



BG - Counter

The first commercially available remote monitoring station for mosquitoes.



Biogents
Mosquito Control

BG - Counter

With the BG-Counter, Biogents offers the first commercially available remote monitoring station for mosquitoes.

The BG-Counter is an innovative and autonomous mosquito trap station that differentiates mosquitoes from other insects, counts them, and wirelessly transmits the results to a cloud server.

Via the web application you can manage your mosquito traps and get new insights into daily activity patterns, adult density indices, population dynamics and effectiveness of your control activities.

Based on the BG-Sentinel mosquito trap, the BG-Counter enables real-time measurements as well as prediction models and historical analysis of infested areas. Vector control professionals can now establish surveillance programs with unprecedented data density and accuracy, overcoming labor constraints associated with manual inspection.

The BG-Counter

- **reports mosquito counts remotely** from everywhere in the world to an internet web page
- **samples local environmental** data such as temperature, relative humidity, ...
- **lets you manage the trap** and the application of attractants remotely
- **reduces costs** associated with manually checking mosquito traps



BG-Counter station with BG-Sentinel 2 trap, CO₂ source, battery and shelter. The station runs on solar power (the solar panel is not displayed here).

Data are transferred to a web page that can be accessed via PC, smartphone or tablet.

Features in Detail

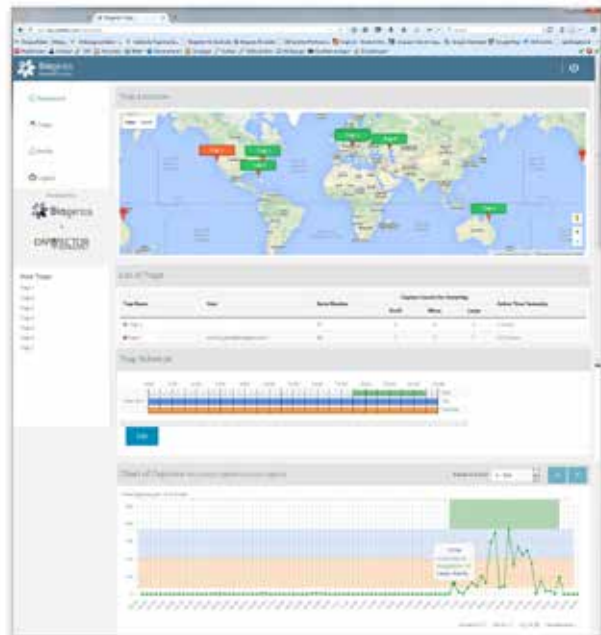
- The BG-Counter counts mosquitoes while they are sucked into the trap and differentiates them from other insects or dust particles. Mosquito counts with an accuracy of 90% have been established in field tests when working with CO₂ as an attractant. Up to 5 mosquitoes per second can be recorded. The data can be accessed by a web application and alerts are retrieved in real-time.
- The BG-Counter also samples local environmental data such as temperature, humidity, or light. Other sensor modules in the trap station's periphery supply additional data; for example, wireless standing water sensors provide „wet“ or „dry“ status of nearby larval sites. As a result, both presence of adult mosquitoes and formation of breeding sites can be detected earlier and with greater precision, enabling faster, more targeted, and thus more effective, mosquito control. Also, the effectiveness of control measures can be validated immediately.
- A web application allows you to remotely switch the traps on and off in the field. It also allows you to set up varying time schedules to run the traps and set up application times of attractants.
- The BG-Counter minimizes maintenance effort: the trap runs on solar power and is self-sustaining. It is robust and well protected against weather.

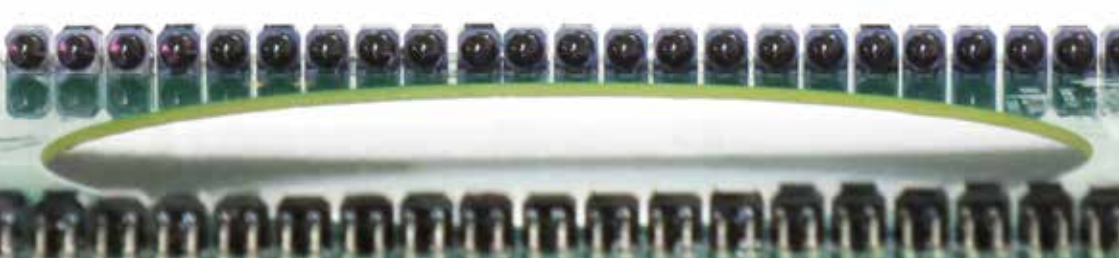
Web-based Access

The system is supported by a web-based database for storage of mosquito counts, geospatial and environmental data, and is automatically updated by the BG-Counter in the field.

The data can be accessed, displayed and analyzed by the end user in a cloud-based "Management Central", and also exported to Excel at the push of a button. The intuitive graphical user interface can be accessed from PCs as well as smartphones and tablets.

The image on the right side depicts a combination of several displays of the user interface.





Technical Details

The heart of the BG-Counter is a highly integrated printed circuit board which incorporates:

- an infrared sensor
- environmental sensors for temperature, relative humidity and ambient light
- a cellular module for communication with the web server
- an SD card for onboard data storage, fan and CO₂ valve control
- connections for optional peripheral devices such as attracting lights and standing water sensors
- an optional network module to allow traps to wirelessly connect with remote devices and each other
- two powerful microprocessors for control and communication

The patented insect sensor consists of arrays of infrared LEDs and light detectors that provide reliable and sensitive detection and differentiation of mosquitoes from other objects entering the trap.

This technology was developed by onVector Technology in collaboration with Biogents.



Infrared LEDs

Light detectors

Contact

For more information about the BG-Counter please contact us at sales@biogents.com

Biogents AG
Weißenburgstr. 22
93055 Regensburg
Germany