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Hohenstein Hygienically Clean for Food Processing and Hospitality Textile Laundry Management

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Introduction

This standard was developed by Hohenstein and considers microbiological hazards during laundry cleaning. The laundry must not present any danger to the consumer through microorganisms and thus through infections. The processes for washing, handling and transporting are investigated to ensure good hygiene.

Quality and Test Regulations

1 Area of Application

The quality and test regulations of Hohenstein Hygienically Clean for Food Processing and Hospitality Textile Laundry Management apply to the professional linen care of manufactured textile goods consisting of food processing and hospitality linens with its special hygienic requirements, and to the appropriate services provided by these institutions.

2 Definitions

2.1 Manufactured textile goods

are textile products which are manufactured, sewn or otherwise prepared in a market-ready condition to be passed on to the processor, trade or end-user.

2.2 Industrial linen care

is provided by laundries as opposed to private households.

2.3 Linen from food processing & hospitality businesses

Are manufactured textile goods that are used during the production, treatment, and marketing of foodstuffs as well as hospitality locations such as hotels and resorts.

2.4 Rental linen

is linen that is not the property of the person using it.

2.5 Laundry machines

comprises machines used in the laundry facility for laundering, drainage, shaking, drying and finishing manufactured textile goods.

2.6 A washing cycle

for the purposes of this regulation, comprises an entire washing program according to the appropriate procedural rules.

2.7 Soiled linen area

comprises the acceptance, sorting, storage, labelling and transport as far as the washing machine.

2.8 Clean linen area

comprises the washing, drying, ironing, finishing and storage of the clean laundry, including all related activities, control systems and tests.

2.9 Disinfection

means the elimination or continual reduction of the number of causative agents to eliminate all risk of infection.

2.10 Disinfection of linen

for the purposes of this regulation, is carried out by means of disinfecting washing procedures.

2.11 Disinfection of hands

takes place using listed agents in the soiled linen area before washing hands and/or in the clean linen area after hands have been washed. When disinfecting the hands, the skin, fingertips and space between the fingers must all be made thoroughly wet. Wiping or washing the disinfectant off afterwards reduces its effectiveness and should be avoided. The disinfectant should be vigorously spread over the hands and rubbed in for a period of 30 seconds until it dries.

2.12 Abrasive disinfection

is a surface disinfection whereby the disinfectant is distributed on the surface using a scouring cloth, sponge or similar.

2.13 Spray disinfection

is a surface disinfection whereby the disinfectant is sprayed onto the surface to be disinfected.

3 Technical Rules & References

The regulations apply according to the specifications of the EPA Environmental Protection Agency lists:

Environmental Protection Agency (EPA), Lists A, B, C, D, E, and F: EPA registered disinfectants, sanitizers, and sterilants. www.epa.gov/oppad001/chemregindex.htm Selected EPA Registered Disinfectants. http://www.epa.gov/oppad001/chemregindex.htm

British Retail Consortium (BRC), Global Safety Standard for Food Products, version 7, section II, item 7.4.3 and 7.4.4

German Certification Association for Professional Textile Services, RAL-GZ 992/3 – Laundry from food processing plants, Boennigheim, Germany, 2011

German Institute for Standardization, DIN 10113-3: 1997-07: Determination of surface colony count on fitment and utensils in food areas - Part 3: Semiquantitative method with culture media laminated taking up equipment (squeeze method), Berlin, Germany, 1997

German Institute for Standardization, DIN 10514: 2009-05: Food hygiene- Hygiene training, Berlin, Germany, 2009

Guideline for Hand Hygiene in Health-Care Settings. Recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the HICPAC/ SHEA/ APIC/ IDSA Hand Hygiene Task Force. https://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf

International Featured Standard Food (IFS Food) version 6, part 2, item 3.2.2.5 and 3.2.2.6

4 Quality Regulations

4.1 Laundry plant

4.1.1 Building area

4.1.1.1 Functional separation/personnel air shower

The laundry plant must be divided into "soiled" and "clean" laundry areas with functional separation between the two. There must be adequate signage to warn employees they are transitioning from one side to the other. Management systems must be in place to protect against contamination from soiled to clean side.

