



Verifying Bio-based content of materials

Comparing apples with apples through Standardization and Certification

All informations are available on www.okbiobased.be

Content

1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization



Content

1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization



Vinçotte in a few words

- Vinçotte is a Belgian - not for profit – organisation which was established more than 120 years ago.
- 2000 employees worldwide including about 1600 engineers and technicians.
- Services: certification, inspection and testing
- Fields: quality, safety and environment
- Complete independence and neutrality.



Vinçotte in a few words

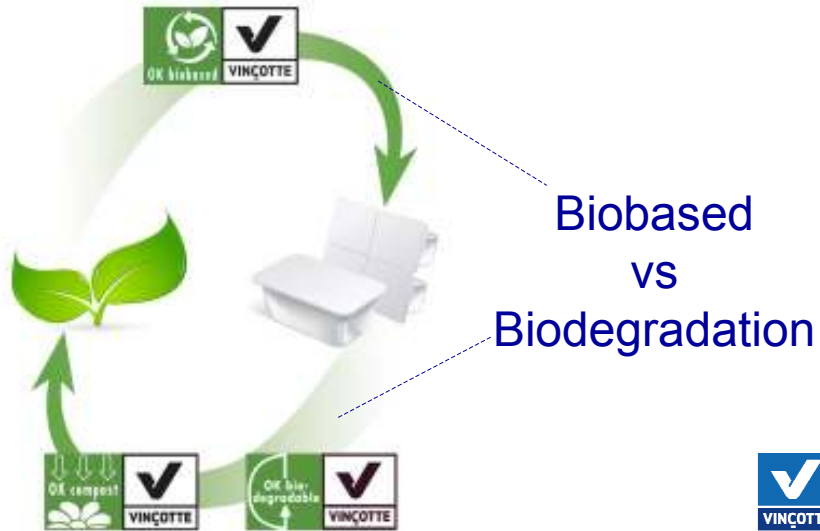


Content

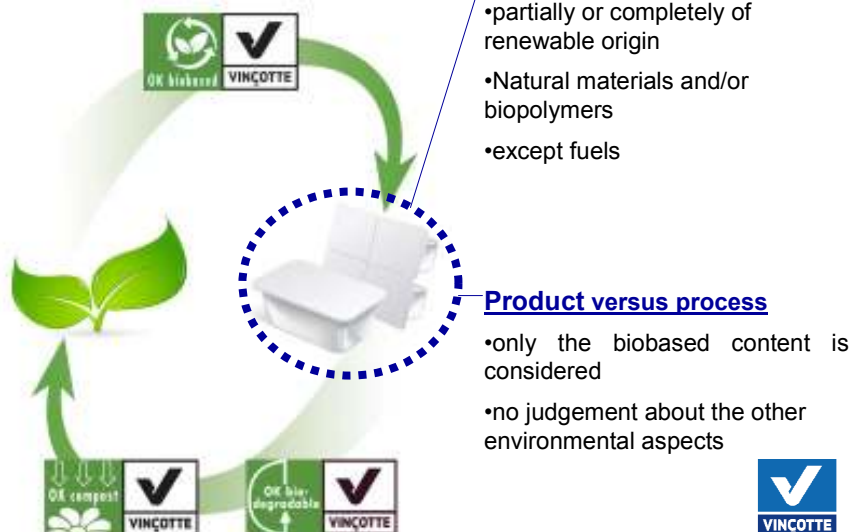
1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization



Delineation:



Delineation:



Content

1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization

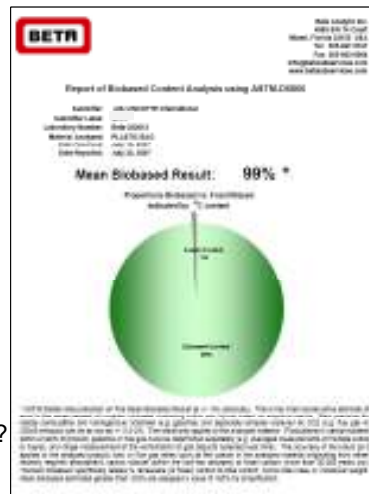


Self claim or Certificate

Measurement & Report ?

Yes, but :

- Method of measurement & accuracy ?
- Terminology ?
- Competence of the lab ?
- Accuracy of the claim ?
- Traceability ?
- Raw material vs finished products ?
- Converters, additives, inks, ...
- Market monitoring ?
- Independence and neutrality (of the claim)?
- Communication to the end-user ?

