

# Food Hygiene and Sanitation Updates

For Key GFSI-Benchmarked Schemes

The webinar will begin shortly.  
Thank you for your attendance!



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For Key GFSI-Benchmarked Schemes

**Deb Smith – Vikan**

- Global Hygiene Specialist

**Amit M. Kheradia – Remco**

- Environmental Health and Sanitation Manager



# Webinar housekeeping

- The presentation will last about 45 minutes.
- After the presentation, there will be an approximate 15-minute Q&A session. You are invited to submit your questions via the Q&A box provided.
- We will reach out after the webinar to answer any questions we do not address during the session.
- This webinar is being recorded, and we will send you the recording a few days after today's event.

# About our presenters



Deb Smith

Global Hygiene Specialist  
Vikan



Amit M. Kheradia

Environmental Health and  
Sanitation Manager, REHS/RS  
Remco

# About Vikan and Remco



Leading provider of advanced hygiene and cleaning products and solutions for key sectors, with a global presence in over 90 countries.



Vikan's dedicated presence in North America (US & Canada), supplying colour-coded cleaning and food handling tools for the food industry.

For more information, visit us at:

- <https://www.vikan.com/int/about-vikan/who-we-are>
- <https://remcoproducts.com/us/about-remco/who-we-are>



# Webinar outline

- ❖ An introduction to GFSI, their recognised CPOs, and their most popular benchmarked food safety standards
- ❖ A summary of food hygiene and sanitation requirements in the latest version of key GFSI-benchmarked food safety standards
- ❖ ...and of the most frequently observed food hygiene and sanitation audit non-conformances
- ❖ The importance of hygiene and sanitation as preventative controls in HACCP-based food safety systems
- ❖ Some control strategies related to,
  - Hygienic design
  - Sanitation
  - Cross-contamination prevention
  - Zoning
  - Environmental monitoring
  - Food safety culture

Q&A Session

# Introduction to GFSI

- The Global Food Safety Initiative (GFSI, <https://mygfsi.com/>) is a Coalition of Action from [The Consumer Goods Forum](#) (CGF), bringing together [44 retailers and manufacturers](#) from across the CGF membership to oversee food safety standards for businesses and help provide access to safe food for people everywhere.
- Many of the food safety standards operated by GFSI-recognised Certification Programme Operators (CPOs) have been aligned to the latest GFSI benchmarking requirements.
- A list of GFSI-benchmarked schemes is available at:
  - <https://mygfsi.com/wp-content/uploads/2022/09/GFSI-Recognised-CPOs-20240705.pdf>

## GFSI-recognised CPOs



"Once Certified,  
Recognised Globally"



# Brand Reputation through Compliance Global Standard (BRCGS)

BRCGS is a leading quality and safety certification program for food products. Originally formed in 1996 by the \*British Retail Consortium (BRC), the group changed its name and branding in 2019 to BRCGS (Brand Reputation through Compliance Global Standard).

The BRCGS Global Standard for Food Safety has become a widely recognised and respected food safety certification program, with over 30,000 certified sites in more than 130 countries. It is one of the most used standards in the food industry and is particularly well-established in the UK, Europe, and the US/Canada.

A BRCGS food safety audit is prescriptive and primarily focused on the manufacturing and processing of food products. It involves an independent assessment of the food safety management system, processes, and procedures for the organisation based on the BRCGS Global Standard for Food Safety.



❖ <https://www.brcgs.com/>

*\*a trade association representing the UK retail industry.*

# Safe Quality Food Institute (SQF)

The SQF Institute is a leading global provider of food safety and quality assurance certification programmes. These programmes offer certification against its comprehensive food safety and quality requirements, from farm to fork.

First developed in Australia in 1994, SQF gained its popularity in the US with the major acceptance by Walmart for its supplier registration.

SQF is a prescriptive and comprehensive food safety and quality management system that focuses on the entire supply chain, including food production, packaging, storage, and distribution.



❖ <https://www.sqfi.com/>

# Food Safety System Certification (FSSC)

FSSC is a food safety certification scheme that combines FSSC requirements with those of ISO 22000 and [ISO/TS 22002-1](#).

FSSC 22000 is a generic food safety standard that can be applied to any type of food product.

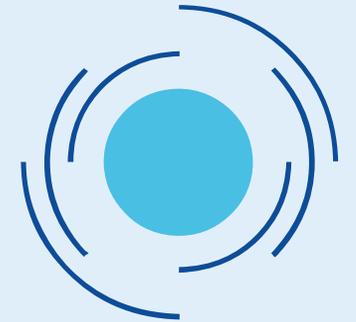
There are some differences in the way the FSSC 22000 standard is structured and assessed compared to BRCGS and SQF. For example, SQF and BRCGS both use a scoring system to assess compliance, while FSSC does not.



❖ <https://www.fssc.com/>

# GFSI benchmarking document update

- ❖ Simplified and harmonised language scoped to ISO 22000 (FSMS standard) structure
- ❖ Alignment to the latest CODEX guidelines on food hygiene, with elements on:
  - Verification of cleaning effectiveness
  - Analysis of layout and flow of operations
  - Control of cross-contamination
  - Strengthened elements of GHP/GAP/GMP
- ❖ Addition of new elements on:
  - Food safety culture
  - Hygienic design (Industry Scopes JI & JII)



**GFSI**  
Global Food  
Safety Initiative

Benchmarking Document  
2020

What changed in Version 2020?: <https://mygfsi.com/wp-content/uploads/2020/02/GFSI-One-pager-Benchmarking-Requirements-v2020-vWeb-1.pdf>



# Key hygiene and sanitation updates: BRCS

Transitioning from Issue 8, BRCS Global Standard for Food Safety Issue 9 audits began on **1 February 2023**. Some key changes (of hygiene and sanitation relevance) in the latest issue are as follows:

- ❖ *Clause 1.1.2:* " ... The [site's **food safety and quality culture** plan] shall include measures needed to achieve a positive culture change ..."
- ❖ *Clause 4.4.11:* "Where **plastic curtains** are present, these shall be maintained in a good condition ... and shall not pose a food safety risk"



## 4.6 – Equipment

All production & product handling equipment shall be suitable for the intended purpose & shall be used to minimise the risk of contamination of product.

### 4.6.1

There shall be a documented purchase specification for any new equipment detailing the site requirements for the equipment. This may, for example, include:

*any relevant legislation where applicable, requirements for food contact surfaces to meet legal requirements, details of the intended use of the equipment, and the type of materials it will be handling*

The supplier should provide evidence that equipment meets these site requirements prior to supply.

<https://www.brcgs.com/product/global-standard-food-safety-issue-9/p-13279/>

# Key hygiene and sanitation updates: BRCS

## 4.6.2

- The *design and construction* of equipment shall be based on risk to prevent product contamination (e.g., *the use of correct seals, impervious surfaces, or smooth welds & joints*) where they are exposed to product & could otherwise result in foreign-body, microbiological, or allergen contamination of the product.
- *Equipment that is in direct contact with food shall be suitable for food contact & meet legal requirements where applicable.*
- ❖ *Clause 8.5.1: "Environment cleaning procedures* in high-care/high-risk areas shall consider the different microbiological risks associated with each production risk zone ... The frequency and methods of cleaning shall be based on risk and the procedures shall be implemented to ensure that appropriate standards of cleaning are achieved."
- ❖ *Clause 8.5.3: "Equipment used in high-risk/high-care areas shall be ... **hygienically designed** and fit for purpose ... cleaned and stored in a hygienic manner to prevent product contamination ..."*
- ❖ *Clause 8.5.4: " ... the **CIP system** shall be designed and controlled so that it does not pose a risk of contamination to the high-risk/high-care area ..."*

The logo for BRCS (BRC Global Standard for Food Safety) is displayed in a bold, green, sans-serif font. The letters are slightly shadowed to give a 3D effect.

<https://www.brcgs.com/product/global-standard-food-safety-issue-9/p-13279/>

# Recent non-conformances for BRCGS

The top equipment and environmental sanitation non-conformities\* of the BRCGS Food Safety Issue 9 Standard were related to the following clauses:

- *Clause 4.11.1: Housekeeping and Hygiene* – Sanitation (GHP)
- *Clause 4.9.1.1: Chemical Control* – Cross-contamination prevention
- *Clause 4.6.2: Equipment Design and Construction* - Hygienic Design
- *Clause 4.4.8: State of Doors (both internal and external)* – Sanitation (GHP) / Hygienic Design
- *Clause 4.4.1: Hygienic State of Walls* – Sanitation (GHP) / Hygienic Design



\*Based on data from BRCGS issue 9 audits conducted between 1<sup>st</sup> Feb – 31<sup>st</sup> Oct 2023.

