CHAMELEON®
DETECTING THE INVISIBLE™

Operating Instructions
Low pH (Acid) Cassette
(Part Number: 084005)

Applications:

The Chameleon is the only hands-free, power-free, chemical detector for gases and vapors **in air,** allowing First Responders, Firefighters, EMS, Police Officers and Military to detect the presence of hazardous chemicals. No liquid sample required. The Chameleon may even be immersed in salt water or fresh water without affecting its performance. Developed under funding by the United States Marine Corps, the Chameleon is ideal for users to screen unknown hazards in their environment.

This cassette responds to strong acid gases such as **hydrochloric acid, hydrobromic acid and nitric acid**. It does not respond to weak acid gases such as hydrogen iodine, acetic acid and acrylic acid. Exposure can occur in many situations. Storage tank leaks in chemical plants and during transportation result in exposure to acid vapors. Hydrochloric acid can be released when PVC electric cable jacketing is burned. Fluorocarbon refrigerants are non-flammable and non-explosive, but exposure to flames or hot surfaces will cause these compounds to generate hydrochloric acid and hydrofluoric acid. Household chemicals, when exposed to high heat can also generate acid vapors. A growing source of exposure to acid vapors occurs in clandestine methamphetamine laboratories.

Specifications:

The chemical sensor in the low pH (acid) cassette shows an easy to see color change. Half of the sensor window will change color as shown in the example below:



Unexposed Exposed

Description	Concentration	Reaction Time
Hydrogen Chloride	25 ppm	3 min.
Nitric Acid	12.5 ppm	4 min.
Hydrogen Bromide	15 ppm	5 min.

Interferences:

The Low pH (Acid) cassette was exposed to saturated vapor concentrations of toluene, bleach, DEET, gasoline, diesel fuel and JP-8 jet fuel for one hour. No false positive or false negative readings were observed. Repeated immersion in a layer of oil/fuel on top of salt water had no effect on the performance of the Low pH (Acid) cassette. No other interferences are known. **Morphix Technologies recommends using the High pH (base) cassette with the Low pH (acid) cassette to provide complete pH detection.**

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Operating Instructions:

1. The expiration date marked on the packaging assumes storage at 77 °F. Short term storage temperatures between 35 °F and 140 °F are acceptable.
2. At time of use - remove cassette from its protective pouch.
3. Holding cassette with text facing up, slide cassette into Chameleon armband until the cassette firmly snaps into the armband.
4. Periodically view the cassette to observe color change in half of the sensor window.
5. Discard cassette after color change is observed or after 24 hours of use.
6. DO NOT use cassette beyond 24-hour service life.

WARRANTY EXCLUSIONS AND LIMITATION OF LIABILITY

IF THE USER DOES NOT ACCEPT THE FOLLOWING TERMS, THE USER SHOULD NOT USE THE CHAMELEON CASSETTES AND ARMBAND.

Seller warrants that, for the lesser of two (2) years or the shelf-life provided on the Seller's product, its packaging or its literature, its products shall conform to the description of such products as provided on the Seller's product, its packaging or its literature. THIS WARRANTY IS EXCLUSIVE, AND SELLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. Seller's warranties made in connection with this sale shall not be effective if Seller has determined, in its sole discretion, that Buyer has misused the products in any manner, has failed to use the products in accordance with safe industry standards and practices, or has failed to use the products in accordance with Seller's written operating instructions, or other instructions furnished by Seller to Buyer.

Seller's sole and exclusive liability and Buyer's exclusive remedy with respect to products to Seller's satisfaction to be defective or nonconforming shall be replacement of such products without charge or refund of the purchase price, in Seller's sole discretion, upon the return of such products in accordance with Seller's instructions. All claims must be brought within two (2) years of shipment, regardless of their nature.

SELLER SHALL NOT IN ANY EVENT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND RESULTING FROM ANY USE OR FAILURE OF THE PRODUCTS, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE INCLUDING, WITHOUT LIMITATION, LIABILITY FOR LOSS OF USE, LOSS OF WORK IN PROGRESS, DOWN TIME, LOSS OF REVENUE OR PROFITS, FAILURE TO REALIZE SAVINGS, LOSS OF PRODUCTS OF BUYER OR OTHER USE OF ANY LIABILITY OF BUYER TO A THIRD PARTY ON ACCOUNT OF SUCH LOSS, OR FOR ANY LABOR OR ANY OTHER EXPENSE, DAMAGE OR LOSS OCCASIONED BY SUCH PRODUCT INCLUDING PERSONAL INJURY OR PROPERTY DAMAGE UNLESS SUCH PERSONAL INJURY OR PROPERTY DAMAGE IS CAUSED BY SELLER'S GROSS NEGLIGENCE.

Warning: Keep out of reach of children, if ingested seek medical attention immediately.

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Morphix Technologies®, 2557 Production Rd., Virginia Beach, VA 23454
Phone: +1-757-431-2260 Fax: +1-757-216-6209
www.morphtec.com