

**WHITE PAPER** : Making the Decision to Apply Color-Coding



## What is a 5S System?

Developed by the Japanese, the 5S System organizes a workplace based on the five “pillars”:

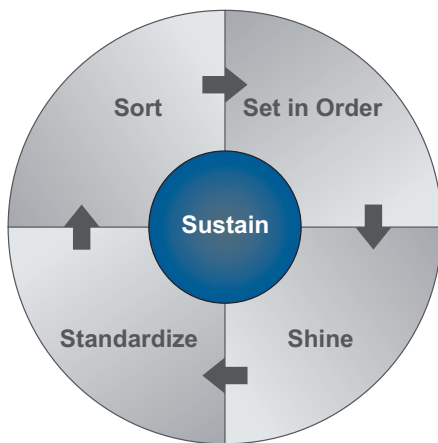
**Sort.** Workers are encouraged to eliminate all unnecessary tools and only keep essential items.

**Set in order.** Workers, equipment, parts, instructions and the work itself flow in an orderly, productive way that is free from waste.

**Shine.** The workspace and equipment are clean and organized. At the end of each shift, workers ensure all work areas are restored to their original, organized state.

**Standardize.** This pillar supports the previous three by instituting standard best practices and procedures at each step of the process.

**Sustain.** Maintaining proper procedures is made a habit throughout the organization.



## Consider the benefits of color-coding.

With the signing of the Food Safety and Modernization Act (FSMA) in 2011, many food processors are taking proactive steps by instituting color-coding as part of their Good Manufacturing Practices. These practices follow guidelines of Hazard Analysis and Critical Control Points (HACCP) — a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material product, procurement and handling, to manufacturing, distribution and consumption of the finished product. Currently there are HACCP procedures developed for dairy, juice, seafood, and retail and food service.<sup>(1)</sup>

But in examining the intent of the HACCP procedures, one can easily see how other types of processing facilities could also benefit from color-coding systems. Processors who work with chemicals, pharmaceuticals, trash, recycled materials, sanitation, other raw materials or are concerned with manufacturing hygiene could also consider how color-coding might benefit their facilities.

## How color-coding can be applied.

First, color-coding can be implemented to provide “zone control” within a food processing or food service facility. Different colors can be assigned to each step in the process or by manufacturing lines, whatever makes sense. When colors are assigned to zones, confirming that a tool is misplaced is easy, and tracing it back to its point of origination is quick. This level of traceability can translate to the prevention of costly recalls.

Second, color-coding may be useful in instances where zones aren’t necessarily required, such as dividing workspaces. For example, “Red” could mean “1st Shift” while “Blue” could indicate “2nd Shift.” In this situation, shift employees are taught to understand which colored tools are for their shift, so they’re less likely to use another shift’s tools. Using color-coding to designate workspaces in this way can be particularly helpful to companies that closely monitor tool and equipment costs. The result can be a reduced incidence or misuse of tools in unapproved areas, as well as fewer lost or misplaced items.

Third, color-coding is often part of businesses that follow a 5S System, which integrates color “cues” throughout a work process or facility in order to reduce waste and optimize productivity. Color-coded tools intuitively complement and support the goals of a 5S workplace. The color-coding promotes a workplace culture where tools and supplies are placed where they are needed and well-maintained for longevity of use.

Finally, color-coding can also be employed to distinguish cleaning versus sanitation in a processor’s maintenance routines. For instance, “Black” is a common color used to identify cleaning tools used on floors and around drains. Other colors can be selected to designate tools that are appropriate for sanitizing food contact surfaces, or to differentiate between tools that are specified for use with particular chemical agents. This practice can also help prevent the undesired occurrence of using a powerful cleaner on the wrong equipment.