Video Reference: <https://www.youtube.com/watch?v=pXNC-J-OVQE>



# Key hygiene and sanitation updates: SQF

Transitioning from Edition 8.1, SQF Edition 9 audits began on **24 May 2021**. Some key changes (of hygiene and sanitation relevance) within the SQF Food Manufacturing Code are as follows:

- ❖ More **sector-specific** code books and a **Structural Clarity of GMP Modules** sections and elements
- ❖ *System Element 2.1.1.2*: "Senior site management shall lead and support a **food safety culture** ..."
- ❖ *System Element 2.5.4.3*: "Regular inspections of the **site & equipment** shall be planned & carried out"
- ❖ *Element 11.6.1: Receipt, Storage & Handling of Goods* (*Focus on Cross-Contamination Prevention*)
- ❖ *Element 11.6.2: Cold Storage, Freezing, & Chilling of Foods*
  - 11.6.2.1
    - Chillers, blast freezers, & cold storage rooms shall *be designed & constructed* to allow for the hygienic & efficient refrigeration of food & be easily accessible for inspection & cleaning.
- ❖ *Element 11.7.1: High-Risk Processes* (*Focus on Cross-Contamination Prevention*)



<https://www.sqfi.com/the-sqf-code/choose-your-code/library-of-codes/food-manufacturing>



# Recent non-conformances for SQF

The top equipment and environmental sanitation non-conformities from 2021- 2022 audit data of the SQF Food Manufacturing Edition 9 Standard were related to the following module elements:

- *Element 11.2.5.1: Cleaning and Sanitation Program - Sanitation (GHP)*
- *Element 11.2.1.1: Preventive Maintenance and Repair Program and Schedule – Cross-contamination prevention*
- *Element 11.2.4.1: Pest Prevention Program – Sanitation (GHP)*
- *Element 11.1.7.2: Equipment and Utensils – Sanitation (GHP) / Hygienic Design*
- *Element 11.1.2.4: Walls, Ceiling, Partitions and Doors – Sanitation (GHP) / Hygienic Design*



*Secondary Reference:* <https://remcoproducts.com/us/services/vikan-blog/cross-contamination-control-strategies-what-are-the-top-violations-related-to-equipment-and-environmental-sanitation>



# Key hygiene and sanitation updates: FSSC 22000

Transitioning from Version 5.1, FSSC 22000 Version 6 audits began on **1 April 2024**. Some key changes (of hygiene and sanitation relevance) in the latest version are as follows:

- ❖ **Clause 2.5.6: Management of Allergens** (for all food chain categories), including risk assessments covering all potential sources of allergen cross-contamination, and identification, implementation, validation, and verification of the control measures
- ❖ **Clause 2.5.7:** A risk-based **Environmental Monitoring Program** for the relevant pathogens, spoilage, and indicator organisms required for the evaluation of the effectiveness of controls on preventing contamination from the manufacturing environment
- ❖ **Clause 2.5.8:** For all food chain categories, senior management must establish, implement, and maintain **food safety and quality culture** objectives as part of the management system
- ❖ **Clause 2.5.10: Transport, Storage, and Warehousing** – for all food chain categories. As part of the requirements, sites that use tankers for transporting their final product must have a documented risk-based plan to address transport tank cleaning.
- ❖ **Clause 2.5.11:** Hazard Controls and Measures for Preventing Cross-Contamination, including **Foreign Matter Management**
- ❖ **Clause 2.5.15:** Equipment Management (for all food chain categories) that also addresses **Hygienic Design Requirements**



## Appendix 1 - Definitions

- Hygienic Design: Design & engineering (materials & fabrication) of equipment & premises that are easily cleanable assuring the food is safe & suitable for human consumption (EHEDG Glossary, Version 2020/08.G04).

<https://www.fssc.com/schemes/fssc-22000/documents/fssc-22000-version-6/>

# Importance of hygiene & sanitation as preventive controls

- ❖ The primary objective of each of these GFSI-benchmarked standards is to improve food safety.
- ❖ Many of the standard requirements are aimed at maintaining the hygienic and sanitary condition of the equipment and food production environment. This, in turn, should facilitate the production of safe and quality food.
- ❖ **We are preventing foodborne illnesses in society:** According to WHO, around 600 million people suffer from foodborne illnesses annually, and 420,000 die each year from these illnesses. In the US, 1 in 6 people (or 48 million Americans) get sick from eating contaminated food each year.



# Importance of hygiene & sanitation as preventive controls

- ❖ Close to 18 years of FDA regulatory agency data has shown that overall, 1-in-3 inspection violations in a facility may be directly related to insanitary equipment or environment.\*



- In the US and Canada, 1-in-3 food recalls are generally related to sanitation, hygiene, and material flow issues within a food processing facility. A significant proportion of these recalls can be avoided by instituting appropriate preventive controls to help reduce food contamination incidents in a plant.\*\*
- It is also important to remember hygiene and sanitation controls are much more than just cleaning environmental and equipment surfaces.

\* <https://remcoproducts.com/us/services/vikan-blog/cross-contamination-control-strategies-what-are-the-top-violations-related-to-equipment-and-environmental-sanitation>

\*\*[https://remcoproducts.com/media/8428/2019\\_iafp-poster\\_amitmkeradia-us.pdf](https://remcoproducts.com/media/8428/2019_iafp-poster_amitmkeradia-us.pdf)

# Control strategies to maximise audit compliance

- Hygienic design
  - Sanitation
  - Cross-contamination prevention
  - Zoning
  - Environmental monitoring
  - Food safety culture



# GFSI Benchmark requirements: Hygienic design of facilities and equipment

#	Scope	End User
JI	Hygienic Design of Food Facilities and Processing Equipment	Facility Constructors, Equipment Manufacturers
JII	Hygienic Design of Food Facilities & Processing Equipment	Facility and Equipment Users

**BRGS**



**FSSC 22000**

<https://mygfsi.com/how-to-implement/recognition/certification-programme-owners>



# Hygienic design: What does it mean?

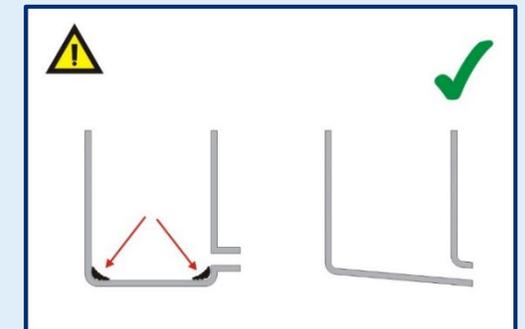
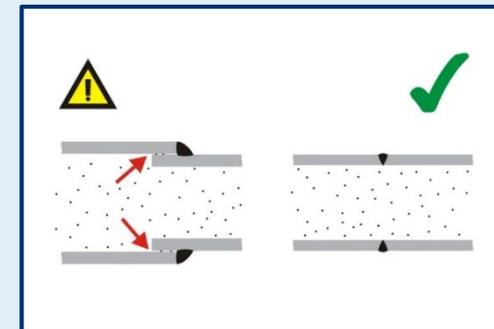
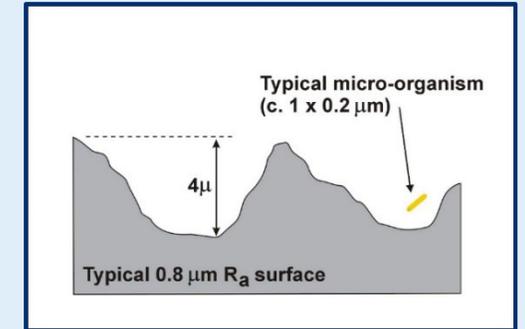
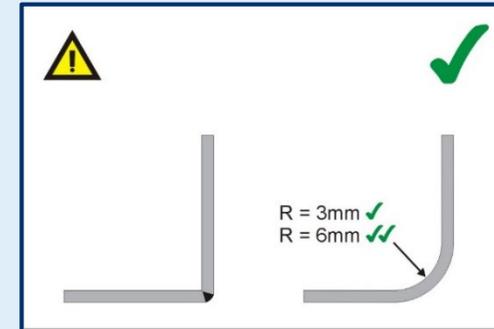


Making something that is easy to clean (decontaminate).

