ViewPoint
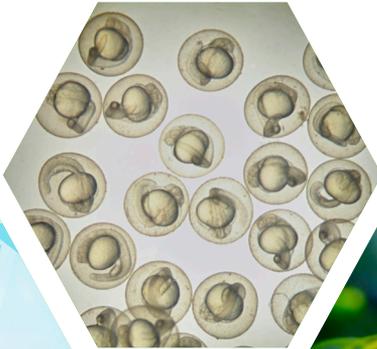## Behavior Technology

Created in 1990
More than 30 years of experience Worldwide

Zebrafish & other aquatic species behavior solutions

Neuroscience and ecotoxicology

Contents

Introduction

Pioneer in automated behavior analysis

The company was established in 1990, and has developed into a major actor in animal behavioral research solutions.

We offer our expertise in video image processing to stakeholders working on the major challenges of the planet : health, water, food.

In 2001, our innovative status elicited a request for zebrafish larval analysis and the first worldwide videotracking software for zebrafish came to life : ZebraLab.

The first commercial behavior enclosure for zebrafish, the ZebraBox was developed following requests from Harvard University and Boston University.

Our solution gives access to high throughput screening, reliable data, better time and cost efficiency and ground-breaking studies.

ViewPoint is currently recognized as the leader in the industry, and is the go-to resource for top scientists looking for reliable video tracking solutions.

Delivering tools that match your research!

Our mission is to build tools that match your behavioral research. Whether you're working on behavioral auditory system, ecotoxicology, compound screening, visual acuity assessment, learning and memory, social behavior and much more, ... our team delivers tailored solutions to fit your needs of zebrafish behavioral research.
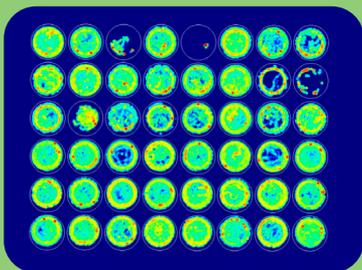
A customer oriented approach

At ViewPoint we take care of our clients so users can focus on the meaningful with easy to use software interfaces and software training to make your experiment processes run smoother in the long term.
ViewPoint material meets biomedical sciences facilities requirements and is ISO 9001 certified to ensure high quality research projects. With its dedicated team of tech engineers delivering constant software improvements and technical support you are sure nothing is getting in the way of your work.

Worldwide success stories

Working with well-known clients for years in more than thirty countries, we have been managing numerous neurobehavioral projects and made partnerships with prestigious research centers for development of new behavioral analysis tools. This has led us to bring talent and constant innovation in the service of present and newly eminent researchers in other fields such as ecotoxicology for example.

ZebraLab

Automated fish behavior analysis System

High throughput monitoring of fishes
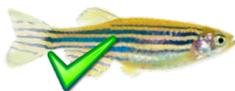
ZebraLab software can analyze very small subjects such as embryos or bigger such as larvae or adult fish. As well as others species like mosquitoe larvae, drosophila... It is suitable for research in drug development, safety pharmacology such as cytotoxicity, behavioral genetics, learning and memory, circadian rhythmicity and other. It can be used for very high-throughout behavioral applications scoring of locomotion, activity, responses to stimulation or conditions and specific behavior.

Various applications

- Animal behavior analysis
- Safety Pharmacology
- Toxicology and Eco-Toxicology
- Drug Screening and Drug Development
- Behavioral Genetics
- Seizures
- Circadian rhythmicity
- Light response and Vision tests
- Escape response C-Stat, S-start
- Muscle disorder/ Muscle recovery
- Ethology
- And many other applications …

ZebraLab has been especially designed for fish movement patterns and tests. It is the cutting edge of behavior analysis; it is an easy to use and high throughout system able to automate almost all behavioral tests known for fish. In a few simple steps of set up you are able to analyze several animals simultaneously, live or using the videos you already recorded in the past. Using our system will save your time, increase your productivity and accelerate your manipulation in order for you to focus on your interest with very precise data.

Turnkey package

• **Locomotor behavior** : classification of locomotion states via distance travelled, speed...