4.1.1.2 Facilities for disinfecting containers

Facilities must be available for disinfecting soiled linen containers which may then be used for clean linen in the clean laundry area.

4.1.1.3 Social facilities

It must be possible to keep food or drink in the common room or break room.

4.1.1.4 Sanitary facilities

There must be facilities for cleaning hands in the laundry areas. Separate male and female toilets should also be available.

4.1.1.5 Ventilation

There must be an effective ventilation to protect against the spread of germs from the soiled side. An exchange of air from soiled to clean laundry areas is not permitted. Special attention must be paid to all procedures for reducing the germ content of air.

4.1.1.6 Pest Control

There must be an integrated pest management (IPM) program including steps for identification, setting action thresholds, prevention and control in place for the facility. As implemented proof of any control mechanisms including treatments must be supported with evidence.

4.1.2 Personnel area

There must be a trained member of staff in the laundry responsible for monitoring the observance of required hygiene procedures. The range of duties must include the submission of a detailed hygiene plan and continually informing personnel of the purpose, necessity and extent of hygiene measures (with documentation in the inspection record book). One person with a relevant qualification should be in charge of hygiene for linen from food processing and hospitality companies. Personnel charged with the laundry care must be trained regularly. This training must be documented for all employees.

4.1.3 Soiled linen area

4.1.3.1 Delivery of Soiled Linen

Linen should be delivered in suitable transport containers such as transport bags, containers etc.

4.1.3.2 Storage of Soiled Linen

The soiled linen should be stored dry until laundering. Storage time should not exceed 72 hours in normal circumstances.

4.1.3.3 Sorting Soiled Linen

The soiled linen is sorted depending on the washing process to be used.

4.1.3.4 Workstations

The workstations in the wet wash area must be functional and clearly laid out, enabling continuous operation. Order and cleanliness must be observed.

4.1.4 Clean linen area

4.1.4.1 Preparation of Fresh Water

If no natural water is available, water preparation should be carried out in a plant that provides water with a hardness of maximum 3 grains and less than 0.1 ppm of iron; the daily monitoring of the water preparation plant with respect to the water equivalents is to be recorded in the inspection record book. Recontamination of the linen, especially by rinsing water, must be avoided. Softened water or water from the drainage area that is fed back into the rinsing process must be checked regularly as required to identify and eliminate the risk of bacterial contamination. Appropriate disinfectant agents or procedures should be applied if necessary.

4.1.4.2 Washing machines

The washing machines used together with the washer extractor/drainage machines including their controlling and checking equipment must function efficiently. It must be possible to remove washing liquor easily. It must be possible to disinfect all parts in contact with the linen and liquor.

4.1.4.3 Washing procedures

Disinfecting washing procedures must be used. Procedural rules must be easily accessible in the wet washing area. Information for the applicable washing processes must be given in the

procedural rules: liquor ratio, loading ratio, detergent dosage, alkalinity, decolorant dosage, liquor temperature for pre-washes, clearing and rinsing; bleaching cycle.

4.1.4.4 Drainage

Presses/centrifuges must be able to be cleaned and disinfected. Further processing of the damp linen must be carried out without storage.

4.1.4.5 Workstations

The workstations in the clean linen area must be functional and clearly laid out, enabling continuous operation. Order and cleanliness must be observed. Work surfaces must be regularly and properly sanitized.

4.1.4.6 Drying

The drying machines, including their controlling and checking equipment, must be in working order.

4.1.4.7 Ironing

The ironers must operate perfectly, folding and creasing the ironed linen must be carried out properly.

4.1.4.8 Processing shaped items

The presses, finishing cabinets and mannequins must operate perfectly. During preparation of clean linen for ironing, contact with the linen should be limited to the minimum necessary.

4.1.4.9 Storage of clean linen

The storage of the clean linen must be clearly laid out. Storage areas and storage surfaces must be well maintained, neat and clean. The clean linen must be hygienically clean when packed for storing. Recontamination must be avoided.

