# Global Artisan C-Sink – Clarification for Endorsement of laboratories

## Preamble

Laboratories seeking approval to conduct analyses for certification purposes must undergo a quality control process. The quality and reliability of the analyses performed by a laboratory are validated through participation in a laboratory approval process organized by an external and independent quality assurance organization. DCC Delta Coal Control GmbH, based in Herten, Germany, is our partner for laboratory approval procedures.

### Aim of the document

This document aims to provide a clear understanding of the steps involved and the requirements needed to obtain the endorsement as laboratory for the Global Artisan C-Sink standard by Carbon Standards International.

The endorsement is valid for Global Artisan C-Sink standard and for 1 year. To obtain re-endorsement each year, the ring trial must be repeated.

## 1. Endorsement process

| Step | Description | Responsible party |
|---|---|---|
| 1 | Laboratory reaches out to Carbon Standards International (CSI) for an introduction call. | Laboratory |
| 2 | The Laboratory registers for the endorsement process. Registration can be done through this link. With this step the annual CSI fee will be invoiced. | CSI / Laboratory |
| 3 | The laboratory registers at Delta Coal Control. | Laboratory |
| 4 | Delta Coal Control will send a standardized sample to the "applicant" laboratory with the request to perform an analysis required for certification using the testing methods specified in the applicable standard. | Delta Coal Control |
| 5 | The laboratory will analysis the samples and send the results to DCC. | Laboratory |
| 6 | The laboratory hands in the laboratory accreditation confirmation, e.g. ISO 17025, to CSI, the signed three-party agreement and the final results of the ring trial from DCC. | Laboratory |
| 7 | Upon successful completion, the laboratory will receive a certificate designating them as an "Endorsed Laboratory". The laboratory will be listed on the website of CSI. After the audit the costs for the endorsement process will be invoiced.<br>If the endorsement is not successful, the laboratory has the chance to improve their processes and start the endorsement process again.<br>The costs for the endorsement will be invoiced in any case. | CSI |

## 2. General requirements

In the following table, general requirements of Carbon Standards International for Laboratories under Global Artisan C-Sink are listed. Those aspects are additional to the specific requirements of the Global Artisan C-Sink standard.

| Requirement | Description |
|---|---|
| Analysis parameters | C, H/C, ash, pH, and water holding capacity<br>DCC Delta Coal Control GmbH will provide a detailed description about the parameters and the analytical methods. |
| Margin of error | The analysed parameters must not exceed a "**zu-score of +/- 2"** for each respective biochar. For the endorsement all analyses must pass. |
| Results sharing | The laboratory is required to share any analytical reports of a biochar sample for Global Artisan C-Sink assessment with CSI. |
| Ring trial | The ring trial must be conducted annually.<br>Upon successful completion, the endorsement will be renewed. |

## 3. Analysis requirements

The analysis parameters need to be presented in accordance with the specified criteria outlined below:

| Requirement | Description |
|---|---|
| File format | The analysis must be provided as a PDF report.<br>Additionally, it must be provided as an XML document. |
| Naming | All Parameters must be named according to the table in chapter 4.<br>The wet basis must be called "as received", the dry basis must be called "dry basis". Shortcuts are allowed. |
| Analysis Packages | The laboratory must offer full packages named as follows:<br>• Artisan Basic package<br>• Artisan Pro Retention sample package |

## 4. Analysis packages

This chapter outlines the various packages that an endorsed laboratory should provide to its Biochar clients. It details the terminology and units associated with the parameters

### 4.1 Artisan Basic package

This package provides the general minimum analysis recommended for biochar intended for Artisan C-Sink Farmers/Networks or for biochar processors within C-Sink Cooks/Villages.

Analytical requirements are mentioned in Annex 1 of the EBC-Guidelines

| Parameter | Unit |
|---|---|
| $C_{org}$ | % (w/w) |
| H | % (w/w) |
| $H/C_{org}$ | - |
| ash at 550°C (inkl. Si) | % (w/w) |
| pH content | - |
| Water hoding Capactiy (WHC) | % |

### 4.2 Artisan Pro retention sample package

This package includes the analysis required for each feedstock and Artisan Pro, which entails analyzing a biochar sample from the retention samples collected.

Analytical requirements are mentioned in Annex 1 of the EBC-Guidelines

| Parameter | Unit |
|---|---|
| $C_{org}$ | % (w/w) |
| H | % (w/w) |
| $H/C_{org}$ | - |
| ash at 550°C (inkl. Si) | % (w/w) |
| pH content | - |
| Water hoding Capactiy (WHC) | % |