Some general principles of hygienic design:

- ✓ No sharp internal angles
- ✓ All areas accessible for easy cleaning and disinfection – no nooks & crannies
- ✓ Smooth surface finishes and welds
- ✓ Self-draining
- ✓ Resistant to corrosion, cracking, splintering, & flaking
- ✓ Non-absorbent
- ✓ Made of food-contact-compliant materials

Courtesy of Eric Partington, Nickel Institute



# Hygienic design: Why does it matter?

**EFSA<sup>1</sup>:** *Poor equipment hygienic design* is the most crucial risk factor for persistent \*pathogens in food production

\* *Salmonella, Listeria mono, Cronobacter sakazakii*

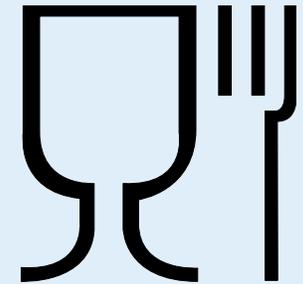
- Other risk factors:
  - Inadequate zoning & hygiene barriers
  - Inadequate cleaning & disinfection
  - Poor infrastructure



[1. Persistence of microbiological hazards in food and feed production and processing environments \(wiley.com\)](http://wiley.com)

# Hygienic design: EU legislation

- *Hygienic design*
  - EC 42/2006 - Machinery directive
- *Materials of construction*
  - EC 1935/2004 - Framework regulation: materials & articles intended to come into contact with food
  - EU 10/2011 - Plastics regulation
  - EC 2023/2006 – GMP for materials & articles intended to come into contact with food regulation
- EC 852/2004 - Hygiene of foodstuffs regulation



# Hygienic design: US legislation

With the passage of the US FDA Food Safety Modernization Act in 2011, more than ever, sites are required, by regulations, to have their equipment and premises constructed based on hygienic design principles:



21 CFR 117.40 –  
Equipment & utensils design & maintenance

*Equipment and utensils must be designed & constructed to be adequately cleaned or maintained to protect against contamination.*



21 CFR 117.20(b) -  
Plant construction and design

*The facility must be constructed or designed to facilitate maintenance & sanitary operations.*

<https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-117>

# Hygienic design: US legislation



FSIS published Sanitary Performance Standards Compliance Guide as a reference on methods already proven to be effective in maintaining sanitary conditions in meat and poultry establishments.

## § 416.2(b) Construction

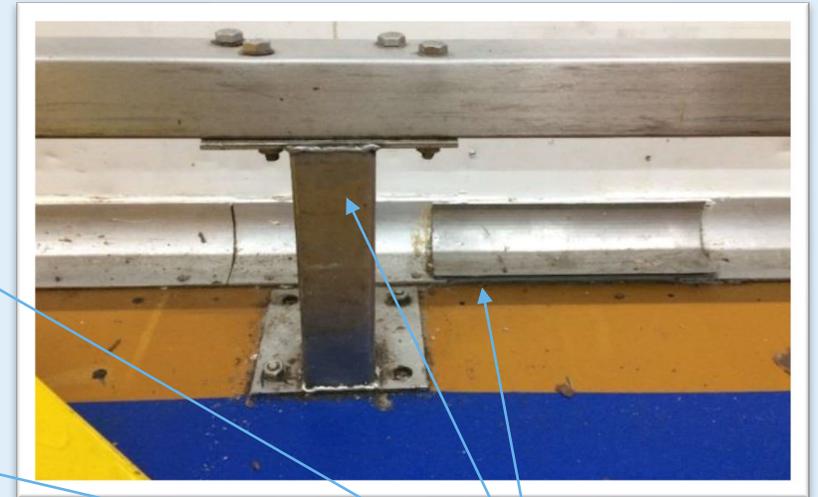
- a. *Establishment buildings, including their structures, rooms, and compartments must be of sound construction ...*
- b. *Walls, floors, and ceilings within establishments must be built of durable materials...*

## § 416.3 Equipment and utensils

- a. *Equipment and utensils used for processing or otherwise handling edible product or ingredients must be of such material and construction to facilitate thorough cleaning...*

# Bad hygienic design:

Walls, floors, drains, ducting/pipework



Contamination traps, difficult to clean

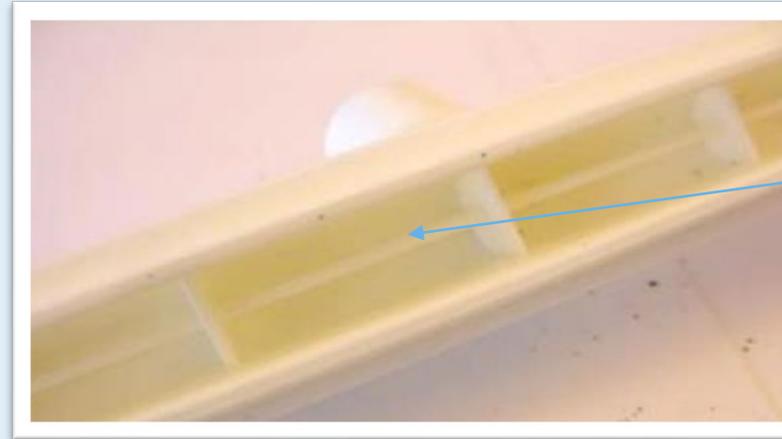
# Bad hygienic design:

## Cleaning equipment

Biofilm buildup  
under the  
screw thread  
handle fixing



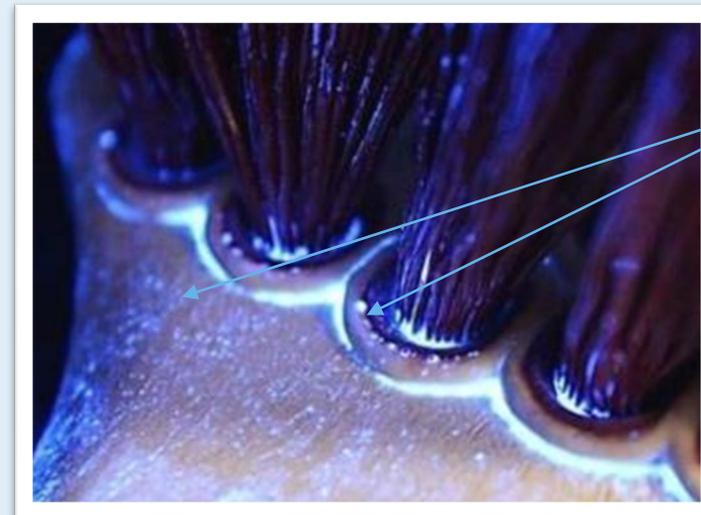
Multiple, deep  
'pockets' on the  
underside of a  
squeegee – difficult &  
time-consuming to  
clean



Biofilm buildup  
between the  
blades of a  
twin foam-  
bladed  
squeegee



Food industry  
cleaning brush  
with poor surface  
finish & multiple  
contamination  
traps