## The Top 8 Food Allergens: <sup>(2)</sup>

While more than 160 foods can cause allergic reactions in people with food allergies, the following are listed as the top eight by law, by the Food Allergen Labeling and Consumer Protection Act (FALCP):

1. Milk
2. Eggs
3. Fish (e.g., bass, flounder, cod)
4. Crustacean shellfish (e.g., crab, lobster, shrimp)
5. Tree nuts (e.g., almonds, walnuts, pecans)
6. Peanuts
7. Wheat
8. Soybeans



## Determining your facility's need for color-coding.

Many factors can influence a processor's decision to implement a color-coding system. Changes in industry regulations or a new manufacturing line can often be a first prompt.

To decide if color-coding is right for your facility, consider these criteria:

1. Does your facility process food, or serve the food service industry?
2. Do any of the ingredients used in the food production process pose microbiological threats?
3. Do you use certain chemicals in any area that would pose a threat if they were transferred to another area?
4. Is it necessary to segregate tools based on the areas where they are to be used, such as floors and drains vs. equipment surfaces, or food contact vs. non-food contact areas?
5. Does your facility process foods that contain ingredients that are known allergens? (See sidebar for common allergen information)
6. Does your facility maintain a HACCP plan or a master sanitation schedule?
7. Does your facility employ a 5S System?
8. Does your facility have separate manufacturing lines for different products?
9. Do you have a need within your facility to divide work spaces in order to maintain quality control?
10. Do you have a manufacturing process that must be consistent from plant to plant?
11. Do any of the following groups have regulatory authority over your products, provide input into your processes, or do you look to them for guidance or certification? (See appendix.)

FDA - U.S. Food and Drug Administration

USDA - U.S. Department of Agriculture

CFIA – Canadian Food Inspection Agency

GFSI - Global Food Safety Initiative

SQFI – Safe Quality Food Institute

FMI - Food Marketing Institute

ISO - International Organization for Standardization

ServSafe - National Restaurant Association Food Safety Training

ANSI - American National Standards Institute

AIB - American Institute of Baking International

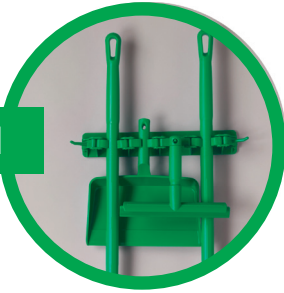
IFT - Institute of Food Technologists

FAO - Food and Agriculture Organization of the United Nations

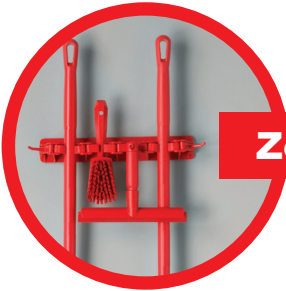
WHO - World Health Organization

IFS – International Featured Standards / International Food Standard

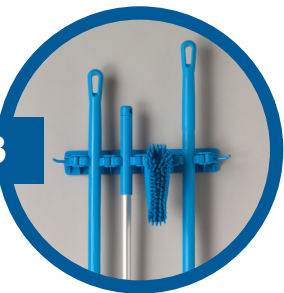
**Zone 1**



**Zone 2**



**Zone 3**



FSSC 22000 – The Foundation for Food Safety Certification 22000

EPA - U.S. Environmental Protection Agency

BRC – British Retail Consortium

12. Are you a US-based processor with employees who do not speak English as their native language? Or do you have plants in various countries with employees speaking multiple languages?

13. Do you have a problem with tools getting lost, misplaced or used inappropriately?

14. Must your facility meet certain sanitation standards?

If you answered YES to any of the questions above, your processing facility is a strong candidate for color-coding.

Color-coding can be particularly helpful for: 1) maintaining strict work zones, 2) reducing the risk of pathogens, allergens and other foreign contaminants affecting their operations, or 3) minimizing miscommunication throughout a facility's processes.