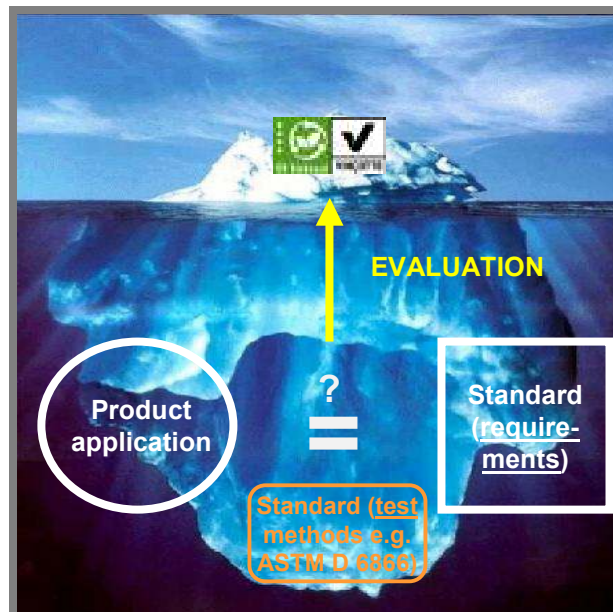


Content

1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Standard/Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization



Standard/Norm vs Certificate

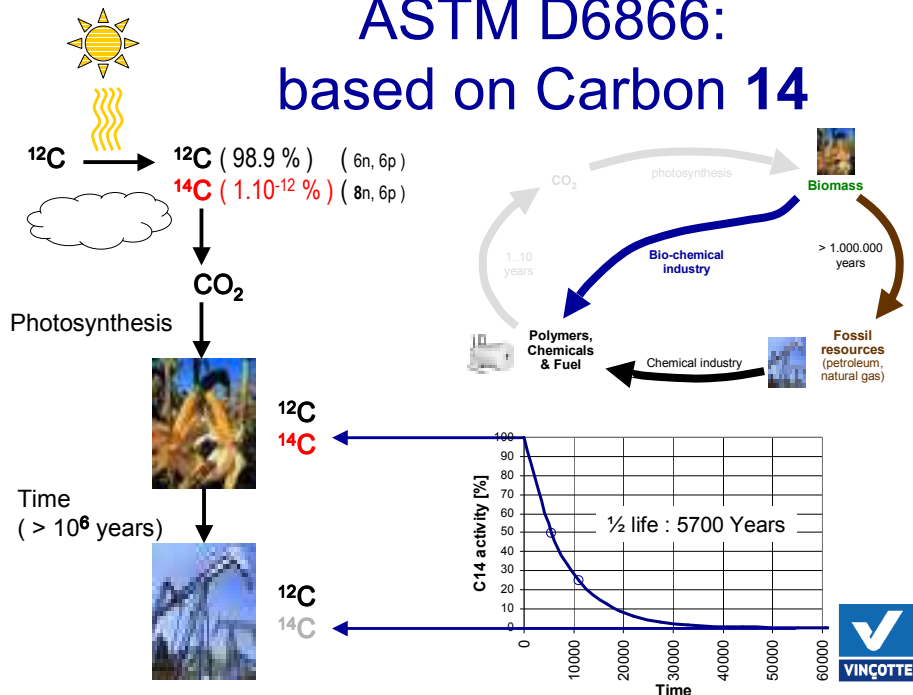


Content

1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization



ASTM D6866: based on Carbon 14



ASTM 6866: 3 Measurement methods

A Liquid Scintillation Counting (LSC) radiocarbon (^{14}C).
This test method is based on LSC analysis of CO_2 cocktails after collecting the CO_2 in a suitable absorbing solution.

B Accelerator Mass Spectrometry (AMS) and Isotope Ratio Mass Spectrometry (IRMS).
Sample preparation methods are identical to Method A. Rather than LSC analysis, the sample CO_2 remains within the vacuum manifold and is distilled, quantified in a calibrated volume, transferred to a quartz tube, torch sealed.

C Liquid Scintillation Counting (LSC).
Whereas Method A uses LSC analysis of CO_2 cocktails, Method C uses LSC analysis of sample carbon that has been converted to benzene.



