BELIZE CERTIFICATION SCHEME

FOR BIODEGRADABLE PRODUCTS

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0 FOREWORD

a) The development of biodegradable materials is a key concern for the future and has the potential to reduce the carbon footprint.

b) This certification scheme is based on third party certification which forms the basis for suppliers, importers and manufacturers of biodegradable materials and products for commercial sale to register products in Belize using independent testing laboratories. The aim is to create consumer confidence, by proving that an independent, neutral and competent body has carefully examined and assessed the product based on the test criteria (limited to biobased content for the interim). Third-party monitoring ensures that quality checks conducted on the product is maintained which gives added value to the customer in making informed purchases.

c) Biodegradable products shall meet the requirements according to the procedures described in this certification scheme before application for permits.

d) This certification scheme and the associated certification mark enable manufactures to demonstrate the usage of renewable raw materials in the manufacture of their product throughout the supply chain.

e) Manufacturers of biodegradable products can have their products certified based on this certification scheme to demonstrate the usage of renewable raw materials in the manufacture of their product throughout the supply chain.

f) This scheme is partly based on definitions and policy decision due to the fact that standardization of biodegradable plastics is currently still being developed, this certification scheme and its requirements form the basis for the qualitative certification and may be amended upon the establishment of relevant standards for biodegradable materials and products.

1 SCOPE

1.1 This scheme forms an objective method for determining solely the biobased content of raw materials, intermediates, additives and finished products, and labelling to communicate this value to end-users.

1.2 All products (partially or completely) made of materials and/or polymers of natural origin are eligible for this certification scheme.

1.3 This scheme is not applicable to:

a) environmental aspects such as energy use;
b) end-of-life treatment;
c) water use;
d) content of hazardous substances;
e) grading requirements

OTE: the above exclusions may be addressed when the relevant standards are established.

2 NORMATIVE REFERENCES

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2.1 Determination of biobased content

a) ASTM D6866: Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis"

b) ISO 16620: Plastics - Biobased content - Part 2: Determination of biobased carbon content

2.2 Sampling

a) ASTM D7026: Standard guide for Sampling and Reporting Results for Determination of Biobased Content of Materials via Carbon Isotope Analysis

2.3 Food Grade Requirements

a) United States Food and Drug Administration: FDA 21 CFR 177.1520 and 21 CFR 175.300.

b) European Union: Food Contact Materials - Regulation (EC) 1935/2004.

NOTE: Other references may include CEN/TS 16295: Plastics - Declaration of the bio-based carbon content; CEN/TS 16137: Plastics – Determination of biobased carbon content; and DIN SPEC 91236: Plastics - Determination of bio-based carbon content

3 TERMS AND DEFINITIONS

For the purpose of this scheme the following definitions apply:

a) **Finished product** means a product resulting from the transformation and/or the assembly of raw materials and/or intermediate materials and/or semi-finished products, destined for the end user. A component is not considered as a finished product. In case of packaging products, the primary packaging is considered as the finished product.

b) **Materials of natural origin** means chemically unmodified materials of natural origin, such as starch, pulp, among others.

c) **Unit** means the basic material, intermediate or finished product that is presented to be certified.

d) **Packaging** means material that is used to protect or contain a product during transport, storage, marketing or use.

e) **Biobased materials** consist of non-fossil organic compounds. Those may be natural (e. g. cellulose) or synthetic (e. g. polylactide acid).

f) **Additive** means materials which are added during the production process in order to achieve respective properties. Additives can be adhesives, printing inks, anti-blocking agent or similar.

g) **Biobased products** consist partially or completely of biobased raw materials. They can also contain additives, inorganic fillers or organic fossil compounds.

h) **Defect** an imperfection or abnormality that impairs quality, function, or utility.

