

Ensuring Microbial Safety of Fresh Produce and Meats

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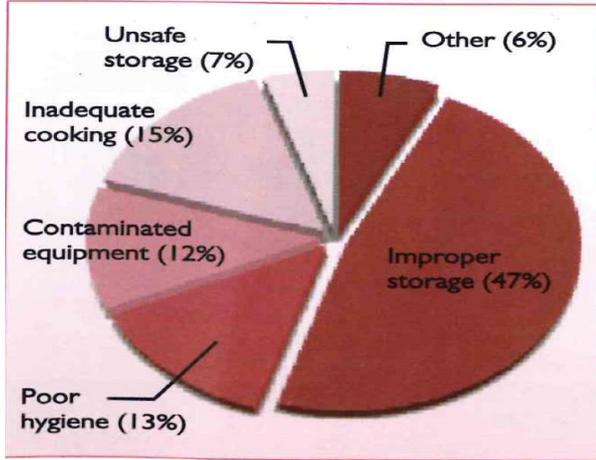
How often do we hear of recalls related to fresh produce, fresh meats and even Ready-to-Eat (RTE) foods. Why are they happening and what can we do to stop them? The most obvious answers are improved sanitation and testing of products before they leave your facility. However, even the best cleaning programs are never going to get facilities to continuous “clean room” status when the raw products themselves are sources of bacteria. As facilities grow larger and production increases, the odds are stacked against us and sooner or later pathogens are going to enter or remain on the finished goods.

How do we test these products in a sufficiently fast enough time period without creating potentially greater issues related to spoilage or growth of marginal pathogens? Even if you do testing in house it takes 48+ hours to get basic results or if you spend money on expensive Elisa testing you can get tests done in just under a day. No matter how you do it test results are simply not available before most fresh products are shipped and thus the potential for recalls increases.

We now have a solution! Our new [MICROSNAPS](#) are [AOAC](#) approved (TPC, [Coliforms](#) and [E. coli](#) with other pathogens pending) and you can get ACCURATE QUANTITATIVE results in 6-8 hours. This is not presence /absence but actual enumeration that is more repeatable and accurate than the methods most of you use. The procedures can be adapted easily for any product (solids or liquids) and reduced labour and lab supplies will actually reduce costs.

So for fresh produce, meats and RTE foods we can now do testing to end recalls related to microbial pathogens. Ease of use is even better. It utilizes our leading edge [Ensure Hygiene meter](#) so that your entire Q.A. sanitation program can all be integrated with one easy to use and cost effective meter. Use of our software allows instant logging of results and its reporting features will make the analysis of this data a snap. You will then be able to identify problem areas and take immediate corrective actions!

Fig. 1. Food poisoning incidents can arise from a variety of causes.



Organism	No. cases	No. deaths	Deaths (%)	Cause/source
Salmonella	26,962	77	0.3	Raw meat/poultry/cross contamination
L. monocytogenes	358	126	35.2	Chilled ready to eat foods
E. coli O157	1054	23	2.2	Raw meat/poultry/cross contamination
Campylobacter	321,179	76	0.0	Raw meat/poultry/cross contamination
Cl. perfringens	52,530	55	0.1	Prepared and ready to eat foods
Norovirus	201,279	32	0.0	Shellfish

Do you think this will cost too much? Please read below and think again.

Hygiene Microbiology Cost Comparison

	<u>ATP testing SystemSure & Ultrasnaps</u>	<u>ATP Testing Ensure & Supersnaps</u>	<u>Microsnaps</u>	<u>Petrifilms</u>	<u>Reference Lab</u>
Detects	ATP	ATP	Microbes	Microbes	Microbes
Detection limits	1 femtonole ATP ~10,000 CFU bacteria * ~1000 CFU Y&M*	0.1 femtonole ATP (~1,000 CFU) ~1,000 CFU bacteria * ~100 CFU Y&M*	<1 CFU	<10 CFU	<10CFU
Time	15 seconds	15 seconds	8 hours Bacteria ~24 hours Y&M	48 hours 5-7 days	3-5 days
TEST	Surfaces	Surfaces	Surfaces, liquids, solids	Surfaces, liquids, solids	Surfaces, liquids, solids
Equipment needed	Systemsure Plus meter	Ensure meter	Ensure meter and incubator	Incubator, pipettes, dilution buffers, autoclave colony counter, stomacher	
Preparation	none	none	~15 seconds	~2 minutes	2 min *****
reading time	15 sec.	15 sec.	15sec.	30 seconds	30 sec
Cost per test**	\$2.50	\$3.00	\$3.50	\$3.00	\$20.00
Equipment cost	\$1,800.00	\$2,100.00	\$2,600	\$10,000	\$0.00
Labour***	\$0.25	\$0.25	\$2.00	\$4.00	\$2.00
Actual Cost****	\$6.35	\$7.45	\$10.70	\$27.00	\$22.00
*ATP test does not directly correlate to CFU's because other ATP sources may also be present					
**These are costs for surface swab tests only. If doing food samples samples must be diluted and several dilutions done using Standard microbiology methods. These would include Petrifilms . Lab tests include shipping and costs per test					
***The costs here are based on \$15/hr (so are likely low) Amortization of other overheads could double or triple this cost.					
**** based on 100/tests /year and 5 year amortization of equipment					

Before we factor in the cost of recalls we can actually show you using your current costs real savings over current methods in most instances. Book your appointment with one of our specialists to do up a complete cost analysis. Not only will we save you money but we will free up some time so that you can take a proactive approach to Q.A. Recalls can become a distant memory and it can be done easily and very cost effectively. With all that spare time we can show you other methods to create further improvements in your monitoring programs while at the same time generating further savings in time and money



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