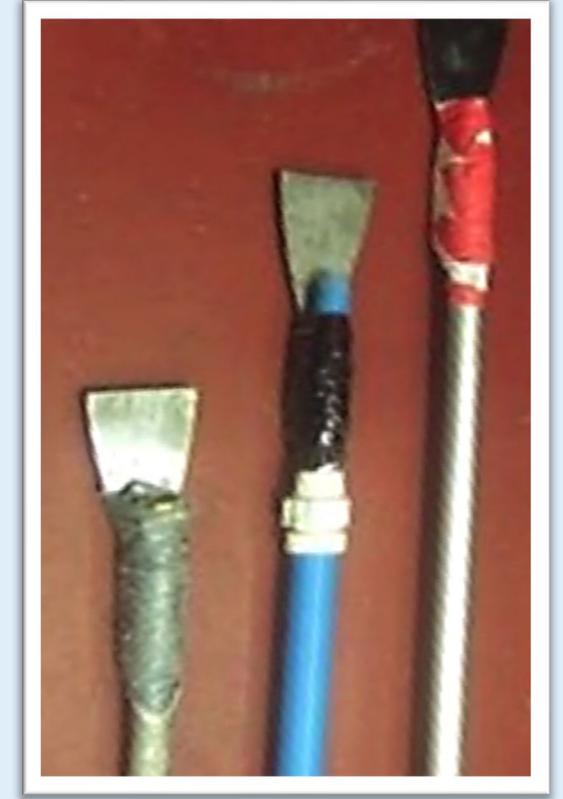


# Bad hygienic design:

Cleaning equipment - materials of construction



Site-made cleaning equipment



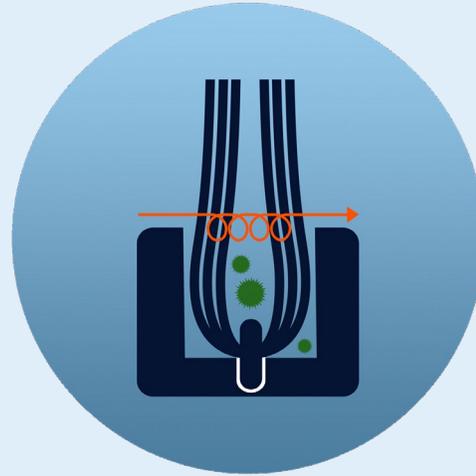
# Good hygienic design



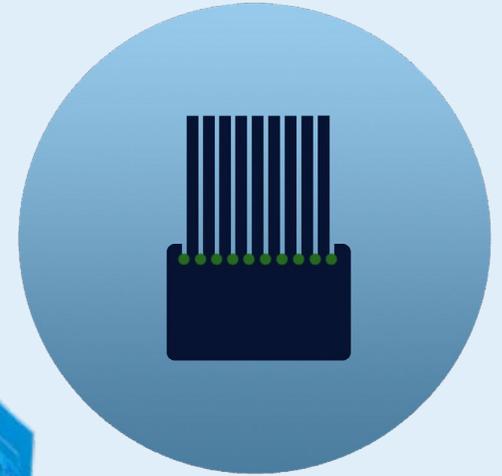
Fully moulded construction



Drilled & stapled



UST



# Hygienic design:

Guidance, certification, and training



<https://www.ehedg.org/>



<https://www.3-a.org/>



<https://www.nsf.org/>



# Cleaning tools: Good hygienic design

❖ <https://www.vikan.com/uk/services/webinar-archive>

❖ <http://viewer.ipaper.io/vikan/food-safety-information/ultra-hygiene/ultra-hygiene-advertorial-en-300/>

Join our webinar  
Achieving Hygienic Design Compliance:  
what every food industry stakeholder should know

→ Practical advice provided by our panel of experts

Feb. 28, 2024 @ 2:00pm (BST)

**Vikan.** **Remco**  
a Vikan company

 <p><b>Deb Smith</b> Vikan</p>	 <p><b>James Hartley</b> Mondelez International</p>
 <p><b>Tim Rugh</b> 3-A Sanitary Standards</p>	 <p><b>Patrick Wouters</b> EHEDG</p>

**Vikan**  
FOOD SAFETY INFORMATION

## Choosing hygienically designed cleaning tools

- what are they and why it matters

GLOBAL HYGIENE SPECIALIST DEBRA SMITH  
VIKAN A/S, RÆVEVEJ 1, 7800 SKIVE, DENMARK

WHAT ARE HYGIENICALLY DESIGNED CLEANING TOOLS?  
The hygienic design of something is related to how easy it is to clean. It can also relate to the materials it is made of<sup>1)</sup>.

The principles of hygienic design have been defined<sup>2)</sup> by the European Hygienic Engineering Design Group (EHEDG, see www.ehedg.org).

Vikan are Company Members of EHEDG



WHY HYGIENIC DESIGN MATTERS  
Thanks to EHEDG, many food manufacturers already appreciate the benefits of using hygienically designed production equipment, i.e. that it is quicker and easier to clean, and minimises the risk of product contamination by microbes, allergens, foreign bodies etc. This in turn maximises food safety and quality, reduces the risk of expensive product rejection or recall, and minimises food waste. However, when it comes to the equipment used to clean the food production environment and production equipment, very few cleaning tools are developed with good hygienic design in mind.

These principles state that equipment should be/ have,

- free of crevices and contamination traps e.g. use of smooth joins, absence of small holes, recesses, and sharp internal angles
- a smooth surface finish (Ra, less than 0,8µm)

1) easy to clean (and dry) e.g. quick and easy to dismantle/re-assemble, or of one piece construction, or with easy access to all areas for cleaning and disinfection

- made of food safe materials i.e., non-toxic (in compliance with EU food contact material legislation)
- well constructed e.g. durable
- non-absorbent
- appropriately temperature and chemical resistant i.e. to dishwashing and autoclaving, to cleaning and disinfection chemicals.

2) Vikan A/S - Department of Research & Development Copyright © 2016 Vikan A/S - All Rights Reserved 01

# Control strategies to maximise audit compliance

- Hygienic design
- Sanitation
- Cross-contamination prevention
- Zoning
- Environmental monitoring
- Food safety culture



# Wet sanitation

## Foaming

- Common method of decontamination used in food production
- Visibly soiled surfaces should be rinsed clean
- Surfaces are covered in a chemical foam, which is given time to act on any remaining contamination before it is rinsed off
- Good for decontaminating large areas such as floors, walls, conveyors, and tables and large, open production equipment
- Wet sanitation only
- Manual cleaning tools are required for detail/deep cleaning and removal of stubborn soils



# Wet sanitation

## Cleaning in Place (CIP)

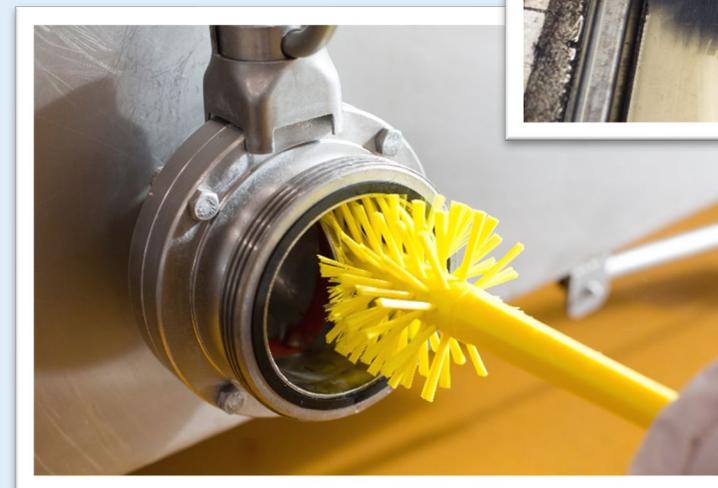
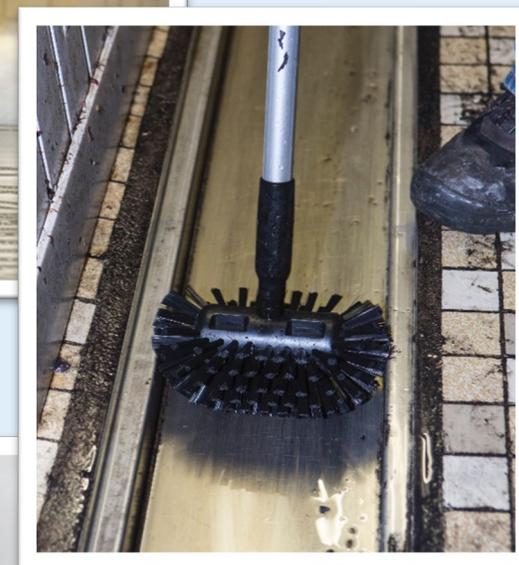
- Commonly used to sanitise closed pipework and vessels used for liquid/semi-solid foods, e.g. dairy products, sauces. Uses:
  - Automated CIP system
  - Aggressive chemicals
  - High temperatures
  - Turbulent flow rates (mechanical action)
- Manual cleaning tools are required for detail/deep cleaning



# Wet sanitation

## Manual cleaning

- Probably the most common method of cleaning used in food production
- Can be used alone or in combination with other sanitation methods.
- Good for:
  - decontaminating small-to-medium-sized production areas/equipment;
  - open surface cleaning, pipework, and vessels
  - deep cleaning
  - detailed & complex equipment
- Controlled wet sanitation
- Requires trained staff, appropriate equipment, chemicals, methods, & time.