• **Activity quantization** : classification of activity states (freezing, burst)

Key Features

• Reliable data & perfect tracking in multi-well plates
• Total control of automated experimental conditions
• High throughput analysis of zebrafish
• Cost-effective & easy to use
• Expandability & customization
• Replay and reuse your data
• Stimuli synchronization along the experiment and datas

Available analysis extension

• Rotation and histograms
• Social contact
• Juvenile sizing
• Cardio vascular screening
• High speed behavior (escape response)
• Multitracking and shoaling behaviors

ZebraLab Extension

ZebraLab allows multiple analysis to be performed at the same time. Simply select from a list of options the different parameters you would like to score. Our protocol creation wizard will assist you throughout the setup of your protocol. It will automatically place the areas of interest and apply the different defined conditions to all the locations to be scored in a few clicks.

Social contact

Zebrafish are social animals and have complex group behaviors, which can tell about numerous disorders and specificities of studied models. Therefore, we have developed specific applications for social interactions:
• Distance between two animals (set by user)
• Animal to Animal contacts detection
• Time spent in which two animals are within each other's proximity
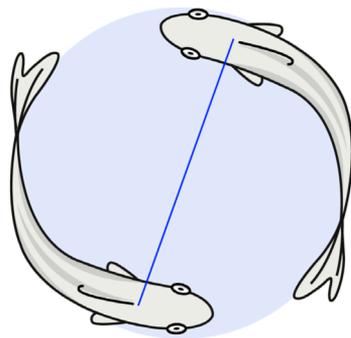
Rotation and path angles
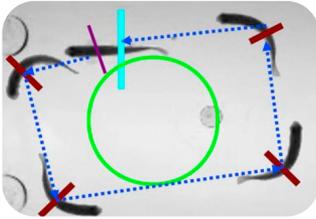
Lateralization of brain and behavior is the apparent predisposition towards side bias {left-right), which often manifests in terms of motor output.
This add-on can assist you in understanding neuromechanical control and assess behavioral asymmetries such as turning and path bias.
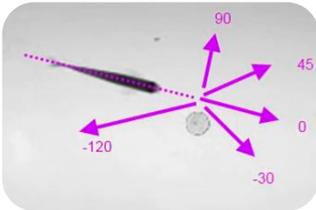
Since zebrafish are capable of regeneration after spinal cord injuries, this add-on in complement to ZebraLab locomotion analysis is also relevant to score regeneration after SCI or muscle disorders.

ZebraLab GrandView - Live 3D tracking

Live 3 Dimensional (3D) tracking of fish in tank :

• Real 3D analysis; Live reconstruction of (X; Y; Z) position of the animal
• ZebraLab extension to handle two synchronized cameras
• High Resolution Analysis
• Automated Locomotion monitoring and calculation
• Data analysis in real time
• 3D Locomotor behavior
• Replay of the experiment as you desire
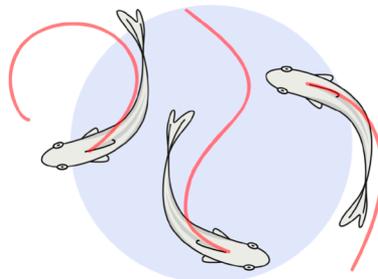
ZebraLab Extension
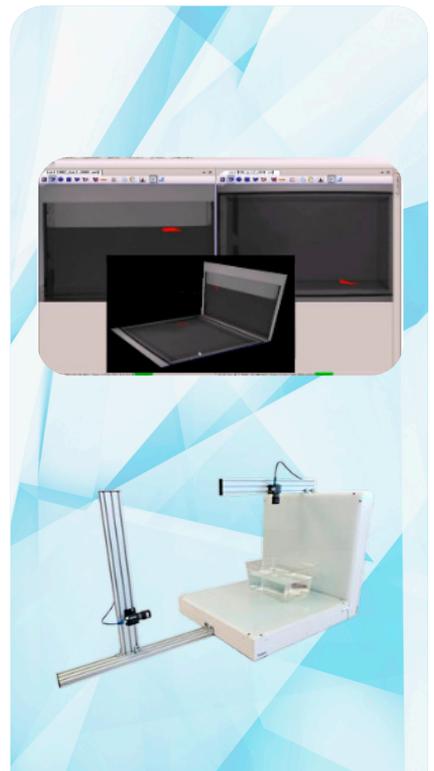
Shoaling: Group behavior analysis of different subjects in the same tank

• Inter-individual distance (mean distance from each subject to all others)
• Nearest neighbor distance (mean distance between the subject and its nearest neighbor)
• Polarization (magnitude of the mean vector of all subjects)
• Average speed of the shoal