4 APPLICATION FOR REGISTRATION

4.1 Basic Requirement

The Unit must have a biobased carbon content (BCC) of at least 50% (expressed as proportion of the TOC)

4.2 Required Documents

Documents to be supplied for the identification and characterisation of the product include(s):

a) name and address of the supplier, importer or manufacturer;
b) name and address of the applicant (if this differs from the manufacturer or supplier);
c) name of the product (trade name as well, if applicable);
d) product description: product type;

e) sample of the product

f) material composition (dry and/or reference mass concentrations in percentages and identifications of all constituents and components;

NOTE 1: including all additives such as e.g. printing inks, colorants, processing agents, fillers,…

NOTE 2: this identification can be in the form of the CAS number, Safety Data Sheet or the name of the supplier and reference code/name of the material by supplier.

g) colour(s) of the material;
h) for finished and/or semi-finished products: dimensions;
i) description of batching system;
j) test standard with issue date;
k) type of testing;
l) test date;
m) up-to-date test results;
n) test report issue date;
o) name and signature of the person responsible for the test;
p) other relevant specifications - Production site(s)

4.3 Available and relevant test reports

a) Certification in the context of this certification scheme comprises the conformity evaluation of biobased products by the DOE based on test reports that have been issued by testing laboratories recognized by DOE. This involves confirming that the products to be certified conform to the requirements in section 4.1 as well as subsequent monitoring as per section 5.

b) Acceptance of test reports through a registered laboratory or a recognised organisation:
   - Registered laboratory: an independent third party laboratory that is officially approved by BBS/DOE to perform the biobased content analysis.
   - Recognised organisation: organisation that is officially approved to manage the correct sending and tracing of samples to the laboratory.

c) Reports from registered laboratories can be accepted.

d) Reports from independent laboratories that are not officially registered by BBS/DOE for determination of the biobased content, but are either accredited according to ISO 17025 for the specific biobased content analysis, recognised for Good Laboratory Practices (GLP) or recognised by a similar certification

body, can be accepted after a positive detailed evaluation of all the requirements of the relevant test standard.

e) The use of certified components and/or constituents (raw materials, inks, colorants, master batches or additives) does not automatically imply the conformity of the finished product. Any modification of a certified raw material, certified intermediate or certified finished product that is not described in the product description of the certification report must be notified to the DOE and may require a new evaluation.

f) In case the test report from a registered laboratory, is over 3 years old, the report can be accepted for evaluation only according to the following two conditions:

- a sample from the archives of the laboratory has to be sent and an appropriate identification method (e.g. FTIR analysis) demonstrates that this sample is completely consistent with the sample submitted in the framework of the certification process.

- the applicant has to provide a statement that the tested sample is completely consistent with the sample submitted in the framework of the certification process

g) The determination of BCC has to meet all the following requirements:
- the analysis report shall not be over 3 years old at the time of application; and
- the analysis shall be performed by a registered laboratory;

5 TESTING

5.1 Testing consists of sampling the respective product from the production or from the importation, distribution, or retail sales, and analysis to be conducted in a recognized laboratory registerd by DOE/BBS. The test result will be recorded in a test report. Parts of one product unit shall be tested separately. The type and scope of the test is limited to the determination of biobased content, for the interim.

5.2 Testing for determining the proportion of biobased carbon content is performed in accordance with section 4.3. The result is given in percentage, based on the total organic carbon content of the product.

5.3 The results are assessed by BBS with advisory provided to the DOE. Verification testing comprises the following:

- Testing marking of the product with an associated registration number
- Determination of the biobased carbon content

- Testing whether the information given during initial certification still conforms to the product (dimensions, ingredients, …)

  NOTE: The resulting costs are charged to the registration/permit holder once the verification tests are completed.

5.4 If the product is produced on multiple production sites the following rules apply:

- Verification testing is performed on products of all production sites
- Samples shall be labelled with the respective production site
- Verification testing of production sites is performed together with the verification testing of the main certificate.

5.5 A supplementary test shall take place if additions, extensions or modifications are made to the certified/registered biodegradable product, which may influence the products' conformity with the pertinent, fundamental requirements.

5.6 A special test is conducted if:

- defects are detected;
- the production has been suspended for a period of more than 6 months;
- required by DOE with reasons to be specified
- requested in written form by a third party if a particular interest in the maintenance of proper conduct of market procedures in relation to competition or quality is involved.