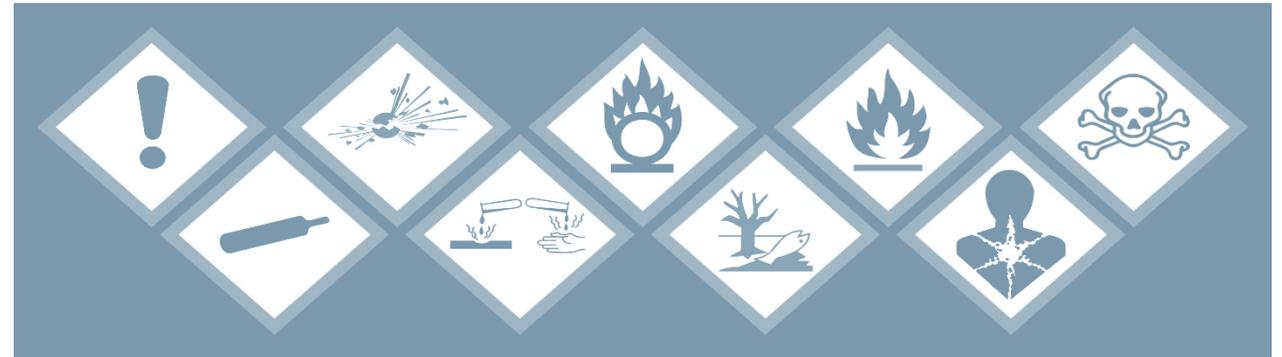
# Sanitation chemicals

Cleaning chemical suppliers can provide:

- advice (and training) on the types, concentrations, application, temperature, contact time, and health & safety information.
- dosing and foaming equipment

Cleaning chemicals must be:

- made up and used as per cleaning chemical manufacturers instructions
- applied and left in contact with the item being cleaned for long enough to be effective
- thoroughly rinsed from the surface after use (in most cases)



# Dry sanitation

## Vacuuming



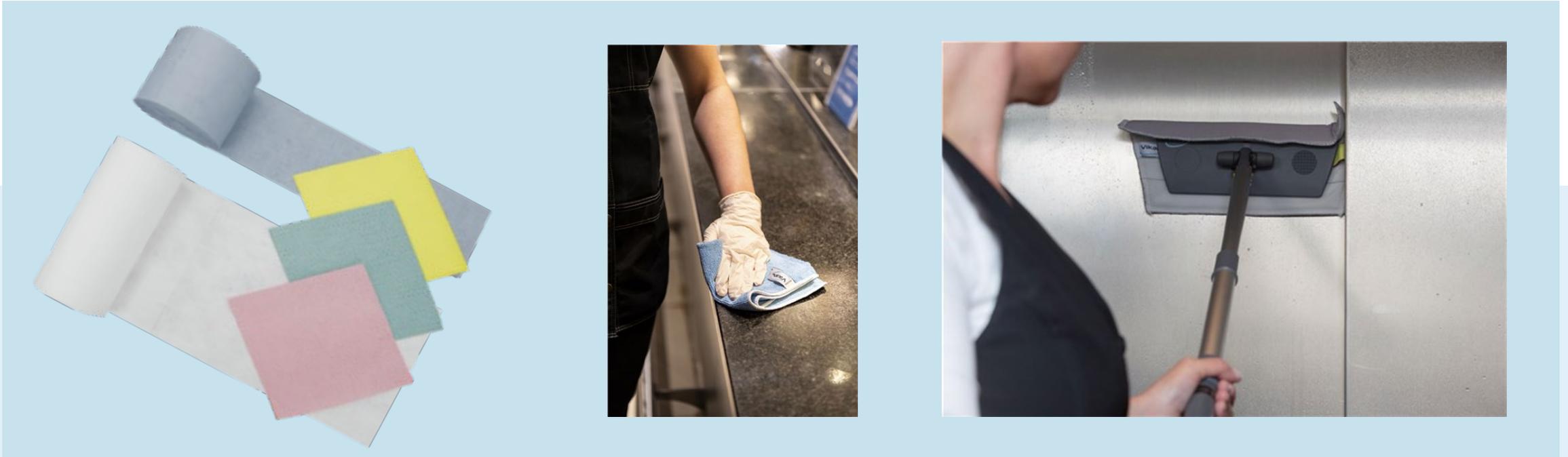
- Vacuum cleaners must be appropriately certified to minimise the risk of explosions
- Equipment and protective systems must be intended for use in potentially explosive atmospheres
- Fitted with appropriate bag and exhaust filters to prevent contamination from being expelled again, e.g., HEPA



- <https://www.delfinvacuums.com/en/>
- <https://www.goodway.com/products/industrial-vacuum-cleaners>

# Dry sanitation

## Wiping



Disposable fabric and paper cloths, wet or dry

Microfibre cloths

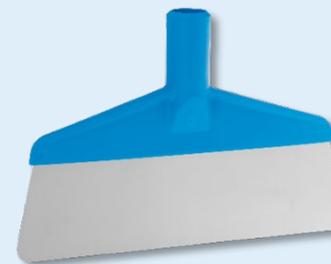
- Very good at low-level contaminant removal
- Use damp or dry. Reusable many times.
- Validated hazard removal laundering process

Microfibre mops

# Dry sanitation

## Scraping

- For the removal of stubborn debris – dried or baked on, heavy grease deposits, set or molten confectionary
- Choose stainless steel, polypropylene, or nylon blades, depending on the surface type to be cleaned
- Choose the blade shape, size, and thickness depending on what you are cleaning – floors, equipment, etc.
- Some scrapers can be fitted to a variety of handles to achieve the required reach



# Dry sanitation

## Sweeping & scrubbing



**Soft-bristled brush**

For the removal of loose dry powders



**Stiff-bristled brush**

For the removal of dried-on soils



Sometimes used instead of a brush or broom

- doesn't clog
- easier to clean

**Squeegee**

For the removal of liquids or other waste

# Dry sanitation

Sweeping & scrubbing



Courtesy of CampdenBRI

# Dry sanitation



Dustpan sets

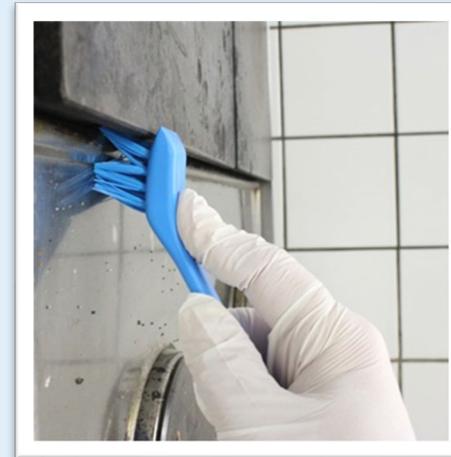


Shovels

- Waste handling
- Allergen spill kits

# Dry sanitation

Detail  
cleaning



# Dry sanitation

## Other methods

- Pigging – gross debris is pushed through pipework by a specialist projectile ‘Pig’
- Granular purging, scrubs, blasting\* – the use of the food product itself or inert granules to provide an abrasive cleaning force
- Dry ice\* – uses carbon dioxide to form dry ice crystals that are fired at high velocity onto the surface to be cleaned
- Dry steam – uses super-heated saturated steam with almost no moisture (<0.5%)
- Hot oil flushing – uses heated oil to help remove oil/fat-based foods & greasy deposits

<https://www.foodprotection.org/annualmeeting/programs-and-activities/workshops/workshop-1-demystifying-dry-cleaning-understanding-the-when-how-and-why-of-dry-cleaning-sanitizing-2/>