Group screening

• Extended analysing system to increase the number of animals analysed simultaneously in the same tank
• Classification of the group behaviors within histograms. Count of the number subject in each area throughout the test (average detection of subjects per time bin).
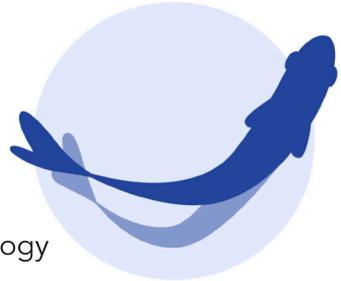
Manual detection of Morphology

Extension of the ZebraLab software for morphology
analysis, allowing to measure :
   • Different part of the body (eyes size, body length...). Can be used at different time-points to evaluate growth, malformation over the time.
   • Based on upload videos or screenshot from videos
   • User friendly interface with an intuitive toolkit to draw different lines, shapes in order to get immediate measurements

Automatic Sizing

Sizing add-on to get an automatic size of your zebrafish. (length > 1cm)
Fully automatized, our sizing add-on can help you to evaluate a growth study over a group of animals (or a single).
No hassles, no complicated calculations, our software will give you several output data such as:
   • Image of the maximum length detected,
   • SVG file with a highlighted segment for maximum length detected,
   • TXT file with the timestamp data (frame used for calculation), position (x;y) of each point used, length in user scale;
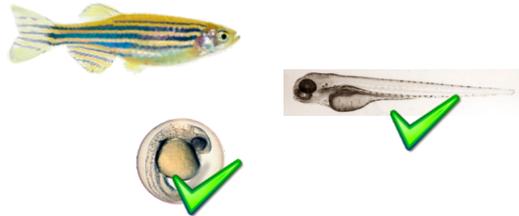   • XLS (or CSV) with maximum length detected (for each time point), surface, speed, and curvature.
   This add-on can be used with a live acquisition (from our equipment) or processed with AVI files.

ZebraBox

Zebrafish embryo and larvae research

The first ever observation chamber designed for zebrafish observation since 2005

ZebraBox Revolution

Since first developed in 2005, the ZebraBox was the first observation chamber designed for zebrafish observation. The 4th generation of ZebraBox is the result of 15 years of close collaboration and development with zebrafish researchers. Unlike other systems inspired from the ZebraBox, the subject are in direct observation, without the use of fresnel lens which can create heat, condensation, image distortion and ultimately stress to the subjects.

Control of the experiment conditions:

- Double Anti-vibration system
- Strong light stimulation
- Direct observation technology
- Many stimuli available

Automated observation chamber for zebrafish larvae and embryos

The ZebraBox is a complete system, designed for the high-throughput analysis of zebrafish, medaka, fathead minnow larvae... in multi-well plates with a total control over the experiment environment.

The ZebraBox is a component of ZebraLab and allows the automated observation and tracking of larval zebrafish, and zebrafish embryos. For embryos an higher resolution camera is provided.

The ZebraBox is capable of analyzing zebrafish larvae in multi-well plates, up to 96 individuals simultaneously. ZebraBox can revolutionize your research thanks to its scalability: connect up to 4 ZebraBox to one computer running the ZebraLab software.

Key Features
• Total control of the experiment conditions
• Automated observation and tracking of larval zebrafish
• Multi-well plates compatible, up to 96 individuals simultaneously
• Scalable and versatile system
• Reliable and reproducible data
• Fast data processing for time saving

Available add-ons
• Temperature control
• Controllable vibration and sound
• Isolated chamber for ZebraBox
• Shocker
• Photomotor response
• Optogenetic top light
• High speed camera
…and more to fit your specific research needs!
Don't hesitate to contact us!

Zebrabox Extension

Automated observation chamber for Zebrafish, larvae and Embryos

Top light – Optogenetics

Use light to modulate molecular events in a targeted manner in living cells or organisms. ZebraBox upgrade to trigger Real Color Vision light stimulation in micro plates, including:

• ZebraLab software extension for top Light Source. Control of light sequences and intensity
• ZebraBox Real Color Plug-in
• Several wavelengths available depending on user's applications
• Protocol definition for vision
• Power supply integrated in the ZebraBox

Top light - Photo motor response

ZebraBox upgrade to trigger Photo Motor Response in micro plates, according to David Kokel protocol, including:

• ZebraLab software extension for High Intensity Light Source.
  - Projection of high intensity light source on top of the zebrafish
  - Monitoring of the fish response to the stimulation
  - Control of light sequences
• ZebraBox PMR Plug-in
  - Monogeneous High Intensity Lighting system
  - Controllable high power light source
  - Infrared sensitivity independent of the light stimulation
  - Data synchronization according to light status
• Controllable High Power Light intensity from 0 to 40 000 lux.
• White Light temperature: 8000 to 10000 Kelvins
• Power supply integrated in the ZebraBox