4.1.4.10 Dispatch of clean linen

Vehicle floors and outer surfaces must be clean. The drivers of the transport vehicles must wear work clothes provided by the user of the certificate. These work clothes must be regularly maintained by the operator. The linen must be transported in receptacles that protect the packing from mechanical damage. The cargo holds in the vehicle must be covered. The inner surface of the cargo holds must be easy to clean and disinfect. After transporting soiled linen and before transporting clean linen the cargo hold of the vehicle must be adequately disinfected.

4.2 Linen care

Quality statements can be made via wash cycle controls using textile process indicators. Further information can be obtained from Hohenstein. The contents of these investigations are the degree of whiteness, the color shade deviation, the basic white value, the tissue incrustation, the reduction in strength and the chemical fiber damage.

4.3 Linen finishing

Cleanliness, a good degree of whiteness, dryness even in problem areas, a neutral smell and sufficient protection against recontamination is required for the clean linen which is to be delivered. In addition, ironed linen must display optimal smoothness and be folded ready to be placed in a cupboard. Article-specific finish is required for shaped items.

4.4 Hygiene requirements

4.4.1 Rooms

Floors, and if possible, also walls at working height, exterior surfaces of installations and machines must permit damp cleaning and disinfection. The floors of the work rooms are to be cleaned at least once per week and disinfected when necessary. Sanitary and communal rooms must be kept in a clean state which encourages the staff to be aware of hygiene.

4.4.2 Equipment

Transport equipment, receptacles, racks, shelves etc. must be cleaned and disinfected daily. The following must be available in the soil and clean laundry areas, and particularly in the changing and common rooms and in the toilets: Hand washing facilities with running hot and cold water, cleaning agents not harmful to the skin, disposable towels, as well as disinfectant dispensers for disinfecting hands.

4.4.3 Personnel

The laundry management must provide employees who work in the soil laundry area with specially marked protective clothing, which must be changed at least once a week. The personnel must be instructed to disinfect hands, especially after using the toilet and to adhere to the hygiene requirements, particularly between the soil and clean laundry areas. When leaving the soiled area, protective clothing must be changed, and hands must be disinfected. Smoking and eating are prohibited in the soil and clean laundry areas. In addition, drinking is prohibited in the soil area.

4.4.4 Hygiene plans

Appropriate hygiene plans are to be drawn up for all areas where hygiene is important.

4.4.5 Clean linen

Checks on the clean laundry must take place after completion of drying, ironing or finishing. The linen processed must be low in microbiological contamination.

Linen is low in microbial contamination if at least 9 out of 10 samples show no more than 50 germ colonies per 100 cm2 with bacteriological checks by means of soiled germ carriers on surfaces of at least 20 cm2 in various places of different types of linen after incubation on a culture medium according to DIN 10113-3 (Rodac plate test).

Wash cycle controls with bioindicators must be carried out regularly. Staphylococcus aureus and Enterococcus faecium should be used as test germs. Cotton lobules that have been contaminated with a germ suspension in blood and then dried are used as germ carriers. The bioindicators are added during washing and then analyzed in the laboratory. 7 log levels must be reduced.

5 Test regulations

5.1 Laundry Plant

Fulfilment of requirements is controlled by on-site inspections at least once a year. A representative from the test center (Hohenstein) completes the checklist inspection.

5.2 Linen care

Tests on the value retention of laundry can be carried out in Hohenstein's laboratories in accordance with international standards.

5.3 Linen Finishing

Through self-checking, random samples should be taken of 5 test samples of dry, ironed and shaped linen as an in-house test to check:

a) visually for folding, finish of shaped parts, packaging
b) visually to ensure that it is clean with no stains, greying and smoothing
c) sensory for smell

5.4 Hygiene requirements

Hohenstein's inspection officer checks compliance with the requirements during the inspection by completing the checklist for hygiene control. Bacteriological tests of the disinfecting washing process with contaminated germ carriers, water tests, and surface contact sampling are carried out. Bacteriological controls are carried out in a clean environment.

