

bluesign® CRITERIA for production sites ANNEX: Down and feathers processing

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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 |
| рН | 6.6 to 8.0 | BS EN 1413 |
| Microbiological state (mandatory if oxygen number is above 20) | | |
| Mesophilic aerobic bacteria content | less than 106 CFU/g | BS EN 1884 |
| Faecal streptococci count | less than 102 CFU/g | |
| Sulfite reducing clostridium count | less than 102 CFU/g | |
| Presence of salmonella | absent in 20 g | |

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.

| Martenator from | Parameter | Method | Unit | Foundational | Progressive | Measuring/Sampling interval treated WW |
|--|--|------------------------------|--------|----------------------|----------------------|--|
| President foam | Wastewater flow | | m³/h | - | - | continually |
| Display Disp | | Visual inspection | - | Shall not be visible | Shall not be visible | · · · · · · · · · · · · · · · · · · · |
| DEFEATOR | | | | | | , and the second se |
| Comparature | пH | | | 6.0 | 6.0 | continually |
| DN SHIGHT C | ρπ | | _ | 0-7 | 0-7 | continually |
| USEPA 1701 CD A15" or max 30" C CD CD CD CD CD CD CD | | | | | | |
| CORD | _ | | | | | |
| DBI 38/07-41 SO 606 | remperature | | ٠ | Δ15° or max. 35° C | Δ10° or max. 30° C | continually |
| SO 0000 | | | | | | |
| USEPA 410.4 | | | | | | |
| COD APIA 52200 mg/L 160 80 dally and covered methods (e.g. according to SD 15705) show and the state of the s | | | | | | |
| Validated coverte methods (e.g. according to 150 1970b) Validated coverte methods (e.g. accordinated measurements (e.g. accordinated coverte methods (e.g. accordinated measurements (e.g. accordinated coverte methods (e.g. accord | | | | | | |
| Control of the Cont | COD | GB/T 11914 | mg/L | 160 | 80 | daily |
| Can be used atternatively | | | | | | |
| BOD SIS 9815-1/-2 USEPA 405 Mg/L 30 15 Weekly | | | | | | |
| BODA | | | | | | |
| BODA | | | | | | |
| APIHA 52/10B HJS50S | POD | | ma/l | 30 | 15 | wookly |
| HJ 505 | BOD5 | | mg/L | 30 | 10 | Weekly |
| TSS | | | | | | |
| SS | | | | | | |
| Coliforms | TCC | | m a /I | 20 | 15 | daily |
| DIN 38406-5 SO 1730, ISO 7150 USEPA 350.1 mg/L 10 5 weekly | 122 | USEPA 160.2 | mg/L | 30 | 15 | daily |
| Ammonium nitrogen (NH-N) | | | | | | |
| Ammonium nitrogen (NH-N) USEPA 350.1 mg/L 10 5 weekly H1535, H1536 Nitrogen (total) USEPA 351.2 mg/L 20 10 weekly APHA 4500 PJ_APHA 4200 N-C H1536, SIO 29441 USEPA 351.2 mg/L 20 10 weekly APHA 4500 PJ_APHA 4200 N-C H1536, SIO 1941 USEPA 351.2 mg/L 2 1 6 months SO 11885, ISO 6878 USEPA 350.4 mg/L 2 1 6 months BO 1189.7 SIO 6878 USEPA 366.4 mg/L 10 5 6 months H1637 Coliforms USEPA 791.2 bacteria/ GRIT 11893 APEO (NPEO, OPEO, NP and SIO 1885, ISO 18857-1, ISO 18857-2, SIO 1885, ISO | | | | | | |
| APHA 4500 NHAN HJ535, HJ536 DINEN 12260 (TNb) ISD 5663, ISO 29441 USEPA 3512 APHA 4200 P-J. APHA 4200 N-C HJ036, CB T1891 ISD 11885, ISO 6878 USEPA 3612 APHA 4500 P-J. APHA 4200 N-C HJ036, CB T1891 ISD 11885, ISO 6878 USEPA 3664 APHA 4500 P-J. May 1 | | | ,, | 40 | _ | |