\*Will spread contamination in similar way to compressed air



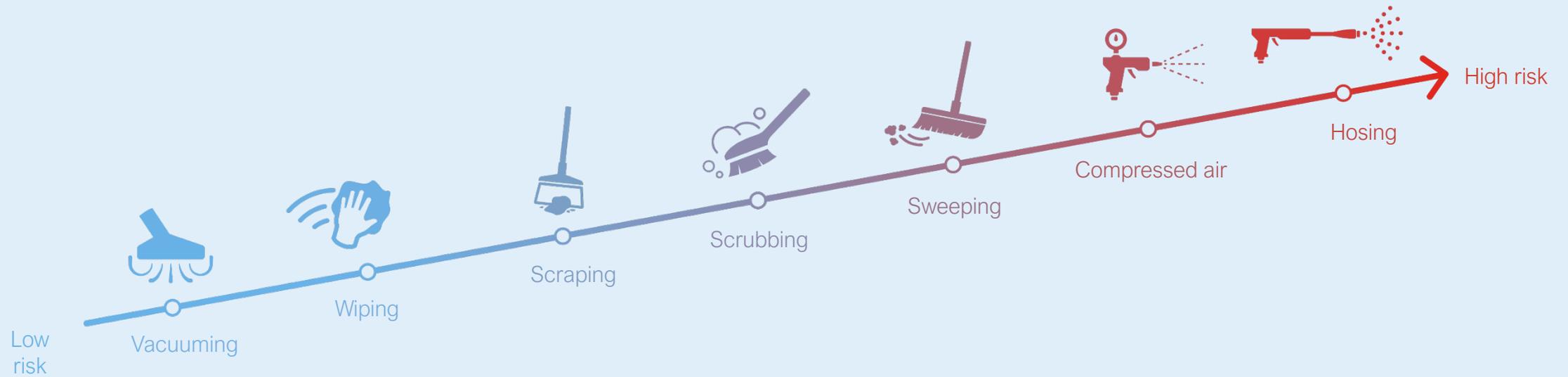
# Control strategies to maximise audit compliance

- Hygienic design
- Sanitation
- Cross-contamination prevention
- Zoning
- Environmental monitoring
- Food safety culture



# Cross-contamination prevention

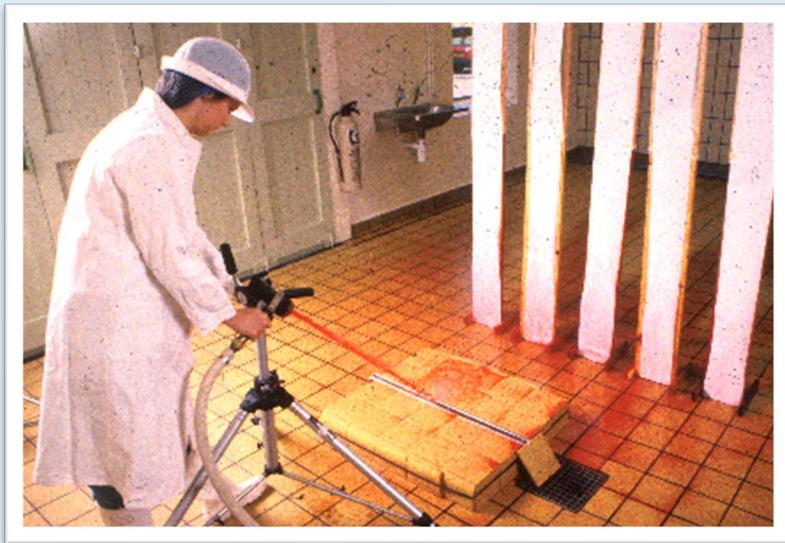
All cleaning activities can cause cross-contamination



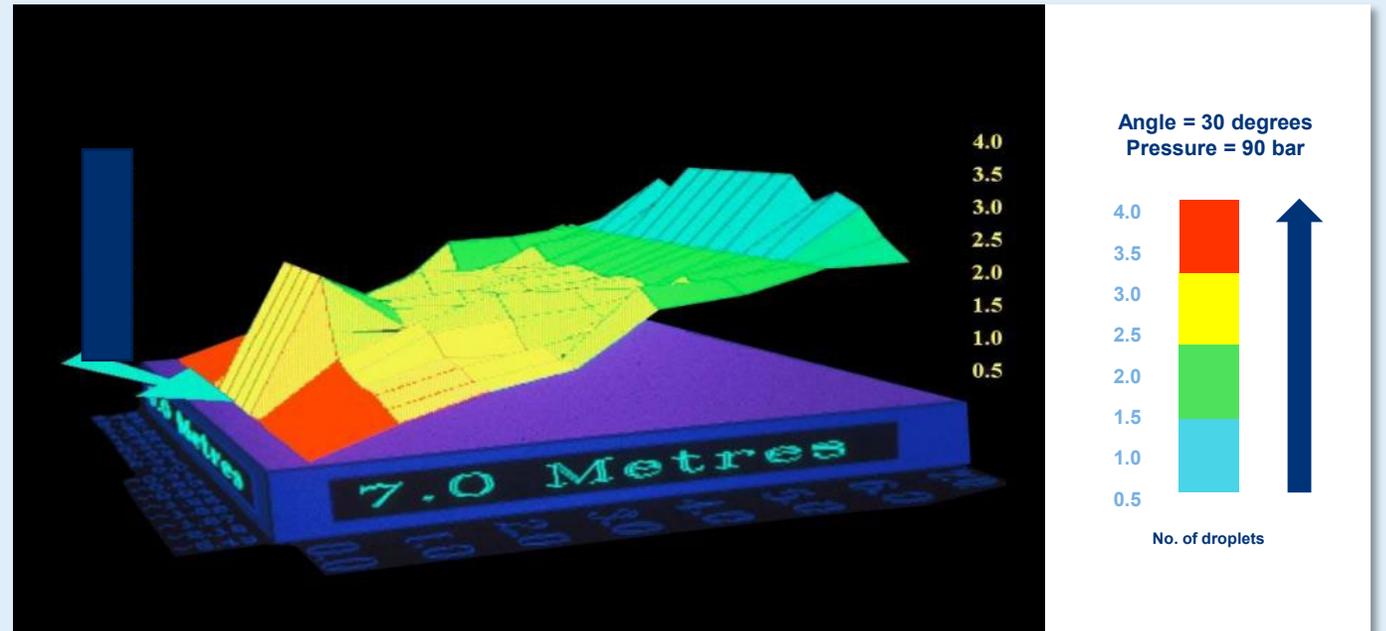
Select the sanitation activity that maximises contamination removal and minimises contamination spread