6 Monitoring

6.1 Initial test

An on-site visit from a Hohenstein auditor is required during the initial certification and the renewal processes. The Hohenstein auditor checks the prerequisites for the award of the certificate, including checking the hygiene on site, checking the documents and taking microbiological samples. The initial test is a prerequisite for the award of the certificate.

6.2 In-house tests

Each certificate holder must carry out the necessary internal checks to ensure compliance with the quality regulations, document and keep them for at least 2 years.

6.3 Monitoring tests

Each certified location must submit 1 textile sample quarterly to an approved testing facility for confirmation of continued compliance to the test limits. Any results not meeting the criteria must be replaced with additional samples. Proof of this ongoing conformance process is audited by Hohenstein during certification renewals.

6.4 Laboratory tests

The laboratory tests are carried out by an external, accredited laboratory according to ISO 17025.

6.5 Recordkeeping

An organized record of all required documentation must be kept up to date and available on-site. The information contained in the documentation must be current, specific, and accurate to the location. The record can be kept as either a physical or digital format but must be easily accessible for presentation to the inspector upon request. The record must – at a minimum have sections for the following topics

- Corporate HAACP Plan
- Site specific Hygiene plan
- Annual training program and attendance records
- Quality Assurance Plan
- Annual product quality inspections
- Monthly inspection report from wash chemistry provider (at least 1 year)
- Quarterly 3rd party compliance testing (at least 1 year)
- Health, safety, and quality audit documentation
- Pest control records
- Copies of prior certificates

7 Award of the certificate

7.1 Prerequisite for the certificate

The prerequisite for obtaining the certificate is good hygiene from the preparation of the laundry to delivery to the customer. The microbiological results of the surface germ count of the dry laundry and the killing of the test germs must be proven.

7.2 Validity of the certificate

A certificate verifying hygienically clean management food processing and/or hospitality laundry is valid until the end of the calendar year following the certification date. During its period of issue, the certificate may be used in advertising, as an enclosure with offers and when negotiating orders.

7.3 Basis of Quality

The basis of quality for the Hohenstein certificate consists of the quality and test regulations for professional textile services in laundries. This basis is regularly amended and developed to bring it up to date with advances in technology.

8 Amendments

Any amendments to these quality and test regulations, even editorial changes, require prior written approval from Hohenstein.

9 Appendix

9.1 Specimen hygiene certificate

HOHENSTEIN

Certificate of Hygiene Control Management

Acme Food Service Cleaners

531 Bakers Lane | Oven, ST 01234 | USA

Hygiene Control Management for Food Service

HOHENSTEIN Hygienically Clean FOOD SERVICE

The certification demonstrates compliance with:

- International Food Standard (IFS) v.6.1, part 2: 3.2.2.5, 3.2.2.6
- British Retail Consortium (BRC)
- Global Safety Standard for Food Products (GSFP), v.7, sec. II: 7.4.3, 7.4.4

The certification is granted upon meeting the following metrics during annual testing:

- The disinfection capability of the laundering procedures is validated to achieve a 7 log reduction (< 1 organism out of 10,000,000) in bacteria
- Tested textiles achieved levels of 50 CFU/dm², validated by an independent laboratory

The process and textiles are reviewed annually for recertification by

Hohenstein Laboratories GmbH & Co. KG | 74357 Boennigheim | Germany | January 1, 2022

Valid until December 31, 2023

Dr. Timo Hammer
Managing Director

Hohenstein Laboratories · Schloss Hohenstein ·

Andre Tomczyk
Hygiene Expert

Hohenstein Laboratories GmbH & Co. KG | Schloss Hohenstein | 74357 Bönnigheim | Germany

9.2 Checklist for plant inspection for food processing and/or hospitality laundry services

Hygienically Clean Checklist for Plant Inspection

Laundry Plant Name:

Plant Address:

Telephone:

Email:

Plant Inspection Date:

Checklist for: Food Hospitality Healthcare

Plant Inspection by:

Accompanied by:

