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ATP Hygiene Monitoring System Comparison Analysis

This is a comprehensive comparison analysis of ATP hygiene monitoring systems. Its sole purpose is to provide individuals looking for a rapid hygiene monitoring system all the information necessary to make an informed decision.

Hygiena, believes in providing the best products at the lowest cost. When evaluating this data or when the time comes to evaluate a system, please contact Hygiena. Our technical staff can answer any questions and arrange a free evaluation of the systemSURE II ATP hygiene monitoring system.

Manufacturer	<u>Hygiena™</u>	<u>Charm™</u>	<u>Charm™</u>	<u>Biotrace™</u>	<u>BioControl™</u>	<u>Neogen™</u>	<u>Merck®</u>
Name of ATP Sample Collection Device	Ultrasnap	PocketSwab Plus	PocketSwab Plus	Clean-Trace	Lightning MVP Swab	AccuClean	Hy-Lite Rinse Pen
Price Per Test¹	\$1.65 - \$1.90	\$2.45 - \$2.75	\$2.45 - \$2.75	\$2.45 - \$2.75	\$2.45 - \$2.75	\$2.59	\$2.50
Single Use Test	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Test Time²	45 seconds	65 seconds	65 seconds	25 seconds	25 seconds	30 seconds	45 seconds
Shelf Life	12 months	12 months	12 months	6 months	12 months	6 months	12 month
Storage Temp³	2° - 8°C	2° - 25°C	2° - 25°C	2° - 8°C	2° - 30°C	2° - 8°C	2° - 8°C
Write On Label	Yes	Yes	Yes	Yes	Yes	No	No
Chemistry⁴	Liquid-Stable	Freeze Dried	Freeze Dried	Liquid Stable	Freeze Dried	Freeze Dried	Freeze Dried
Name of Instrument	systemSURE II	Luminator-T	NovaLum	Unilite NG	Lightning MVP	Accupoint	HY-Lite 2
Price⁵	\$800 - \$1,200	\$3,000 - \$3,500	\$4,000+	\$3,000 - \$4,000	\$3,000 \$3,500	\$1,495	\$4,000
Sensitivity⁶ (Femtomoles of ATP)	.97 – 9,999	1.73 – 100,000	N/A	1.53 – 100,000	.2 - 10,000	2.6 - 999	N/A
Reproducibility⁷	8% - 18%	9% - 28%	N/A	8% - 20%	11% - 56%	N/A	N/A
Instrument Read Time	15 seconds	5 seconds	5 seconds	10 seconds	10 seconds	10 seconds	10 seconds
Self Calibration	Yes	Yes	Yes	Yes	No	No	No
How Instrument Displays Results	RLU – 1 fmole to 1 RLU relationship	RLU	RLU	RLU	Log Scale & RLU	RLU	RLU
Assay Steps⁸	3	3	3	3	3	3	3



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Data Storage (# of test results stored before deletion)⁹	500	4,800	6,000	5,000	10,000	99	2,000
# of Programmable Sampling Sites¹⁰	100	300	400	400	1,000	99	50
Power Supply	2 AA Alkaline batteries	Internal rechargeable NiCad	Internal rechargeable lithium ion battery	Internal rechargeable NiCad	Internal rechargeable lithium ion battery	Internal NiMH rechargeable battery	Alkaline batteries
Battery Run Time	3 – 6 months depending on use	8 – 12 hours	16 – 20 hours	24 hours	8 hours	8 hours	N/A
Battery Charge time	No charge time required	2 – 3 hours	2 -3 hours	3 hours	2 – 3 hours	2 – 3 hours	N/A
Battery Replacement Cost	< \$2.00	> \$100.00	> \$100.00	> \$100.00	> \$100.00	> \$100.00	< \$10.00
Size of Instrument (H x W x D)	18.5 x 7 x 3 cm	22.5 x 13 x 8 cm	18.1 x 9.8 x 6 cm	15 x 10 x 20 cm	20.5 x 10 x 5.5 cm	14 x 8.5 x 4.5 cm	11 x13 x 28 cm
Can Operate in One Hand	Yes	No	Yes	Yes	No	Yes	No
Weight	.57 lbs	2.5 lbs	1.35 lbs	1080g	1.5 lbs	.8 lbs	2.5 lbs
Warranty	16 months	12 months	12 months	12 months	12 months	12 months	12 months
Rent/Lease Program¹¹	Yes	Yes	Yes	Yes	Yes	Yes	No
Trade-Up Program¹²	Yes	No	No	No	No	No	No
Data Analysis Software	DataSURE II	Charm Link	Charm Link	Biotrack	Trax	Data Manager	N/A
Excel Compatible	Yes	Yes	Yes	N/A	Yes	N/A	N/A