Zebrabox Extension

Vibration Module

ZebraBox upgrade to trigger vibrations to micro plates, including:

• Shaker and Vibration module;
   - Frequency range 80 to 10 000 Hz
   - Integrated amplifier
• ZebraBox Adapter for Shaker
• Software module to program and control the vibrations:
   - Vibration modulation control and sequences
   - Vibration Time
   - Vibration Duration
   - Vibration Frequency

ZebraBox Noise cacelling chamber

Made with robust steel and flatten with Polyurethane foam the acoustic ZebraBox reduces environmental sound.

We implemented an easy software module to program and control the vibrations time, duration, frequency, and parameter different edge or slope variation of each noise. Supply with a standard 30FPS high resolution it is up to you to upgrade your system with a faster Camera (from 100 to 1000 FPS) and run startle response or PPI test and monitor how the zebrafish react (C/S shape). ZebraBox acoustic offers total environmental control of the experimental conditions.

Temperature Control Unit

The temperature control unit facilitate internal temperature regulation in the experimenting arena. Non mandatory, but help you to keep your fish warm for long term experiments:
• Temperature heating and cooling control from 10°C to 40°C (device only to heat up available)
• Temperature stability (°C) in the TCU: ±0.1
• Automated Thermal shocks possibilities - add-on
• Change of +7°C within 10 minutes' max
• Pump and Tubing kit to connect to the ZebraBox
• Valves to set the output flow
• Adapted Water tank
• Bright, white, easy to read display
• Space-saving cooling coil design
• Removable ventilation grid
• Refrigeration unit without side vents
• High-quality bath tanks made of stainless steel with bath lid and drain tap
• Possibility to control the temperature with the ZebraLab software
Exhaust flow is gravity dependent; the control unit has to be installed underneath the bench.

ZebraBox PPI

ZebraLab for PPI test

PPI Backed by years of research and development, ZebraBox Revolution brings state of the art observation and video tracking to your laboratory. A special device synchronizes the stimulus and the camera frames to allow an accuracy under 1 millisecond ! The ZebraBox is designed to have a perfect synchronization of the sound stimulus over every well (less than 100μs).

Complete turnkey fast behavior apparatus system for high speed applications for zebrafish including:

• ZebraLab "Lightning Fast" software
• Two step analysis: time controlled acquisition and batch processing to detect multiple animals.
• PPI Generator application:
   - Stimulus sequence definition
   - Acquisition workflow management
• Batch Processing, data analysis:
   - Distance swam
   - Displacement
   - Time to reaction, latency
   - Response type classification: scoots or turn
   - Angle bend and amplitude
   - Trajectory
   - Latency type: LLC (long-latency C-start) /SLC (short-latency C-start)

Zebra Agression Box
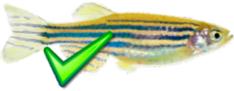
The Zebrafish Aggression Box is an observation system designed with our state of the art video tracking technology and a practical cubical to have a perfect detection of the fish aggression when the fish sees its own image towards a mirror.

Available for the applications:

• Controllable values
• Detect alterations to aggression levels produced by drug treatments or mutation
• Powerful screening technology - the drugs to reduce the aggression from the fish
• Scalable system – unlimited experimental fishes and cabinet to connected to speed up the research
• Validated software - comparison to manual quantification
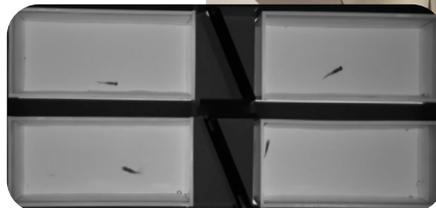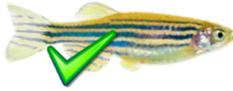
ZebraTower

Adult fish monitoring

Several applications:

• Zebrafish 3D tracking
• Sizing assay of zebrafish
• Sizing in zebrafish

Automatic Adult fish Monitoring

Using our fast cameras technology, you can automate any kind of test involving refined behavior analysis such as social contact and aggressive behavior in various tank shapes.