NOTE: If defects are found during a special test, the registration holder must bear the costs of the special testing procedure. If no defects are detected during special testing that has been carried out at the request of a third party, the costs will be charged to the third party in question.

5.7 The samples used for initial and verification testing are usually provided to the testing laboratory by the competent authority. The manufacturer, supplier or importer bears the associated costs. The number of samples required for product testing is agreed between the DOE and the testing laboratory unless it is already specified in the applicable test standards.

5.8 The testing laboratory informs the client of the result of the tests by issuing a test report. The original copy of the test report must be provided to DOE/BBS and must generally have been issued within six months of the application being submitted. In individual cases, however, older test reports can be recognized if the testing laboratory confirms in writing the validity of the details in the test report.

6 CLASSIFICATION AND GRADING

There is no classification or grading requirements being established for the interim; there is only the establishment of a minimum parameter with respect to the biobased carbon content (BCC).

7 PACKAGING AND LABELLING

a) The percentage of the biobased carbon content and organic carbon content shall be featured on the certificate. The percentage of the biobased carbon content may be featured on the product if and only if that product is registered.

b) Commercial or other declarations may not mislead the final consumer. More specifically, the declarations about the use of a certified component or constituent may not give the end user the impression that the finished product is certified and complies with this scheme. The use of conformity marks (logo) are allowed on certified packaging when the packed product is certified. In this case it must be clearly shown near the logo that the logo on the packaging applies only to the packed product, not the packaging. The use of the logo for marketing purposes is allowed only in flyers, information papers, technical sheets or equivalent documents or on websites. The use of the logo on promotional tangible goods (such as bags, ball points, boxes, …) is not allowed if they are not officially certified.

8 VALIDITY AND RENEWAL OF CERTIFICATE/NOTIFICATION OF REGISTRATION

a) The certificates and notifications of registration are valid for 5 years. The period of validity is shown on the certificate. On expiry of the certificate, the registration also expires.

b) If the certification is to continue beyond the expiry date shown on the certificate, an up-todate, positive test report and an application for renewal must be submitted in good time to the DOE. Proof of conformity with the requirements of the test and certification specifications according to section 4 shall be provided within the scope of an initial test according to section 4.1.

c) In the event that the new standard conformity examination has not been completed before expiry of the validity period, the registration number expires without the necessity for explicit notification from DOE.

d) The registration holder is obliged to promptly notify the DOE of any alterations to the product. The DOE shall decide on the scope of an examination that shall be conducted according to section 5 and whether it is a matter of a substantial alteration. The respective testing report shall be forwarded to the DOE by the test laboratory. Should DOE determine a substantial alteration, the corresponding registration number shall

expire. For the modified product, a new application for initial registration or an application for amendment requiring new registration shall be submitted. The registration holder remains obliged to notify of any changes in the formal details (e.g. contact details). The certificate holder may apply to DOE for an extension of the existing certificate for further design-types of a product family. It is for DOE to decide whether these amendments require an examination. The design-types shall be entered in the certificate for the already certified product and, provided that the conditions are fulfilled, shall be regarded as an integral part of same.

e) In case the test standards are changed, DOE decides whether it is necessary to change the certification scheme and specifies a deadline by which the respective requirements are to be implemented.