# Cross-contamination prevention

## High pressure hosing



Courtesy of Campden BRI

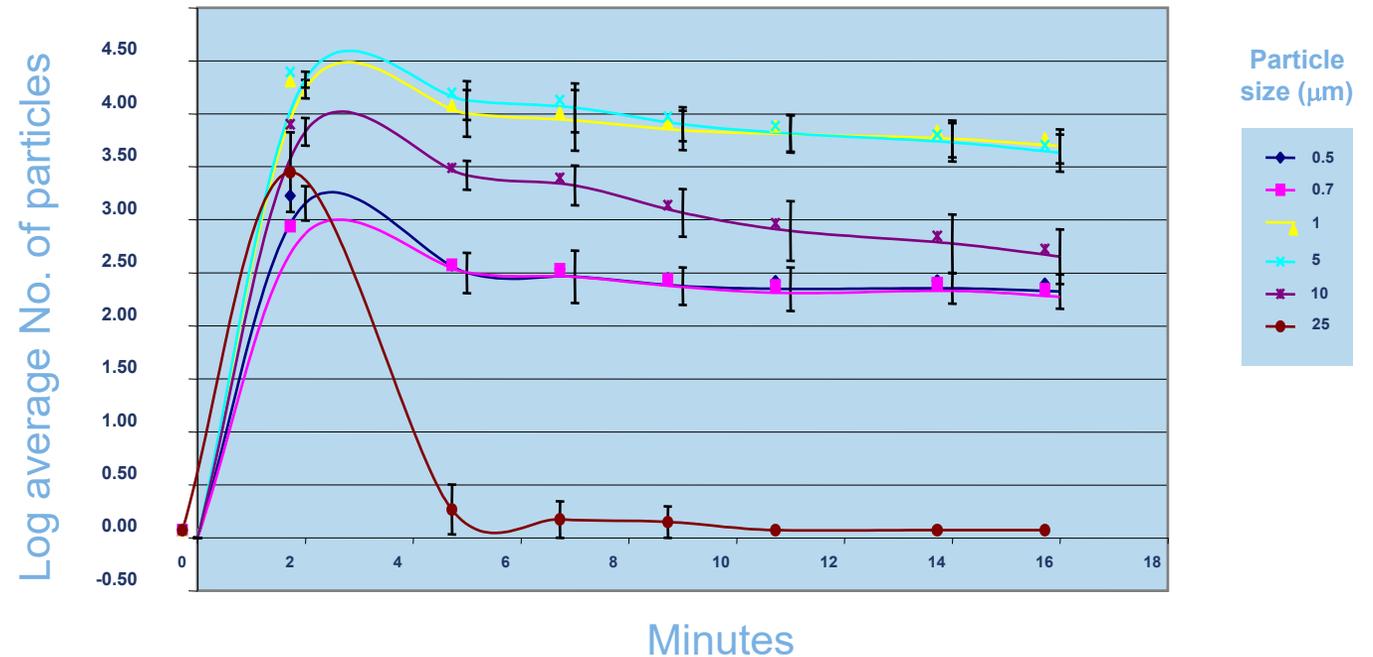


# Cross-contamination prevention

## Compressed air



Size and number of particles in the air after using compressed air on flour

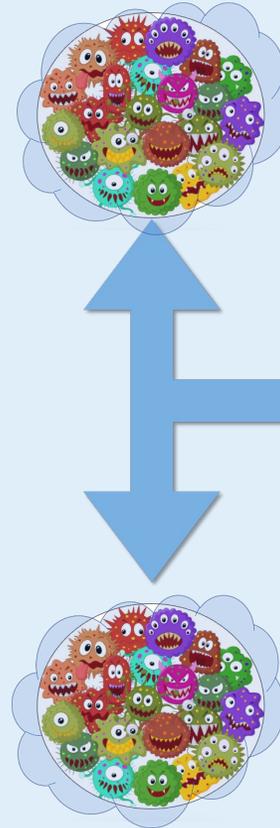


Courtesy of Campden BRI

# Cross-contamination prevention

## More top tips

- Don't clean / minimise sanitation during production
- Clean things as far away as possible from open product (spatial segregation)
- Clean in physically segregated areas to protect product from splashes, etc. (separate cleaning rooms/screens)



# Cross-contamination prevention



## Section 4.11.6

- Cleaning equipment shall be cleaned & stored in a hygienic manner to prevent contamination.



## Section 10.2.9.8

- All equipment, utensils, and protective clothing shall be cleaned after use or at a frequency to control contamination and stored in a clean and serviceable condition to prevent microbiological or cross-contact allergen contamination.



## Clause 11.3 Cleaning and sanitising programmes:

- Cleaning and sanitising programmes shall be established and validated by the organisation to ensure that all parts of the establishment and equipment are cleaned and/or sanitised to a defined schedule, including the cleaning of cleaning equipment.

# Cross-contamination prevention



## ➤ October 2020

- **FDA warning letter** issued to food manufacturer highlighting ‘critical food safety violations’ including the improper movement and use of an **unclean broom** from a wet cooler passageway to a ready-to-eat (RTE) food production area.
- **Whole genome sequencing traced *Listeria monocytogenes***, found in the RTE area, back to the broom.
- FDA concluded that food manufacturer **did not clean and sanitize their utensils and equipment in ‘a manner that protected against contamination of food, food-contact surfaces, or food-packaging materials’**.

<https://www.foodsafetynews.com/2020/11/two-california-food-companies-warned-over-violations/>

<https://remcoproducts.com/us/services/vikan-blog/how-to-keep-cleaning-tools-from-becoming-vectors-of-contamination>



# Cleaning tool sanitation

## Dry cleaning

- Brush, knock, or shake after use to remove loose dry debris
- Replace when no longer fit for purpose – worn, clogged
- Use it once & throw away

## Wet cleaning

Manual cleaning in water containing a detergent/sanitiser



Use an automated washing system, e.g., tray/equipment washer or an industrial dishwasher.

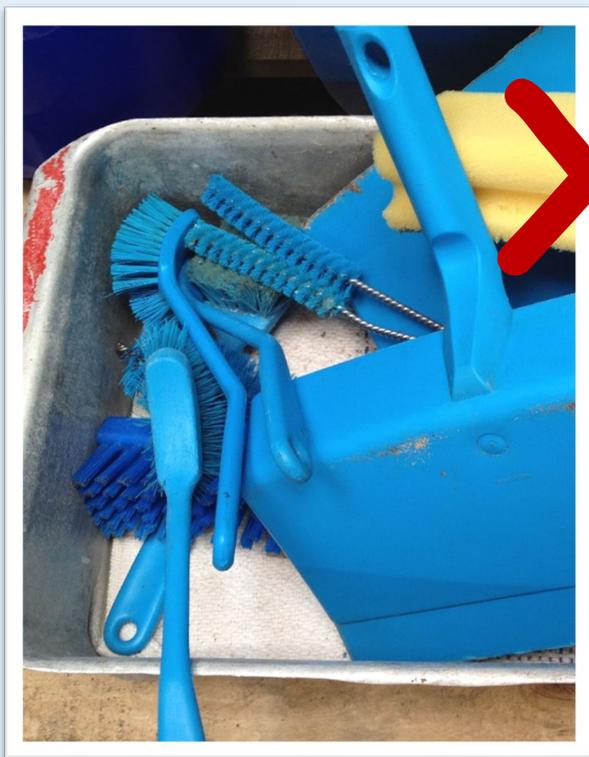
Note: Dishwasher jets may cause some deformation of soft bristles



Use an industrial washing machine.  
[https://www.linkedin.com/posts/kurt-fryer-5411236\\_haccp-foodsafetyandhygiene-electroluxprofessional-activity-6660535624031965184-yZP9](https://www.linkedin.com/posts/kurt-fryer-5411236_haccp-foodsafetyandhygiene-electroluxprofessional-activity-6660535624031965184-yZP9)

Includes a thermal disinfection step that also aids drying

# Cleaning tools: Maintenance



<https://www.vikan.com/uk/services/webinar-archive>



WHITE PAPER

## Optimising Food Safety Through Good Cleaning Tool Maintenance

DEBRA SMITH - GLOBAL HYGIENE SPECIALIST,  
VIKAN A/S, RÆVEVEJ 1, 7800 SKIVE, DENMARK

**KEYWORDS**  
Cleaning tools;  
Equipment maintenance;  
Food safety, hygiene and quality;  
HACCP prerequisites;  
Hygienic design;  
Decontamination;  
Cross-contamination;  
Risk.

**INTRODUCTION**  
*Cleaning* is a critical step in the management of food safety and quality. Consequently, the correct maintenance of cleaning tools by the food industry is essential to minimise the risk of microbial, *allergen*, and *foreign body* cross-contamination. This, in turn, aids compliance to relevant regulatory and legal requirements, HACCP prerequisite programs, and audit standards. Additionally, this process can have many other benefits including:

- improving the effectiveness and efficiency of cleaning, thus reducing the downtime required to clean;
- improving food safety, quality and shelf-life;
- reducing waste;
- minimising the risk of product recalls;
- protecting/improving the reputation and income of the food business;
- minimising the risk of prosecution; and
- associated cost reductions.