Site-Specific Hygiene Plan: Implemented Not Fulfilled

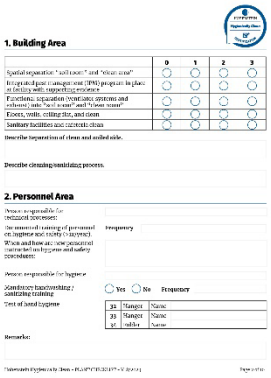
Checklist Requirements Evaluation Key

0	Not Applicable
1	nulfilled
2	nulfilled, improvements recommended
3	Not fnulfilled, obligations required for certification

Overall Site Evaluation:

Satisfactory - certification can be issued pending mandatory tasking audits

Needs Improvement - obligations are required before certification can be issued



1. Building Area

	0	1	2	3
Spatial separation "soil room" and "clean room"				
Integrated pest management (IPM) program in place at facility with supporting evidence				
Functional separation (ventilation, airlocks and enclosure) into "soil room" and "clean room"				
Doors, walls, ceiling fits, and clean				
Sanitary facilities and canteen clean				

Describe the separation of clean and soiled side.

Describe cleaning/sanitizing process.

2. Personnel Area

Person responsible for

Documented training of personnel on hygiene specific to (various)

Frequency

When and how are new personnel instructed on hygiene and safety procedures:

Person responsible for hygiene

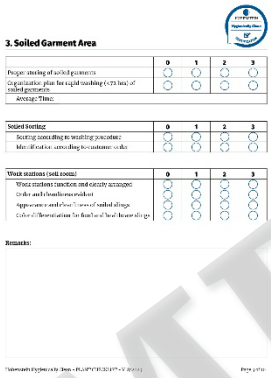
Mandatory handwashing / sanitizing training

Yes No Frequency

Test of hand hygiene

32	Ranger	Name
33	Ranger	Name
31	Staffer	Name

Remarks:



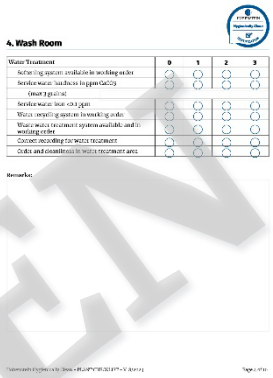
3. Soiled Garment Area

	0	1	2	3
Proper sorting of soiled garments				
Contamination plan for rapid washing (<24 hrs) of soiled garments				
Average Time:				

Soiled Sorting	0	1	2	3
Sorting according to washing procedure				
Identification according to customer order				

Work stations (soil room)	0	1	2	3
Work stations function and clearly arranged				
Order and cleanliness evident				
Appearance and cleanliness of soiled linen				
Color differentiation in fixed soil load house slip				

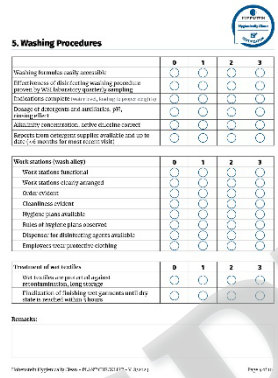
Remarks:



4. Wash Room

Water Treatment	0	1	2	3
Softening system available & working order				
Softer water hardness in ppm CaCO3 (must be <10 ppm)				
Water recycling system in working order				
Water waste treatment system available, and in working order				
Correct recording for water treatment				
Odor and cleanliness in water treatment area				

Remarks:



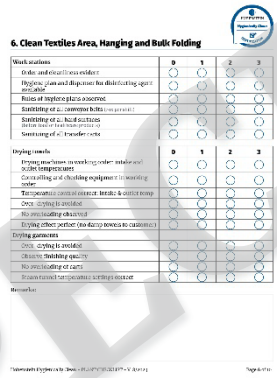
5. Washing Procedures

	0	1	2	3
Washing formulas easily accessible				
Effectiveness of chair testing washing procedure process, by SOP, laboratory quarterly sampling				
Indicators composite (water type, loading to power required)				
Dosage of detergents and auxiliaries, pH, rinsing effect				
Alkalinity concentration, active chlorine correct				
Reports from detergent supplier available and up to date (<6 months for most recent visit)				