9 TESTING METHODS

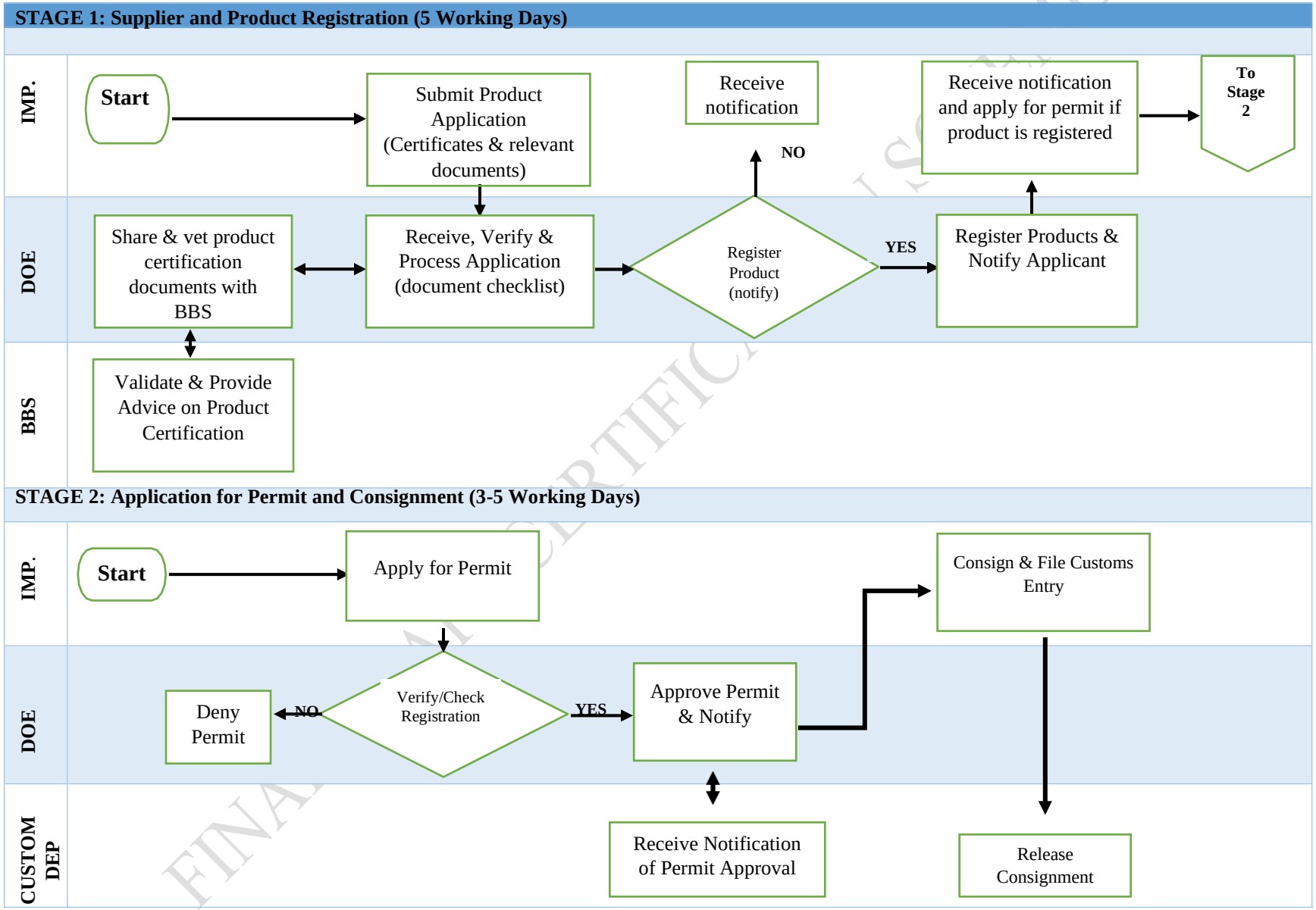
9.1 According to ASTM D 6866 Method B: Accelerator Mass Spectrometry (AMS). Method C: Liquid-Scintillation Counter, LSC; „Benzene-Method“

9.2 According to ISO 16620 – Part 2 Method A: Liquid-Scintillation Counter (LSC); Method B: Beta-Ionization (BI); Method C: Accelerator Mass Spectrometry (AMS).

10 **Exclusion Table**

Exclusion Table
• **Oxo-degradable**

Annex 1: Third Party Certification Process Flow for Imports/Local Production of Biodegradable Products



Annex 2: Checklist for Ensuring Adequate Submission of Documentation

Section/topic	#	Document & Description	Checklist (yes √, no X)
GENERAL INFORMATION			
Title		Name & address of Supplier/Manufacturer declared	
PRODUCT INFORMATION			
Product Overview		Product identification and characteristics.	
CERTIFICATION			
Biobased content		Received approval for obtaining results from the intended laboratory	
Food Safety		Material Safety Data Sheet	
METHODS			
Test Methods		Use of recognized test methods.	
Food Grade		Use of recognized food grade inputs and packaging mterials.	