bluesign® CRITERIA for production sites

ANNEX: Down and feathers processing

Version 3.0 | 2020-03

Contents

1 Scope

Comprehensive requirements for companies with production sites are determined in the bluesign® CRITERIA for production sites.

The document at hand defines additional provisions for final product manufacturers processing already pre-washed and sterilized down and feathers. Processing steps may include amongst others washing, drying, sorting, blending and packaging of down and feathers.

Poultry processing and slaughterhouses are outside the scope of this document.

2 Definitions

For a comprehensive list of terms and abbreviations, please refer to the document *bluesign® glossary*.

3 Industry specific requirements

3.1 Product Stewardship

3.1.1 Input stream management

For the supplied down and feathers, a manufacturer shall ensure that the BSSL limits (consumer safety limits) are met. This shall be achieved by appropriate input stream management, including:

- Technical purchasing specifications
- Supplier selection and evaluation
- Input control and testing

In particular a manufacturer shall ensure that the following information from the supplier of pre-washed/sterilized down and feathers is available and kept up-to date:

- Contact data of the company performing the pre-washing/sterilization step
- Confirmation of compliance with all applicable legal, environmental and OHS requirements
- Confirmation of APEO-free washing process
- Information on the sterilization procedure and, if relevant, chemicals used for sterilization (ideally chemical-free sterilization is performed by means of a thermal process)

Down and feathers shall not originate from animals that have been subjected to any unnecessary harm. In particular there shall be no force-feeding and live plucking of waterfowl. By means of appropriate input control - as for example supplier evaluation and supplier selection - and purchase conditions, animal welfare of the waterfowl has to be assured. A chain of custody to validate the source of the material shall be established. Verification of these requirements is preferably supported by reliable certificates (e.g. RDS (Responsible Down Standard)).

3.1.2 Final product

Down and feather products have to fulfill all quality aspects demanded by the customer (composition, species identification, fill power, filling weight, air permeability, down proof properties, etc.). Fat-, oil- and odor-free material with a high level of cleanliness is required. Along with BSSL compliance, the requirements listed in Table 3.1 have to be fulfilled.

Description	Requirement	Test Method
Oxygen index number	max. 20 goal: less than 10	BS EN 1162
Oil and fat content	0.5 to 2 %	BS EN 1163
Turbidity	min. 300 mm	BS EN 1164
pH	6.6 to 8.0	BS EN 1413
Microbiological state (mandatory if oxygen number is above 20)		
Mesophilic aerobic bacteria content Faecal streptococci count Sulfite reducing clostridium count Presence of salmonella	less than 106 CFU/g less than 102 CFU/g less than 102 CFU/g absent in 20 g	BS EN 1884

Table 3.1: Requirements for down and feathers (CFU = colony-forming unit)

3.2 Water emissions

3.2.1 General aspects wastewater

- EDTA, DTPA and phosphonates shall not be used for process water softening purposes
- Unused residual chemicals, auxiliaries and dyestuffs shall not be discharged to the wastewater
- Regarding COD/TOC elimination, the efficiency of wastewater treatment steps prior to direct discharge to the aquatic body shall be 85 % or higher
- Testing of incoming water is recommended to be conducted from time to time to identify potential contaminants
- It is recommended to determine the consumption of chemicals and energy for the WWTP separately

3.2.2 Water consumption

System partner shall investigate the technical and economic feasibility of water recycling. Documented information on the feasibility evaluation shall be available.

The freshwater consumption goals are:

- Long-term goal: Zero Liquid Discharge (ZLD)
- Short-term goal: < 60 L/ kg

3.2.3 Direct wastewater discharge

The limit values and sampling requirements for direct wastewater discharge are compiled in Table 3.2.