| Nitrogen (total) | Ammonium nitrogen (NH ₄ -N) | | mg/L | 10 | 5 | weekly |
| DIN EN 12260 (TNb) ISO 5663, ISO 2941 USEPA 501-2 APHA 4200 N-C Ho 36. GB 11891 ISO 1885, ISO 6878 USEPA 4500 P-J. APHA 4200 N-C Ho 36. GB 11891 ISO 1885, ISO 6878 USEPA 4500 P-J. APHA 4200 N-C APHA 4500 P-J. APHA 4200 N-C Ho 36. GB 11891 ISO 1885, ISO 6878 USEPA 4500 P-J. GB/f 11893 ISO 9377-2 USEPA 1664 IBO 1637 ISO 9377-2 USEPA 1664 IBO 1637 ISO 9308-1 USEPA 1664 IBO 1637 ISO 9308-1 USEPA 1664 IBO 1637 ISO 9308-1 USEPA 1693 IBO 17550-12 ISO 18251-1, ISO 18857-2. ISO 18251-1, ISO 18857-1, ISO 18857-1, ISO 18857-1, ISO 18857-2. ISO 18251-1, ISO 18857-1, ISO 18857-2. ISO 18251-1, ISO 1825 | | | | | | |
| Nitrogen (total) SO 5666,3 ISO 29441 | | | | | | |
| Nitrogen (total) SSP1 A9.51.2 | | | | | | |
| APHA 4500 P.J. APHA 4200 N.C | Nitrogen (total) | | ma/L | 20 | 10 | weekly |
| SO 11885, ISO 6878 USEPA 365.4 APHA 4500 P.J GB/T 11893 Margine Ma | , , | APHA 4500 P-J, APHA 4200 N-C | J | | | , |
| Phosphorous (total) | | | | | | |
| Phosphorous (total) | | | | | | |
| APFIA 4500 P-J GB/T 11893 SO 9377-2 USFPA 1664 HJ 637 DOOD SOO SOO Gentational measurements + monitoring findings SO 1885 - DA 1885 USFPA 2007, USFPA 2008 USFPA 2007, USFPA 2008 USFPA 2007, USFPA 2008 USFPA 20 | Phosphorous (total) | | ma/L | 2 | 1 | 6 months |
| SO 9377-2 | | | | | | |
| SEPA 1664 | | | | | | |
| HJ 637 SCO 9308-1 USEPA 9132 Dacteria/ 100ml 1000 500 6 months: only if sanitary water is contained SCO 1885-1, ISO 1885-2, ISO 1885-1, ISO 1885-1 | Oil and grease | | ma/l | 10 | 5 | 6 months |
| SO 9308-1 | On and grease | | mg/L | 10 | J | OTHORITIS |
| Coliforms | | | | | | |
| APEO (NPEO, OPEO, NP and SO 18857-1, ISO 18857-2, ISO 18857-2, ISO 18254-1 ASTM D7742-17 Metals Arsenic USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Cadmium USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 DIN 38405-D24 SO 11885 USEPA 200.7 USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Lead USEPA 200.7, USEPA 200.8 mg/L 0.5 0.5 0.05 0.005 | Coliforms | | | 1000 | 500 | |
| APEC (NPEU, NP and OP) ASTM D7742-17 Metals ISO 18254-1 | | GB/T 5750.12 | TOOMI | | | water is contained |
| OP) ASTM D7742-17 Metals ISO 11885 USEPA 200.7, USEPA 200.8 USEPA 200.7, USEPA 6020a GB 7475, HJ 700 Cadmium USEPA 6010c, USEPA 6020a GB 7475, HJ 700 DIN 38405-D24 Chromium (VI) USEPA 218.6 GB 7467 Lead USEPA 200.7, USEPA 200.8 USEPA 200.8 USEPA 200.8 USEPA 200.8 USEPA 200.8 USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7467 DIN 38405-D24 USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Mercury Mercury Mercury DIN 38405-D24 USEPA 200.8 USEPA 200.8 USEPA 6010c, USEPA 6020a USEPA 6010c, USEPA 6020a Mg/L 0.01 0.005 Mercury Orientational measurements + monitoring findings Orientational measurements + monitoring findings | AREO (NIREO OREO NIR and | ISO 18857-1, ISO 18857-2, | | | | |
| SO 11885 | | | μg/L | 5 | 5 | 6 months; raw WW |