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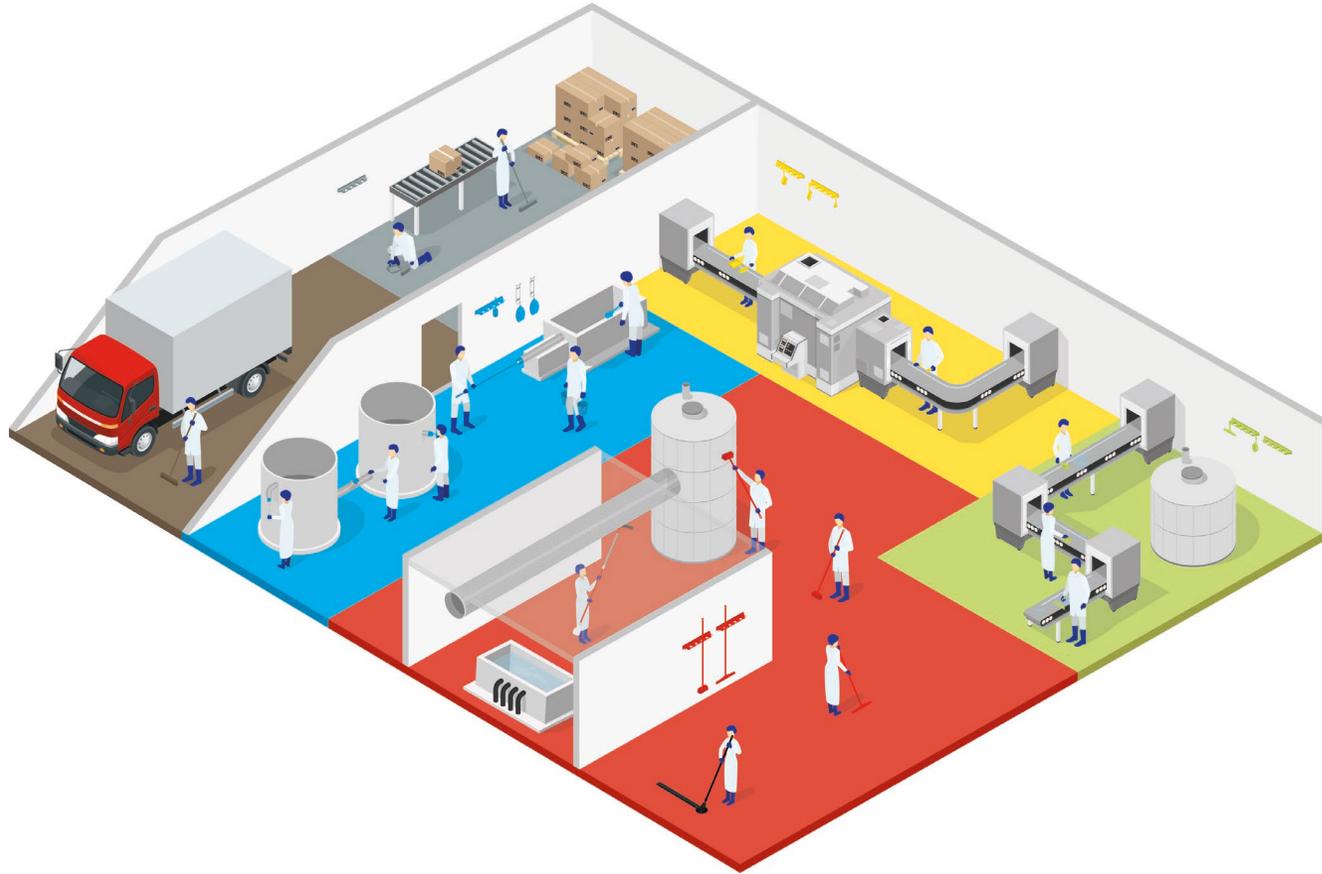
<http://viewer.ipaper.io/vikan/white-papers/cleaning-tool-maintenance/cleaning-tool-maintenance-whitepaper-en-300/>

# Control strategies to maximise audit compliance

- Hygienic design
- Sanitation
- Cross-contamination prevention
  - Zoning
  - Environmental monitoring
  - Food safety culture



# Zoning



- ❖ Zones based on risk to the hygienic status of environment and products - high risk, medium risk, low risk
- ❖ Color coding by process zones - This is especially important in food processing plants where process streams will need to be kept separate to prevent cross-contamination
- ❖ For example, meat processing facilities often colour-code to distinguish raw meat from cooked, semi-processed, and/or processed meats.

Link: <https://www.vikan.com/int/services/colour-coded-segregation>

# Environmental monitoring and control

- ❖ At minimum, a risk-based **environmental monitoring program** for the relevant pathogens, spoilage, and indicator organisms is required.

<b>ZONE 1</b> <i>Product contact surfaces</i>	<b>ZONE 2</b> <i>Areas in close vicinity of Zone 1</i>	<b>ZONE 3</b> <i>Exposed product areas away from Zone 1</i>	<b>ZONE 4</b> <i>Areas outside exposed product room</i>
<b>Examples:</b> <ul style="list-style-type: none"><li>- Food equipment</li><li>- Work tables</li><li>- Tools like scoops</li></ul>	<b>Examples:</b> <ul style="list-style-type: none"><li>- Exterior of equipment</li><li>- Hoses</li><li>- Maintenance tools</li></ul>	<b>Examples:</b> <ul style="list-style-type: none"><li>- Walls</li><li>- Floors</li><li>- Forklifts</li></ul>	<b>Examples:</b> <ul style="list-style-type: none"><li>- Warehouse</li><li>- Offices</li><li>- Washrooms</li></ul>

**As a best practice**, a comprehensive environmental sampling, monitoring, trending, and control program may not only include microbes, but also allergens, foreign materials, and other contaminants of concern.



# Food safety, hygiene, and sanitation culture



According to GFSI Benchmarking Document 2020, **food safety culture** elements shall include, but are not limited to:

- ❖ Communication about food safety policies and responsibilities
- ❖ Training
- ❖ Employee feedback on issues related to food safety
- ❖ Performance measurement

More information from our webinar archive on "*Food Safety Culture and Colour-Coding: How to exceed compliance and simplify complexity*" is available here: <https://remcoproducts.com/us/services/webinar-archive>

Link: <https://remcoproducts.com/us/services/vikan-blog/top-6-food-safety-culture-and-color-coding-webinar-questions-answered-by-industry-experts>

# Tips on finding the right GFSI-benchmarked standard for your food site

- ❖ Not all GFSI-benchmarked schemes are created equal
- ❖ Ask your customers
- ❖ Research on the certification options
- ❖ Make the decision to get GFSI-benchmarked standard certified
- ❖ Keep abreast of relevant changes in the standard through reliable information

# Summary

- ❖ Food sites certify to a GFSI-benchmarked standard to align their **food safety management system** compliance to global customer requirements.
- ❖ There is an enhanced focus on **cross-contamination prevention**, which means robust food hygiene and sanitation controls are a greater, and a mandatory requirement for food sites.
- ❖ **Food safety culture** is a new added element. Expect more **hygienic design**-related updates in future GFSI-benchmarked programs. These requirements will raise the bar for the food safety and quality assurance of products.

# Further information and support



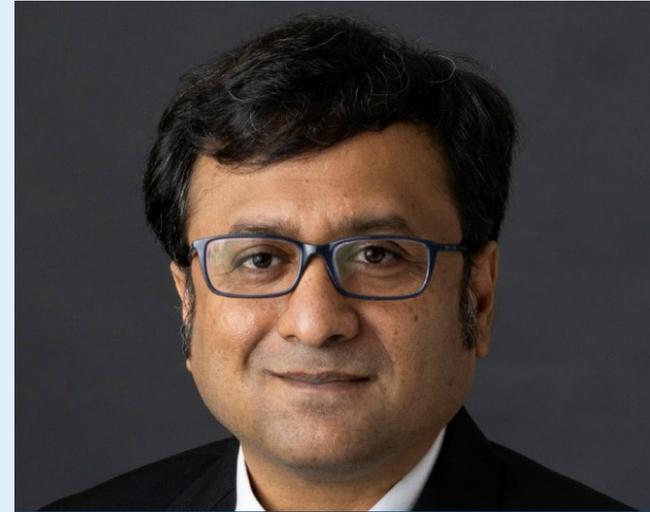
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**Remco, USA**

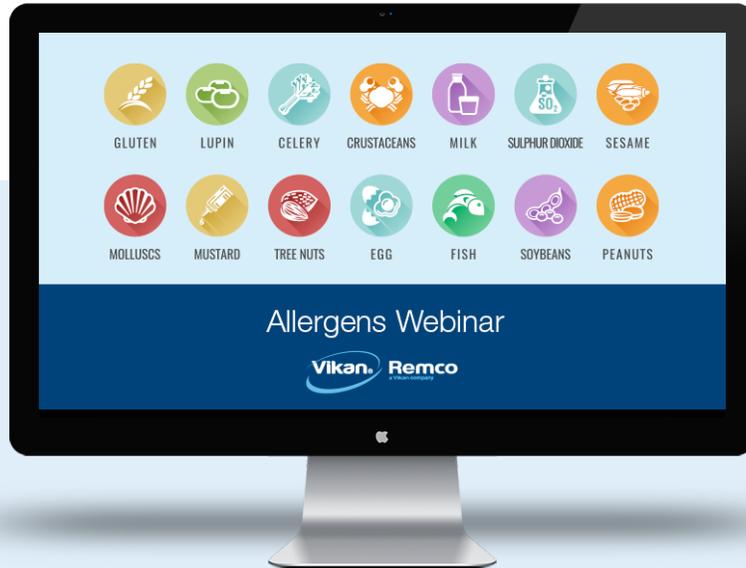
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[remcoproducts.com](http://remcoproducts.com)

# Vikan's Food Safety Webinar Series

What's next?



## Topic:

The What, How, and Why of Risk-Based Allergen Management: From Recipe to Removal

## Date & Time:

10 October 2024  
3 p.m. CEST (9 a.m. EST)

## Presenter:

Deb Smith, Vikan