Parameter	Method	Unit	Foundational	Progressive	Measuring/Sampling interval treated WW
Wastewater flow		m^3/h	-	-	continually
Persistent foam	Visual inspection	-	Shall not be visible	Shall not be visible	daily
pH	DIN 38404-C5 ISO 10523 USEPA 150.1 GB/T 6920	-	6-9	6-9	continually
Temperature	DIN 38404-C4 USEPA 170.1 GB/T 13195	°C	Δ15° or max. 35° C	Δ10° or max. 30° C	continually
COD	DIN 38409-41 ISO 6060 USEPA 410.4 APHA 5220D GB/T 11914 validated cuvette methods (e.g. according to ISO 15705) can be used alternatively	mg/L	160	80	daily
BOD_5	DIN EN 1899-1 ISO 5815-1/-2 USEPA 405.1 APHA 5210B HJ 505	mg/L	30	15	weekly
TSS	DIN EN 872 ISO 11923 USEPA 160.2 GB/T 11901	mg/L	30	15	daily
Ammonium nitrogen (NH_4-N)	DIN 38406-5 ISO 11732, ISO 7150 USEPA 350.1 APHA 4500 NH_3N HJ 535, HJ 536	mg/L	10	5	weekly
Nitrogen (total)	DIN EN 12260 (TNb) ISO 5663, ISO 29441 USEPA 351.2 APHA 4500 P-J, APHA 4200 N-C HJ 636, GB 11891	mg/L	20	10	weekly
Phosphorous (total)	ISO 11885, ISO 6878 USEPA 365.4 APHA 4500 P-J GB/T 11893	mg/L	2	1	6 months
Oil and grease	ISO 9377-2 USEPA 1664 HJ 637	mg/L	10	5	6 months
Coliforms	ISO 9308-1 USEPA 9132 GB/T 5750.12	bacteria/ 100ml	1000	500	6 months; only if sanitary water is contained
APEO (NPEO, OPEO, NP and OP)	ISO 18857-1, ISO 18857-2, ISO 18254-1 ASTM D7742-17	µg/L	5	5	6 months; raw WW
Metals					
Arsenic	ISO 11885 USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700	mg/L	0.05	0.01	Orientational measurements + monitoring findings
Cadmium	ISO 11885 USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700	mg/L	0.1	0.05	Orientational measurements + monitoring findings
Chromium (VI)	DIN 38405-D24 ISO 18412 USEPA 218.6 GB 7467	mg/L	0.05	0.005	Orientational measurements + monitoring findings
Lead	ISO 11885 USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700	mg/L	0.1	0.05	Orientational measurements + monitoring findings
Mercury	ISO 12846, ISO 17852 USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a HJ 597	mg/L	0.01	0.005	Orientational measurements + monitoring findings

Table 3.2: Limit values for direct discharge to the aquatic body. The measuring point is after on-site wastewater treatment, before discharge to the aquatic body

In order to control the efficiency of the wastewater treatment plant, it is recommended that relevant parameters are measured not only in the treated (clean) stream but also in the untreated (raw) wastewater.

- The above-mentioned levels are defined as follows:
  - Foundational: minimum requirement for a bluesign® SYSTEM PARTNER
  - Progressive: shall serve as a guidance and shall be the goal in case of major modifications of a WWTP or if a WWTP is newly built
- Δ = difference in temperature between the wastewater and the receiving water body.
- Orientational measurements: shall be conducted two times; based on the results future monitoring plans can be adapted (continue monitoring detected parameters, omit non-detected parameters).
- Sampling shall be conducted according to *ISO 5667-13:2011 (Parts 1, 3, 10, 13 and 15)*, *"Water Quality Sampling Guidance for the preservation and handling of water samples,"* either by qualified lab personnel or the by the external lab which conducts the related analysis under representative conditions (i.e. not after production breaks, heavy rainfall, etc.).
- The system partner shall define a sampling/measuring plan to ensure analyses are conducted at regular intervals.
- Sampling intervals as listed in Table 3.2 shall be observed; sampling intervals depend on the dimensions and complexity of the plant as well as on the findings. The sampling plan shall include regular third-party measurements by an accredited laboratory.
- A full measuring campaign shall be conducted at least two times per year with one of the following sampling methods:
  - Composite sampling (preferred): composite sampling should be performed for no less than six hours, with no more than one hour between discrete samples. Each discrete sample shall be of equal volume. Sampling using calibrated autosamplers is preferred.
  - Qualified spot sampling: should be performed over two hours with samples taken at regular intervals of 15 minutes using an automatic composite sampler ;
    or
    a minimum of five samples should be taken during a maximum of two hours, with at least two minutes between discrete samples.
- Compliance is present if four out of the five last measurements meet the above listed limits.

National or local requirements that are stronger or more detailed than the bluesign® CRITERIA, will supersede the limit values specified above.

3.2.4 Indirect wastewater discharge

See *bluesign® CRITERIA for production sites*.

4 Verification of compliance

BLUESIGN verifies compliance with the bluesign® CRITERIA by means of a bluesign® COMPANY ASSESSMEMT including an on-site inspection. Re-assessments shall be carried out no later than every three years.

5 Validity

This document comes into effect from 2020-03. It replaces the *bluesign® CRITERIA for production sites - ANNEX: Down and feather s processing* version 2.0.
For all companies that signed an agreement for an assessment or for a bluesign® SYSTEM PARTNERSHIP before 2020-03 the adapted and newly introduced requirements are binding after a transition period of one year from the date of release.
This document is subject to revisions. Details on the revision procedure for regular and unscheduled revisions are compiled in the *bluesign® SYSTEM* document.

6 Other applicable documents

The following documents complement the document at hand:

- *bluesign® SYSTEM*
- *bluesign® glossary*
- *bluesign® CRITERIA for production sites*
- *bluesign® CRITERIA for production sites - Annex: Exclusion criteria*
- *bluesign® CRITERIA for production sites – Annex: Rating of production sites*
- *bluesign® SYSTEM BLACK LIMITS (BSBL) - Threshold limits for chemical substances in chemical products*
- *bluesign® SYSTEM SUBSTANCES LIST (BSSL) - Consumer safety limits*

Current versions are available for download at www.bluesign.com/criteria.