Work stations (wash alley)	0	1	2	3
Ware stations functional				
Ware stations clearly arranged				
Order evident				
Cleanliness evident				
Hygiene plans available				
Rules of hygiene plans observed				
Dispenser for disinfecting agents available				
Employees wear protective clothing				

Treatment of wet textiles	0	1	2	3
Wet textiles are protected against recontamination, long storage				
Finalization of finishing wet garments until dry state is reached within 12 hours				

Remarks:



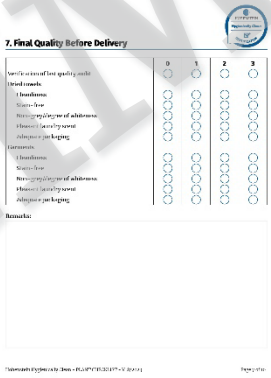
6. Clean Textiles Area, Hanging and Bulk Folding

Work stations	0	1	2	3
Order and cleanliness evident				
Hygiene plans and dispenser for disinfecting agent available				
Rules of hygiene plans observed				
Sanitizing of ca. conveyor belts (as present)				
Sanitizing of ca. hand surfaces (at the end of last transaction)				
Sanitizing of all transfer carts				

Drying tunnels	0	1	2	3
Drying machines in working order: intake and outlet temperatures				
Controlling and checking equipment in working order				
Temperature curves correct: intake & outlet temp				
Over - drying is avoided				
No overloading observed				
Drying effect perfect (no damp zones to customer)				

Drying garments				
Over - drying is avoided				
Quality finishing quality				
No overloading of carts				
Room tunnel temperature settings correct				

Remarks:



7. Final Quality Before Delivery

	0	1	2	3
Verification of last quality audit				

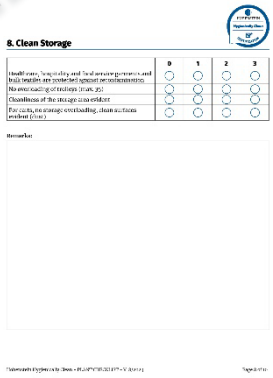
Dried towels

Cleanliness				
Stain-free				
Foreign application of additions				
Chemical laundry agent				
Adequate packaging				

Garments

Cleanliness				
Stain-free				
Foreign application of additions				
Chemical laundry agent				
Adequate packaging				

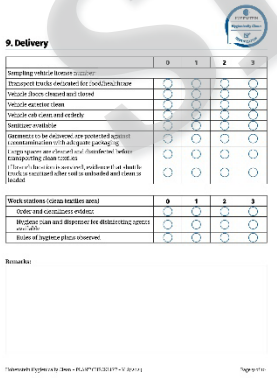
Remarks:



8. Clean Storage

Finished ware, hospitality and food service garments and bulk textiles are protected against recontamination	0	1	2	3
No overloading of shelves (max. 3/4)				
Cleanliness of the storage area evident				
For carts, no storage overloading, clean surfaces evident (clear)				

Remarks:



9. Delivery

	0	1	2	3
Sampling vehicle license number				
Transport trucks dedicated for food/healthcare				
Vehicle floors cleaned and dried				
Vehicle exterior clean				
Vehicle cab clean and orderly				
Sanitizer available				
Garments to be delivered are protected against contamination with adequate packaging				
Cargo spaces are cleaned and disinfected before transporting clean textiles				
Driver's license is associated, evidence that clean & textiles are not handled after soil is unloaded and clean is loaded				

Work stations (clean textiles area)	0	1	2	3
Order and cleanliness evident				
Hygiene plan and dispenser for disinfecting agents available				
Rules of hygiene plans observed				

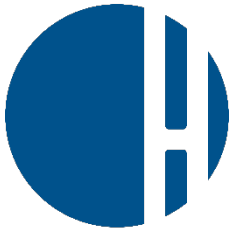
Remarks:

10. Checklist Summary

We guarantee that the signatures are exclusively used for the inspection and are not misused.

Date Hohenstein Signature Plant Signature

Print Checklist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