IAA-AMS 3MV Tandem Accelerator

Content

1. [Vincotte](#) in a few words
2. [Delineation](#) of the topic
3. [Self claim](#) or [certificate](#)?
4. [Norm](#) vs [certificate](#)?
5. [ASTM D6866](#) & [C14](#) method
6. [OK biobased](#) certification
7. [Evolution](#) of [standardization](#)



OK biobased: Scope & Requirements

- **METHOD**

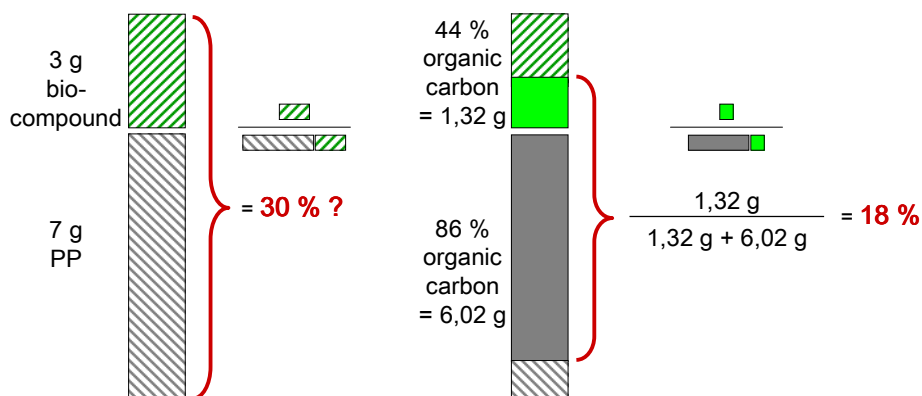
- 3 Measurements of the biobased (carbon) content according to ASTM D6866
- 3 Measurement of the organic (carbon) fraction

- **REQUIREMENTS**

- **Organic carbon fraction :** $\geq 30\%$ **of the product to certify**
- **Biobased carbon content :** $\geq 20\%$ **of the product to certify**



OK biobased: based on **Carbon**

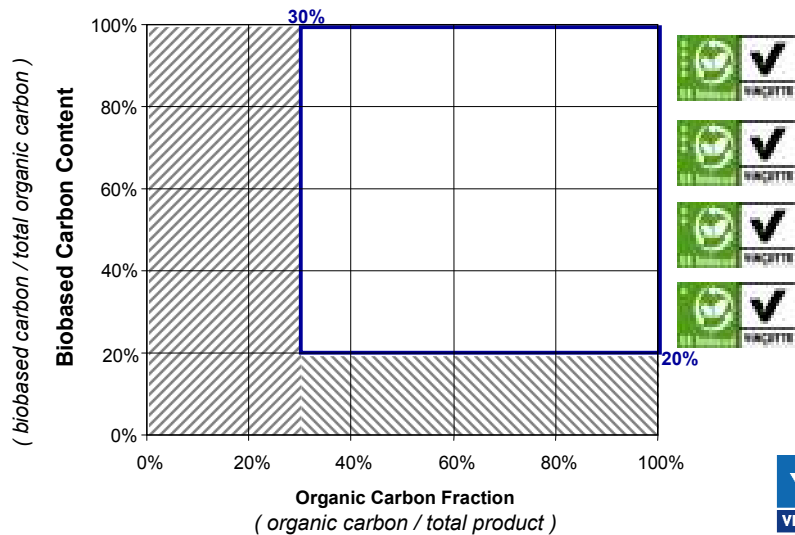


Based on **statements**

Based on **measurements**



OK biobased: the **star** system



Content

1. Vinçotte in a few words
2. Delineation of the topic
3. Self claim or certificate?
4. Norm vs certificate?
5. ASTM D6866 & C14 method
6. OK biobased certification
7. Evolution of standardization



Evolution of standardization

- Currently published:

<i>Requirements</i>	<i>Methodology</i>	<i>Claims</i>
/	ASTM D 6866 (C14 Method)	/

- In process:

<i>Requirements</i>	<i>Analysis Methods</i>	<i>Claims</i>
/	•CEN/TS 16137 (C14 Method) •ISO/CD/16620	•CEN “Declaration of the bio-based carbon content” •CEN “Environmental declaration”



Contact

Petra MICHIELS
Luc TORDEUR
Claude WEI
Philippe DEWOLFS

okbiobased@vincotte.be

VINCOTTE
Leuvensesteenweg 248
B-1800 Vilvoorde
BELGIUM

www.okbiobased.be

T +32 (0)2 674 57 50
F +32 (0)2 674 57 85



Thanks