## Guidance for implementing your program.

Once a facility has determined color-coding is a positive decision, care should be taken in implementing a color-coding system that makes sense. Here are some tips for assuring a well-implemented color-coding system:

### 1. Keep it Simple

After you've identified the hazards and the Critical Control Points that can benefit from color-coding, make sure you make your color assignments as simple and logical as possible. A good rule of thumb is to assign only one color to each zone. Make sure the colors you select make sense in relation to your process. It's also a good idea to check the availability of colors in the tools you need before finalizing your plan. This will allow your operation the greatest flexibility.

### 2. Be Consistent

Once you've made logical color assignments, consider where the color should be applied to assure the process is followed properly. Consider your material handling, tubs, machinery, labels, plant signage, storage closets, employee clothing and floor markings. Key items within a particular zone or Critical Control Point should be identified with the appropriate color to assure consistency. Be sure your documentation at each point of use is also consistent with the paperwork used by your Quality Manager and Purchasing Department, so you can more easily determine when color-coded work items have been misplaced, lost or stolen, and items can be re-ordered with greater ease.

### 3. Communicate the Program

Once you decide to implement a color-coding program, be sure you also have a communication strategy for how the program will rollout to your employees. Most processing facilities already have guidelines for how to communicate changes in processing procedures. It's often recommended to meet with shift employees first, and then communicate the program to all employees. It's considered a best practice to include details about your color-coding program in your operation's

Preventive Control or Prerequisite Procedures, such as GMP's, SOP's, CCP's or Non-CCP's. Following this best practice will go a long way to help ensure company-wide adoption, consistency and compliance of any color-coding scheme you may choose to implement. Whatever you do, be sure to implement the program in its entirety. It's best NOT to have part of your facility following the old protocol while another part of the facility is using your new color-coded protocol.

### **Conclusion.**

Color-coding is an effective way to minimize cross-contamination or other hazards within a processing facility. While not a requirement of many regulating bodies, color-coding can demonstrate a company's dedication to the quality and consistency of their products while maintaining a high level of safety for both their employees and end users. For more information on color-coded products available from Remco, visit [www.remcoproducts.com](http://www.remcoproducts.com).

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## References:

<sup>(1)</sup>FDA, <http://www.fda.gov/Food/GuidanceRegulation/HACCP/default.htm>

<sup>(2)</sup>FDA, <http://www.fda.gov/food/resourcesforyou/consumers/ucm079311.htm>

## Appendix:

### **FDA – U.S. Food and Drug Administration**

A federal agency responsible for monitoring trading and safety standards in the food and drug industries. [www.fda.gov](http://www.fda.gov)

### **USDA – U.S. Department of Agriculture**

A federal department that administers programs and provides services to farmers. The Food Safety and Inspection service of the USDA develops policies and inspection methods that help safeguard food safety. [www.usda.gov](http://www.usda.gov)

### **CFIA – Canadian Food Inspection Agency**

A Canadian agency that works with federal, provincial and municipal agencies, as well as consumers and industry, to protect Canadians from health risks related to food. [www.inspection.gc.ca](http://www.inspection.gc.ca)

### **GFSI – Global Food Safety Initiative**

A non-profit foundation established by global companies to harmonize food safety standards and avoid duplication throughout the supply chain. <http://www.mygfsi.com>

### **SQFI – Safe Quality Food Institute**

An organization recognized by retailers and food service providers worldwide for its food safety certification program designed to reduce assessment inconsistencies and costs in managing food safety. SQFI is recognized by the GFSI. [www.sqfi.com](http://www.sqfi.com)

### **FMI – Food Marketing Institute**

An organization that serves the needs of food distribution and related businesses including grocery wholesalers and supermarkets. The organization serves the industry through its government relations, food safety programs, industry information, education and consumer affairs. [www.fmi.org](http://www.fmi.org)

### **ISO – International Organization for Standardization**

The world's largest developer of voluntary International Standards that provide state-of-the-art specifications for products, services and good practice. From food safety to computers, and agriculture to healthcare, ISO International Standards impact all our lives. [www.iso.org](http://www.iso.org)

