

Healthcare Laundry Standards: Compare and Contrast Table of Existing Standards

Note: Superscript numbers in **red** boldface type refer to Notes following this table.

General Comparisons					
Author	Hohenstein Institute Germany ¹ (Laboratory Testing)	Textile Rental and Service Association (TRSA)	Healthcare Laundry Accreditation Council (HLAC)	UK Department of Health	Joint Technical Committee TX/16, Laundry Practice
Standard	RAL Quality Certification Mark 992/2 German Certification Association for Professional Textile Services	Standard for Producing Hygienically Clean Reusable Textiles for Use in the Healthcare Industry	Accreditation Standards for Processing Reusable Textiles for Use in Healthcare Facilities	Health Technical Memorandum HTM 01-04 Decontamination of Linen for Health and Social Care	Australian/New Zealand Standard Laundry Practice AS/NZS 4146-2000
Available version for review	2011 (preview document brochure) ²	2016 ³	2016 ⁴	2016 ⁵	2000 (preview document – table of contents) ⁶
Full document available free of charge	No	Yes	Yes	Yes	No
Regulatory document issued by a AHJ (authority having jurisdiction)	No	No	No	Yes	Yes
Status conferred	Certification “Hygienically Clean”	Certification “Hygienically Clean”	Accreditation “Hygienically Clean”	(Pass) ⁷ Refers to Certification as per BS EN 14065	(Pass)
Major sections	Includes, but may not be limited to: <ul style="list-style-type: none"> Textile processing Quality requirements for textiles 	<ul style="list-style-type: none"> Documenting laundry Best Management Practices (BMP) Facility inspections 	Including, but not limited to: <ul style="list-style-type: none"> Basic Elements Textile quality control procedures, 	Including, but not limited to: <ul style="list-style-type: none"> Essential Quality Requirements (EQR): 	Including, but may not be limited to: <ul style="list-style-type: none"> General Requirements & Recommendations:

	<ul style="list-style-type: none"> • Training • Plant and equipment maintenance, facility layout, cleaning, and environment, written policies & procedures • Employee training & safety • Textile Processing Cycle • Microbiologic testing • Equipment operation & Maintenance • Storage & transport 	<ul style="list-style-type: none"> • Microbiologic testing 	<p>facility layout, cleaning, and environment, equipment use and maintenance, employee training and safety</p> <ul style="list-style-type: none"> • Textile Processing Cycle • Surgical Pack Assembly 	<p>Laundry disinfection, HACCP-type risk analysis of facility, employee safety, written policies & procedures,</p> <ul style="list-style-type: none"> • Best Practices (BP): Functional separation, employee health & safety, workforce training • Statutory requirements & reporting: Worker safety, • Microbiologic testing • Equipment operation & maintenance • Transport • Surgical textiles • Storage & transport 	<p>Facilities, management, transport equipment, collection, sorting, laundry operations, storage, packing</p> <ul style="list-style-type: none"> • Minimal Requirements: Regulations, surgical textiles, specific laundering parameters, disinfection, record keeping
Specific information on tunnel washers	Yes	No	No	Yes	Unknown ⁸
Specific information on exchange carts	Yes	Yes	No	No	Unknown
Statements ranked	Yes	Yes	Yes	Yes ⁹	Unknown

Includes relevant regulatory statements from national regulations/documents	Yes	Yes	Yes	Yes	Yes
Terminology defined	Yes	Yes	Yes	Yes	Yes
References cited	Yes	Yes	Yes	Yes	Yes
References to regulations included with appropriate standard statement	Yes	Yes	Yes	Yes	Unknown
Appendices included	Yes	Yes	Yes	No	Yes
Laundry Facility Inspections					
Standard	RAL Quality Certification Mark 992/2	Standard for Producing Hygienically Clean Reusable Textiles for Use in the Healthcare Industry	Accreditation Standards for Processing Reusable Textiles for Use in Healthcare Facilities	Health Technical Memorandum HTM 01-04 Decontamination of Linen for Health and Social Care	Laundry Practice AS/NZS 4146-2000
Are laundry facility inspections required?	Yes	Yes	Yes	Yes	Unknown
Frequency of inspections	Initial inspection, repeated unannounced inspections annually	Initial inspection, repeated at the end of the 3-year certification period; another impromptu inspection may occur during the 3-year period	Initial inspection and upon renewal after 3-year period. Additional inspections may occur during the accreditation period.	Not specified ¹⁰	Unknown
Inspection activities	<ul style="list-style-type: none"> Hohenstein Inspector conducts inspection and review as per Inspection Checklist and Standards Control points Target values for HCTs, surfaces 	<ul style="list-style-type: none"> TRSA representative inspects Quality control Inspects on the provisions in the standard 	HLAC-contracted inspector conducts visual inspection and review of documents as per the HLAC Inspection Checklist	<ul style="list-style-type: none"> Inspectors review EQR elements and BP Facility HACCP reviews Laundry disinfection Documentation 	Unknown

