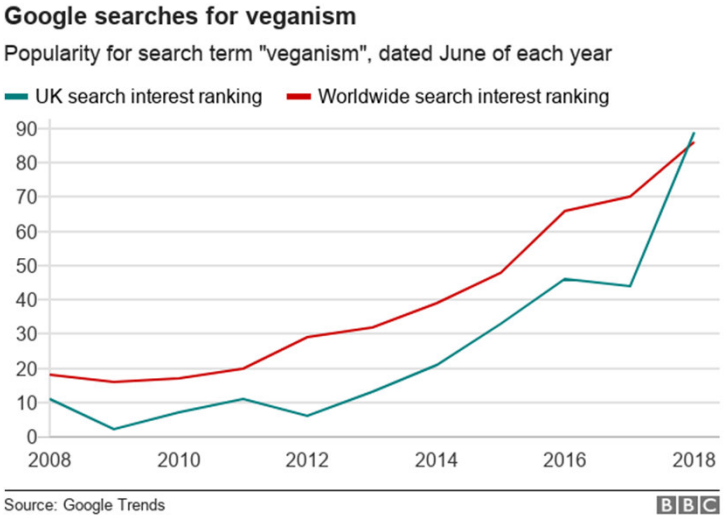
Following the Trend

- Social media has had a big part to play in the rise of the plant-based lifestyle.
- #vegan has more than 61 million posts listed on Instagram.
- The popularity in searching the word "veganism" in Google has increased significantly over 10 years.



Consumer Interest

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What's behind it?

- Impact animal derived materials can have on the environment and potentials
- Animal welfare issues in production
- Equity in performance – these materials often have a Polyurethane (PU) or similar coating
  - Note: Many coated leathers also use PU
- These materials are often called 'Synthetic Leather' or 'Vegan Leather' – debate in the industry over the terminology that can be used
  - Use of the term 'leather' often used to add value to materials
  - Using the term 'vegan' to appeal to certain customers

What are the risky components?

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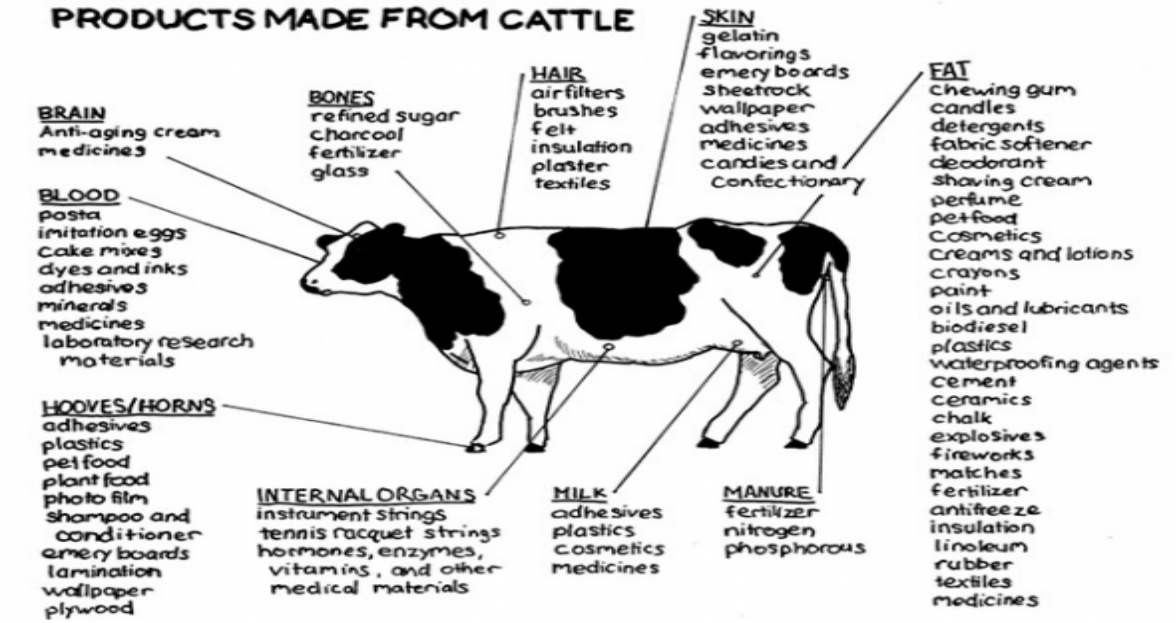
Just one Example!



What are Companies Doing?

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….and to what success?