### **ServSafe – National Restaurant Association Food Safety Training**

A program developed by the National Restaurant Association to provide food safety training, exams and educational materials to food service managers. [www.servsafe.com](http://www.servsafe.com)

### **ANSI – American National Standards Institute**

An institute dedicated to the creation and use of norms and guidelines for nearly every business sector — from acoustical devices to construction equipment, from dairy to livestock production, and more. ANSI is also engaged in accrediting programs that assess conformance standards, such as ISO 9000 (quality standard). [www.ansi.org](http://www.ansi.org)

### **AIB – American Institute of Baking International**

A group committed to protecting the safety of the global food supply chain. AIB provides

food safety inspections, audits and certifications, food safety education and research and technical services. [www.aibonline.org](http://www.aibonline.org)

**IFT – Institute of Food Technologists**

A visionary organization dedicated to advancing the science of food and the people who practice it. As a leading advocate for food science and change around the world, the group provides a global forum where members from more than 100 countries share, learn and grow. [www.ift.org](http://www.ift.org)

**FAO – Food and Agriculture Organization of the United Nations**

An intergovernmental organization dedicated to achieving food security for the world. FAO's departments and offices are involved in agriculture and consumer protection, economic and social development, fisheries and aquaculture, forestry, natural resources and the environment. [www.fao.org](http://www.fao.org)

**WHO – World Health Organization**

The directing and coordinating authority for health within the United Nations. WHO is responsible for providing leadership on global health matters, shaping the health research agenda, setting standards, articulating policy options, providing technical support and assessing health trends. [www.who.int](http://www.who.int)

**IFS – International Featured Standards / International Food Standards**

Uniform quality standards developed with the support of the food industry. These standards utilize a common evaluation system to ensure comparability and transparency throughout the entire supply chain. [www.ifs-certification.us](http://www.ifs-certification.us)

**FSSC 22000 – The Foundation for Food Safety Certification 2000**

A certification of food safety systems for organizations that process or manufacture animal products, perishable vegetable products, products with a long shelf life, food ingredients such as additives and vitamins, bio-cultures and food packaging materials. [www.fssc22000.com](http://www.fssc22000.com)

**EPA – US Environmental Protection Agency**

An agency of the United States government dedicated to protecting human health and the environment. The EPA works in tandem with the US Department of Agriculture and the Food and Drug Administration to help ensure food safety in the US. [www.epa.gov](http://www.epa.gov)

**BRC – British Retail Consortium**

A trade association representing United Kingdom retailers. The organization defends and promotes retailers' interests, as well as campaigns to influence government policies that affect retailing. [www.brc.org.uk](http://www.brc.org.uk)

# REMCO P R O D U C T S

## About Remco

Remco Products is a trusted supplier of a wide selection of high quality color-coded sanitation products made from FDA-compliant materials through an ISO-certified manufacturer to meet the demands of several industries and applications. Remco manufactures injection-molded polypropylene tools such as shovels, scoops, scrapers, tubs, and mixing paddles, and is the exclusive US based distributor of Vikan® color-coded brushes, brooms, squeegees, and handles. Ideal for compliance with today's stringent regulations and HACCP guidelines, these hygienic cleaning tools provide the ultimate step in quality assurance and safety. Remco continues to increase customer loyalty by expanding inventories and maintaining a well-earned reputation for excellent customer service. Visit [www.remcoproducts.com](http://www.remcoproducts.com) for a complete catalog.



Supplied to industrial distributors in the U.S. exclusively by Remco.

Vikan® is one of the world's leading manufacturers of maximum hygiene cleaning tools with over 115 years of brush-making experience. Based on the needs of customers and regulatory requirements, Vikan develops, produces and sells a broad range of cleaning solutions which are primarily intended for environments where hygiene and efficiency are essential.