	<ul style="list-style-type: none"> Quality maintenance audits for product and processes Records review 			<ul style="list-style-type: none"> Functional responsibility of staff, training Storage, transport Surgical textiles 	
Inspection checklist available?	No	No	Yes	No	Unknown
Laundry Facility Testing					
Standard	RAL Quality Certification Mark 992/2	Standard for Producing Hygienically Clean Reusable Textiles for Use in the Healthcare Industry	Accreditation Standards for Processing Reusable Textiles for Use in Healthcare Facilities	Health Technical Memorandum HTM 01-04 Decontamination of Linen for Health and Social Care	Laundry Practice AS/NZS 4146-2000
Is laboratory testing part of the standard?	Yes	Yes	No ¹¹	Yes ¹²	Unknown
Central accredited laboratory	Yes	No ¹³	N/A ¹⁴	Unknown	Unknown
Is microbiologic testing optional?	No	No	Yes	No	Unknown
Microbiologic testing of hard surfaces?	Yes	No	N/A	No	Unknown
Microbiologic testing of textiles?	Yes	Yes	N/A	Sterile fabric swatches	Unknown
Microbiologic testing of hands?	Yes	No	N/A	No	Unknown
Are test for specific microbes indicated?	Yes, USP 62	Yes ¹⁵	N/A	Yes ¹⁶	Unknown
Quantitative or qualitative tests	Both	Both	N/A	Qualitative	Unknown
Who collects the specimens?	“Hygienically Clean Auditor” from Hohenstein	Laundry facility’s “Hygienically Clean Expert?”	Unknown	Unknown	Unknown
Target samples	Validation of the disinfecting process using bioindicators. Dried textiles, wet textiles, hard & raw water, soft water, drainage & rinsing	Samples are only on clean, dry textiles of various fabrics (e.g., terry, flat item)	Samples are taken from entire washing and laundering process, including wash chemistry validation through a 7-log reduction	Sterile swatches attached to textiles in a load. Swatches inoculated with heat-resistant <i>Enterococcus</i> sp. used for additional	Unknown

	water, hard surfaces in facility, storage, drainage prewash area, hand hygiene. Wash chemistry validation through a 7-log reduction demonstration		demonstration – environmental surfaces, Air, Hands, and textiles	best practice testing.	
Other tests of hard surfaces	Yes	No	N/A	No	Unknown
Microbiologic test details included in the standard (methods, how tested, specimen transport)?	Yes	Yes/No ¹⁷	N/A	Yes/No ¹⁸	Unknown
Microbiologic benchmark for Pass/Fail	<p>7 log-reduction through bioindicators</p> <p>USP 62 method:</p> <ul style="list-style-type: none"> • Specific microbes “absent” <p>Contact plate sampling:</p> <ul style="list-style-type: none"> • TAMC and TYMC ≤ 20 cfu/dm² • Wet HCTs • Water, drainage/ rinse • Prewash drainage • Facility surfaces, storage, hands 	<p>USP 62 method:</p> <ul style="list-style-type: none"> • Specific microbes “absent” <p>Contact plate sampling:</p> <ul style="list-style-type: none"> • TAMC and TYMC ≤ 20 cfu/dm² 	N/A	<ul style="list-style-type: none"> • Sterile swatches 10cm x 5 cm: no viable bacteria recovered • Heat-resistance test with <i>Enterococcus</i>: 5 log reduction • <i>Bacillus cereus</i> test: no viable bacteria recovered 	Unknown
Total aerobic bacteria (TAMC) and total yeast and mold (TYMC) counts	Yes	Yes	N/A	No	Unknown
Renewal period	Annual	3 years	N/A	Unknown ¹⁹	Unknown
How many times is microbiologic testing done during the active period?	Frequency dependent on successfully completed microbiologic testing	<ul style="list-style-type: none"> • USP 62 testing semi-annually • Contact plate sampling quarterly 	N/A	Unknown ¹⁹	Unknown