¹ – ‘Price Per Test’ is a critical component when evaluating the cost of implementing an ATP hygiene monitoring program. This is the recurring cost for which a company will have to budget once an ATP hygiene monitoring program is implemented. Hygiena provides the most affordable tests by using patented designs and a unique liquid-stable reagent that is far superior to other companies’ reagents.

² – ‘Total Test Time’ is defined as the amount of time it takes to collect a sample, activate the device and the read the sample. Assay time for all devices was derived from each manufacturer’s instruction manual.

³ – ‘Storage Temp’ for most testing devices is at refrigerated temperatures, thereby controlling the environment in which the tests are stored. Tests that claim to have room-temperature stability define stability differently; therefore it is important that a company make a careful decision. Temperature increases above the range allowed affect these tests dramatically, which is why storing tests at refrigerated temperatures is better and guarantees each test will perform exactly as intended.

⁴ – ‘Chemistry’ or reagents used in each test is a critical part of the accuracy and sensitivity of the test. Hygiena’s unique liquid-stable reagent allows the systemSURE II system to have exceptional reproducibility and sensitivity. With freeze-dried enzymes, the



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reconstitution step adds variability to the test in addition to the variability that comes from the freeze-dried process. It is also important to note that the amount of reagent or buffer in an ATP test does not affect sensitivity. For more information on this please contact Hygiena.

⁵ – ‘Price’ of the systems is quoted in US dollars. Price range depends on usage of collection devices and the part of the world where the instruments are sent. A key component to the cost of ATP hygiene monitoring system is the cost of devices. Ultrasnap devices used with the systemSURE II generally cost 35% to 50% less than other ATP collection devices. For prices, please contact Hygiena.

⁶ – ‘Sensitivity’ was calculated using the formula:

Limit of Detection (L.O.D.) = (3 x Standard Deviation of Blank) + Mean Blank.

Information is presented in femtomoles (fmoles). A femtomole is 10^{-15} of a mole.

⁷ – ‘Reproducibility’ or coefficient of variation was calculated using data from 10 replicates for each serial dilution of ATP pipetted onto swab tips from 2 – 2000 femtomoles. The background deduction limits were removed (set to zero) from the Charm LUM-T luminometer in order to measure the true Charm device blank.

⁸ – ‘Assay Steps’ is defined as the number of actions necessary to get a final result. In all systems the steps are 1) collect sample 2) activate sample and 3) read sample. Each system activates the sample collection device in a different way. It is important for users to understand each method, since some are easier than others.

⁹ – ‘Data Storage’ is the amount of information that an instrument can hold before the data must be transferred to a PC or deleted. Transfer of data is quick and easy on all machines.

¹⁰ – ‘# of Programmable Sampling Sites’ is the total amount of site locations that can be programmed into a sample plan. For facilities with more than 100 locations to be tested, additional machines can be provided at a reduced cost.

¹¹ – ‘Rent/Lease Program’ is for companies wanting to extend the purchase cost of the instrument over a period of time. This arrangement generally requires a one-year commitment.

¹² – ‘Trade-Up Program’ allows a company to trade in its existing instrument for a free or discounted systemSURE II. Hygiena is the only company that offers such a program. Visit www.hygiena.net for more information on the Trade-Up Program.

N/A – ‘Not Available’ was used in areas where the information required was not available or could not be found.

For questions regarding this data or if you would like evaluate the systemSURE II on a 30-day, free evaluation, please contact a Hygiena Sales Representative by sending an e-mail to enquiries@hygiena.net.

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