- Declarations of conformity
  - How are these policed?
  - What about unintentional usage?
- Supply chain policies
  - Important as this establishes expectations
  - Again, consider policing efforts
- SDS checks
  - Does this actually give you the information you need?
- Microscopy
  - Relevant for certain components only
- DNA analysis
  - Finished product? Components? Chemistries?
- Audits
  - To check adherence to above
  - Consider cross contamination

Services

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Vegan Verification

Vegan Verification is an innovative programme that tests chemicals used in the manufacture of materials to establish whether any animal products or by-products have been used.

Vegan Verification helps to specify vegan materials using a phased approach covering:

- Strategy Support & Policy Creation
- Chemical Inventory, Log Creation, Implementation & Review
- Risk Assessment & Onsite Audit
- Animal DNA Analysis
- Microscopy for Animal Fibres FTIR Testing for the presence of animal proteins.
- Declarations of Conformity/Labelling

Process Steps

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Process & Testing to be Undertaken

1. Collect BOM from customer & check for completeness
2. Request additional information where needed (see commonly asked questions document)
3. Collect completed DoC's from all suppliers listed in BOM & check for completeness
4. Define testing plan
5. Undertake testing
6. Issue test reports
7. Issue certification (provided all compliant)
8. Issue Eurofins logo
9. Referral to The Vegan Society and/or BeVEG (if requested by customer)

Test Methods

Testing to be undertaken

The Eurofins | Chem-MAP testing service includes the following (note: all may not be applicable for every product):

1. Testing for the presence of animal DNA using PCR (on chemical formulations)

We like to describe NGS as a trawler net approach as it has the potential pick up all fish, animal, insect, crustacean and mollusc species in a single test - this is particularly useful for composite and highly homogenised samples at risk of adulteration. It is also good option for when there is no targeted test (qPCR) available for a species of concern. Please be aware that speciation methods depend on the ability to first extract plenty of good quality DNA from the sample. This can be affected by sample type and age of sample, as well as sample processing (heat treatments, high salt etc.). Results can also be affected by extraction bias, amplification bias and prevalence of DNA in different species.

Methods - DNA is extracted from the sample. Depending on the target Kingdom (animal, plant, fungi, bacteria) specific genes are selected that are conserved within species but demonstrate variance between species. These target sections of DNA are amplified using PCR and "barcoded" with unique labels that identify that section of DNA to the original sample. These barcoded target sequences are then loaded onto the sequencing instrument, here they are washed over a flowcell that contains a lawn of primers to which the sequences can adhere. Once attached the DNA target is amplified to form small clusters of the same sequence. Each addition of a new nucleotide emits a unique fluorescent signal which is recorded and used to determine each targets unique sequence. The strands within the clusters are flipped and re-sequenced to allow the reverse read to also be determined. Samples are always run in duplicate which provides huge volumes of data (usually >40,000 reads per sample). Firstly, partial or poor-quality reads are excluded, the remaining sequences are then compared to reference databases. In most cases we are able to identify the DNA to a species. In closely related species discrimination is not always possible - in this instance the results are reported to genus level. Only species detected in both replicates are reported. To report results the reads obtained must meet acceptability criteria on read numbers to enable us to report a LOD of 0.5%. Where multiple species have been reported these are reported in descending order of the number of reads assigned to the species.

Test Methods

Testing to be undertaken

The Eurofins | Chem-MAP testing service includes the following (note: all may not be applicable for every product):

2. Testing for the presence of animal fibres using microscopy (on textiles)

   The microscopic test is a technical test that involves identifying the fabric with the help of a microscope with a magnification of minimum 100 power. The test can easily distinguish between fibres. The test identifies the natural fibres more easily as compared to man-made ones.

3. Testing for the presence of animal proteins using FTIR (on polymers)

   FTIR can be used to study proteins to gain molecular and conformational information

Vegan Verification Mark & Branding

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Vegan Verification Mark

Colour Verification Mark

Green | Single Colour Mark

Black | Single Colour Mark

Trademark Partnerships

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Trademark Partnerships

The Eurofins | Chem-MAP Vegan Verification Testing Programme has been successfully registered with the Vegan Society. This means that upon successful completion of testing, clients can qualify for use of the Vegan Society Trademark on their product and/or promotional material.

In addition, the Eurofins | Chem-MAP Vegan Verification Testing Programme has been approved and listed with US based company BeVeg, an ISO accredited vegan certification standard.

So, ask yourselves – how confident are you that your footwear is vegan?

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Question Time

Any Questions?

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