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Notes:

1. Hohenstein Institute in Germany operates internationally utilizing the RAL guidelines, similar to an ISO certification.
2. Internet document available at:
https://www.waeschereien.de/fileadmin/user_upload/2_GG_Waeschereien/Guetezeichen/GG_Imagebrochure_RAL-GZ_992-2_EN.pdf
3. Internet document available at: <http://hygienicallyclean.org/hygienically-clean-healthcare/>
4. Internet document available at: https://docs.wixstatic.com/ugd/076879_f1469c4510464048999c64c1149c6799.pdf
5. Internet document available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/527542/Mgmt_and_provision.pdf
6. Internet document available at: <https://www.saiglobal.com/PDFTemp/Previews/OSH/as/as4000/4100/4146.pdf>
7. “Pass” is the presumed status conferred since there is no indication in the document reviewed of any description of status attained after review and/or inspection.
8. An “Unknown” entry here and elsewhere in the table indicates that this topic point was not available in the text reviewed, but given the likelihood that the full standard does address this topic, the designation of “Unknown” as opposed to “No” allows for that possibility.
9. The HTM 01-04 standard makes it clear which statements are required for compliance. However, the vast majority of the standard’s statements are expressed as “should” statements, and this includes the “required” statements.
10. Inspection of laundry facilities is part of the process to ensure compliance with the standard (i.e., mention is made of inspectors referring to certain relevant adjunct documents), but text addressing frequency of inspection was not found. Across the laundry industry, however, the minimum frequency of scheduled inspections is generally annually.
11. While the HLAC standard does not include microbiologic testing as part of its official document, HLAC has produced a “process microbiologic test kit” (PMTK) that is available for laundries to use on a voluntary basis. Anecdotal information about this kit is that it contain supplies and sampling equipment to sample: 1) textiles; 2) hard surfaces; 3) water quality; 4) air quality; 5) hand hygiene. The accredited laboratory that will process the samples has the capability to identify *C. difficile*. Official details about this testing program were not available for review.

12. HTM 01-04 adopts by reference much of the provisions/statements of BS EN 14065 and BS EN ISO 9000, and suggests that BS EN 14065 provides a suitable style to adopt for microbial quality control.
13. TRSA has approved several accredited laboratories for this program.
14. N/A = not applicable.
15. Previous editions of the TRSA standard did name the specific microorganisms of interest to their testing program: 1) *Staphylococcus aureus*; 2) *Escherichia coli*; 3) *Pseudomonas aeruginosa*. A yeast organism, *Candida albicans*, was added a few years later. The current edition of this standard does not include testing for *Clostridioides difficile*.
16. Bacterial heat-resistance testing uses swatches inoculate with *Enterococcus* sp. The standard doesn't mention specific microorganism testing on a regular basis. However, it does point out that laundries can test for *Bacillus cereus* on the swatches added to laundry loads. This test is suggested for the summer months only. The standard also briefly discusses the capability of the laundry process to inactivate/remove *Clostridioides difficile* spores.
17. While there are a few details about the testing program, there is nothing mentioned about the techniques used to collect the textile samples, whether or not the interior of the specimen containment is sterile, and no details are provided about the actual microbiologic culture process (i.e., temperature of incubation, incubation period, culture media, etc.)
18. While there are minimal details about microbiologic testing in this standard, the presumption is that BS EN 14065 Annex E will provide a more detailed discussion about the specifics of the microbiologic testing methods and processes.
19. These details about the frequency of microbiologic testing are not addressed in the HTM 01-04 document. They may be discussed, however, in the document adopted by reference – BS EN 14065.

Table prepared 12 August 2019