

Ensuring Microbial Safety of Fresh Foods

By: Douglas Wright, President

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 PCR, Elisa or other automated processes you can get tests done in just under a day. But in order to be cost effective you need to be running huge volume of tests. So, most food processors hold product and send off to accredited labs and wait several days. 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.

Compounding this is that low level of pathogen might die off in transit to the lab leading to false negative.

The ideal solution is to run in house screening tests and have those cross validate the accredited lab. The advantage of Screening tests is you can detect faster and take corrective actions faster,

We now have rapid detection system that are easy to use and cost effective. Our new [Contam swabs](#) can detect most major pathogens and can do so in as little as 24 hours.

Our [Microfast plates](#) likewise can give quantitative result in as little as 16 hours.

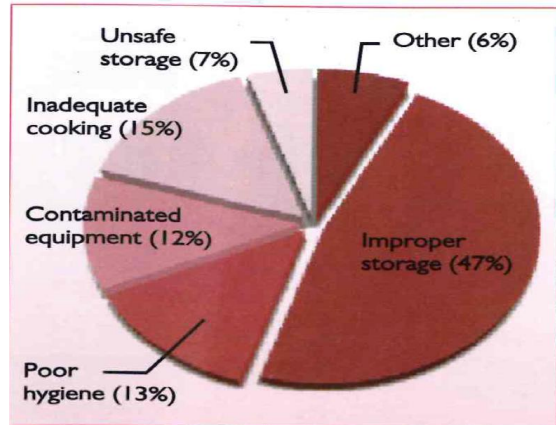
While sending off to accredited labs is required and recommended, we also advise in house screening tests that are easy to run and cost effective can supplement and even replace much of the testing done by outside labs.

After all, if you detect pathogen earlier you can put hold or take action faster. Should the outside lab confirm this you likely saved yourself a recall. If in the rare instance the lab reports a negative to your positive result should be confirmed.

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 used 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 CleanTrust Hygiene meters ([CleanTrust](#) and [CleanTrust 2](#)) to detect ATP a microbe at level unheard of before.

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



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

Hygiene Microbiology Cost Comparison

Manufacturer	CleanTrust™	CleanTrust™	Hygiena™	Hygiena™	3M /Neogen	Charm™
Name of Instrument	CleanTrust™ ATP3500	CleanTrust™ ATP3900	SystemSure	Ensure Touch	Clean-Trace	NovaLum II-X
Name of ATP Device	CleanTrust™ ATP002	CleanTrust™ ATP003	UltraSnap	UltraSnap	Clean-Trace	Pocket Swab Plus
Price Per Test	3.50	4.50	4.50	4.50	3.95	5.00
Calibratable	Yes	Yes	No	No	No	No
Certified	optional	optional	No	No	No	No
Warranty	24 months	24 months	12 months	12 months	12 months	12 months
Tilt Detection	Yes	Yes	No	yes	no	No
Price/meter	2250	4200	\$ 2,885	\$ 3,589	~3800	~5000
Sensitivity	1 fm	0.01 fm	1 fm	.5 fm	1fm	10 fm
Reproducibility	1-2%	1-2%	8% - 18%	20-40%	8% - 20%	20-40%
Display	5.5 -inch touch screen	5.5 -inch touch screen	LCD display	5.1 -inch touch screen	touch screen	touch screen
Power Supply	rechargeable lithium-ion batteries	rechargeable lithium-ion batteries	2 AA Alkaline batteries	rechargeable lithium-ion batteries	rechargeable NiCad	rechargeable lithium-ion battery
Data transmission:	Wi-Fi, Bluetooth, USB Type C	Wi-Fi, Bluetooth, USB Type - C.	USB	Wi-Fi, Bluetooth, USB	Wi-Fi, USB	Wi-Fi, USB
Size of Instrument (H x W x D)	189.5 * 34 * 89 cm	189.5 * 34 * 89 cm	18.5 x 7 x 3 cm	7x3x1"	7 x 8.9x 28cm	18.1 x 9.8 x 6 cm
Weight	510 g	510 g	.57 lbs.	510 g	1080g	1.35 lbs.
Trade-Up Program	Yes	Yes	Yes	Yes	No	No
Data Analysis Software	PC or Cloud software	PC or Cloud software	PC software	Cloud based only software	Cloud based only software	Cloud based only software
Chemistry	Liquid-Stable	Liquid-Stable	Liquid-Stable	Liquid-Stable	Liquid Stable	Freeze Dried
Shelf Life	18 months	18 months	12 months	12 months	6 months	12 months
Storage Temp	2° - 8°C	2° - 8°C	2° - 8°C	2° - 8°C	2° - 8°C	2° - 25°C

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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