| Arsenic USEPA 200.7, USEPA 200.8 USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Cadmium USEPA 6010c, USEPA 6020a GB 7475, HJ 700 ISO 11885 USEPA 6010c, USEPA 6020a Mg/L Chromium (VI) USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Chromium (VI) USEPA 200.8 USEPA 6020a GB 7475, HJ 700 Chromium (VI) USEPA 218.6 Mg/L USEPA 218.6 Mg/L USEPA 200.7, USEPA 200.8 USEPA 6020a GB 7467 Lead USEPA 200.7, USEPA 200.8 USEPA 6020a GB 7475, HJ 700 Mercury USEPA 200.7, USEPA 200.8 USEPA 6020a GB 7475, HJ 700 Mercury USEPA 200.7, USEPA 200.8 USEPA 6020a Mg/L USEPA 200.7, USEPA 200.8 USEPA 6020a USEPA 6020a Mg/L USEPA 200.7, USEPA 200.8 USEPA 6020a USEPA 6020a GB 7475, HJ 700 Mercury USEPA 200.7, USEPA 200.8 USEPA 6020a USEPA 6020a Wg/L USEPA 6010c, USEPA 6020a Mg/L USEPA 6010c, USEPA 60 | | ASIM D7742-17 | | | | |
| Arsenic USEPA 200.7, USEPA 6010c, USEPA 6020a | Metals | 100 11005 | | | | |
| Arsenic USEPA 200.7, USEPA 200.8 | | | | | | Orientational |
| Cadmium SO 11885 | Arsenic | | mg/L | 0.05 | 0.01 | measurements + |
| SO 11885 | | | | | | monitoring findings |
| USEPA 200.7, USEPA 200.8 mg/L | | | | | | |
| USEPA 6010c, USEPA 6020a | 0.1. | | ,, | 0.1 | 0.05 | |
| DIN 38405-D24 | Cadmium | | mg/L | 0.1 | 0.05 | |
| Chromium (VI) ISO 18412 USEPA 218.6 GB 7467 ISO 11885 USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Mercury ISO 12846, ISO 17852 USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 Mercury Orientational measurements + monitoring findings Orientational measurements + monitoring findings Orientational measurements + monitoring findings | | | | | | monitoring initings |
| Chromium (VI) USEPA 218.6 GB 7467 Lead USEPA 200.7, USEPA 200.8 USEPA 6010c, USEPA 6020a GB 7475, HJ 700 ISO 12846, ISO 17852 USEPA 200.7, USEPA 200.8 USEPA 200.7, USEPA 200.8 GB 7475, HJ 700 ISO 12846, ISO 17852 USEPA 6010c, USEPA 6020a USEPA 6010c, USEPA 6020a Mercury Mercury USEPA 6010c, USEPA 6020a Mg/L 0.01 0.005 measurements + monitoring findings Orientational measurements + monitoring findings | | | | | | Orientational |
| USEPA 200.7, USEPA 200.8 | Chromium (VI) | | ma/l | 0.05 | 0.005 | |
| Lead USEPA 200.7, USEPA 200.8 mg/L 0.1 0.05 Orientational measurements + monitoring findings | | | | 2.30 | 2.300 | |
| Lead USEPA 200.7, USEPA 200.8 | | | | | | |
| USEPA 6010c, USEPA 6020a | | | | | | |
| GB 7475, HJ 700 | Lead | | mg/L | 0.1 | 0.05 | |
| SO 12846, ISO 17852 Orientational | | | | | | monitoring findings |
| Mercury USEPA 200.7, USEPA 200.8 mg/L 0.01 0.005 measurements + uSEPA 6010c, USEPA 6020a mg/L 0.01 measurements + | | | | | | Onionatation I |
| USEPA 60/10c, USEPA 60/20a monitoring findings | Morcury | USEPA 200.7, USEPA 200.8 | ma/l | 0.01 | U 00E | |
| | iviercury | | THg/L | 0.01 | 0.005 | |
| HJ 597 | | HJ 597 | | | | morntoring infullys |

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
- 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

discrete samples.

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.

Disclaimer

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