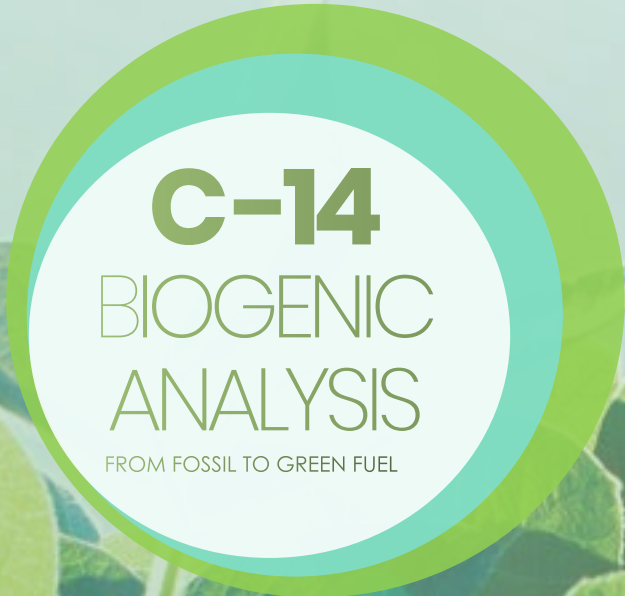


SHAPING A WORLD OF TRUST

BUREAU VERITAS
COMMODITIES
THE NETHERLANDS



C-14
BIOGENIC
ANALYSIS
FROM FOSSIL TO GREEN FUEL



BUREAU
VERITAS

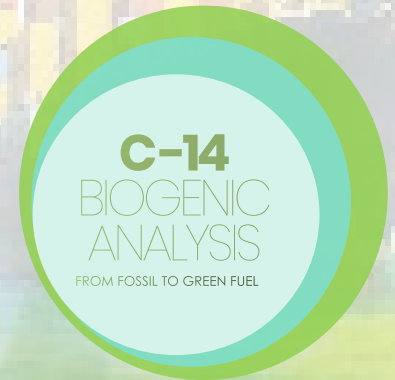


FRONT-RUNNING THE ENERGY TRANSITION & ENVIRONMENTAL REGULATION

Bureau Veritas presents an innovative testing service to support the OIL & PETROCHEMICAL and AGRI industries through their energy transition processes.

The C-14 biogenic analysis raises a great importance not only on compliance aspects, but this fosters extraordinary business opportunities for companies seeking the portfolio diversification, by incorporating organic raw materials into their commodity products.

The C-14 TIC service is a key asset to society, especially in the current scenario where the consumption of bio-based products is growing. This is part of our green line of services & solutions, where we empower organizations - both private and public - to implement, measure and achieve their sustainability objectives.



BUSINESS CHALLENGE

The Dutch Emission Authority (NEA) requires the C-14 biogenic analysis

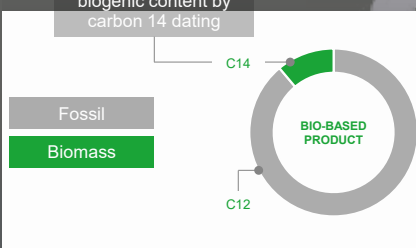
NEA legislation in place



OCT 1st, 2021

Bureau Veritas CLIENTS in compliance with NEA Regulation

Determination of biogenic content by carbon 14 dating



COMPLIANCE REQUIREMENTS



This framework applies not only to HVO, but to all biofuels that can only be distinguished as biogenic from their fossil counterparts by means of a C14 analysis



Pre-requisite for sampling and performing a lab test is accredited under ISO17025 by the RvA or by another national accreditation body



A test must have been conducted in the supply chain to determine whether 1) the fuel contains HVO and 2) and how much FAME is present in the fuel. It is important to determine the FAME volume content by EN 14078 to prevent FAME presence being assumed to be HVO

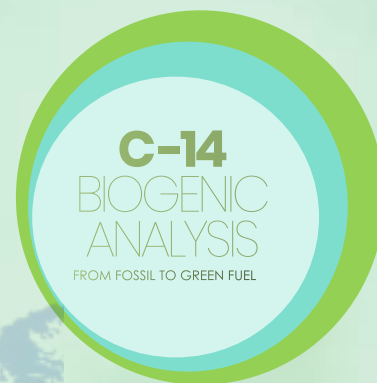


The control tolerance is 3% of the expected value for blends of 25% and above. For blends <25%, the control tolerance is 1%. If the outcome with LSC methodology is outside the control tolerances of the expected value, a test must be performed using the AMS method.

Source: NEA

This trends is likely to be followed by other public authorities

FOCUSED ON OUR CLIENTS, DRIVEN BY SOCIETY



New Capability at BV



Liquid Scintillation Counter (LSC)

ISO 17025 standard

Method ASTM D6866 A&C / EN 16640 A / DIN 51637

Amount of sample needed: 100 ml

Delivering time: 1 working day



BY 2030 (DIRECTIVE (EU) 2018/2001)

32%

of the energy produced in Europe must come from renewable (L 328/83 (11)).

14%

of the fuel supplied in Europe must come from renewable energy (art 25)

365/24/7

BUREAU VERITAS
C-14 BIOGENIC ANALYSIS

Under the ISO 17025, and following the methods ASTM D6866-21 (LSC)/En and 16640:2017 (Method A)/Din 51637 **together with our expertise**, our state-of-the-art laboratory in Amsterdam is supporting our clients 365/24/7.

SOME PRODUCTS TESTED

HVO
Sustainable Aviation Fuel
Bio ETBE
Bio Ethanol
Bio Naphtha
Bio Methanol,
Perfume and more



From our locations in Rotterdam and Amsterdam we are strategically positioned within the gateway to Europe to serve our clients in various commodity markets. Our client coordinators, analysts and surveyors are highly trained in their respective markets and all work closely together to serve our clients in the most proactive, accurate and professional manner. We invest in latest technology, the green economy and digitalization. This makes us a recognized, independent and trusted partner to commercial organisations, governments and society.

Marijke Paalvast
Vice President

Bureau Veritas Commodities
North West Europe



A BUSINESS TO BUSINESS TO SOCIETY COMPANY,
CONTRIBUTING TO TRANSFORMING THE WORLD WE LIVE IN



SUPPORTING COMPANIES TO BECOME CLIMATE NEUTRAL

WANT TO KNOW MORE?



Nicole van Klaveren | Director, Sales & Business
Development North West Europe
T: +31 (0) 6 23 22 78 19
E: nicole.vanklaveren@bureauveritas.com

(Please zoom in
and take a picture
with your mobile)



Dana White | Sales Manager Biofuels and Vegoils
North West Europe
T: +31 (0) 6 34 32 85 91
E: d.white@bureauveritas.com

(Please zoom in
and take a picture
with your mobile)



**BUREAU
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LINE**