ZebraTower system includes:

• Camera : high sensitivity - up to 30 frames/sec acquisition board
• Openfield with Infrared Lighting module 50*50cm
• Camera stand

Specification of ZebraTower

• Infrared Lighting system:
   - For a precise detection of the zebrafish
   - Camera will only be sensitive to this infrared light source
• High sensitivity camera
   - Live analysis at 30 to 100 Frames /Sec
   - Up to 200 Frames /Sec at 640 X 480 (offline processing)
   - Up to 300 Frames /Sec at 320 X 240(offline processing)
• ZebraLab software extension for adult analysis
• Appropriate lens for sharp picture quality
• Acquisition board
• Camera stand to hold the high speed camera

Live 3D tracking with mirror

Live 3 Dimensional (3D) tracking of fish in tank including:
• ZebraLab 3D GrandView software
• Real 3D analysis; Live reconstruction of (X,Y,Z) position of the animal
• Automated Locomotion monitoring and calculation
• Data analysis in real time
• 3D Locomotor behaviour of zebrafish in tank:
   - Distance travelled
   - Position (X;Y;Z) and trajectory
   - Time spent in 2D Areas of the tank
   - Entry count in each areas of interest
   - Counting for each state (movement categories)
   - Time duration in each state
   - Transition count of the states
   - Distance swum by the animal in each state
• Replay of the experiment with a different protocol (replay of the raw data)
• One year free on-line update
• Digital user manual
• Technical support one year on site and internet remote support
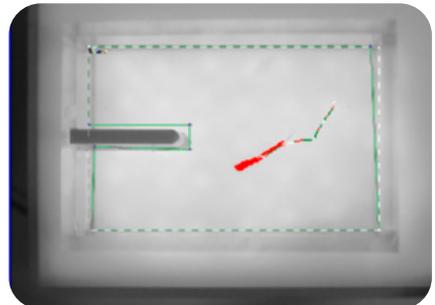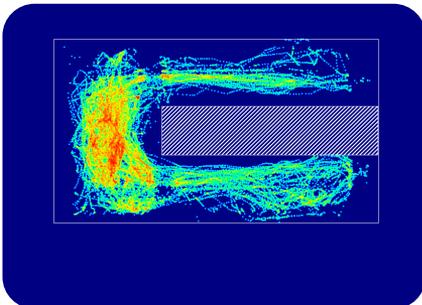
ZebraCube
& Extensions

Compact cabinet for adult zebrafish screening
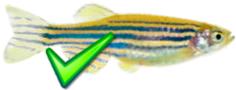
ZebraCube is similar to the ZebraBox, it is an enclosure to monitor and score adult zebrafish behavior under controlled condition for large tanks or multiple dish, based on a 50 x 50 cm infrared floor.

Total control of the experiment conditions

Controlling the environment during a behavioral
experiment is the key to success. ViewpPoint has developed a new Cubicle enclosure to control light
and optionally sound, vibration and temperature.
ZebraLab can monitor up to 4 Cubicles.

Vibration Module

ZebraBox upgrade to trigger vibrations to micro plates, including:

• Shaker and Vibration module;
   - Frequency range 80 to 10 000 Hz
   - 40 W amplifier
• ZebraBox Adapter for Shaker
• Software module to program and control the vibrations:
   - Vibration modulation control and sequences
   - Vibration Time
   - Vibration Duration
   - Vibration Frequency
• Power supply:
   - Power requirements: 12Volt DC, 2.0Amp (max)
   - Mains adapter: input 100-240 V.AC, output 12 V.DC, 2 A

Live 3D tracking with mirror

Live 3 Dimensional (3D) tracking of fish in tank including:

• ZebraLab 3D GrandView software
• Real 3D analysis; Live reconstruction of (X,Y,Z) position of the animal High Resolution Analysis
• Automated Locomotion monitoring and calculation
• Data analysis in real time
• Automatic stop of the experiment
• 3D Locomotor behavior of zebrafish in tank:
   - Distance travelled
   - Position (X;Y;Z) and trajectory
   - Time spent in 2D Areas of the tank
   - Entry count in each areas of interest

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Micro ZebraLab

## Cardiovascular monitoring and bloodflow

Zebrafish Cardiology and Physiology

Heart Beat and Blood flow analysis

MicroZebraLab is the reference tool since 2008 to investigate live and in a non-invasive way a scope of zebrafish embryo and larvae physiological parameters.

Developed by ViewPoint from researchers' demand, it measures cardiovascular activity, gut transit and blood flow.
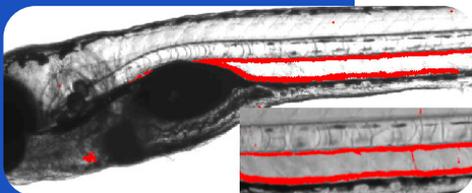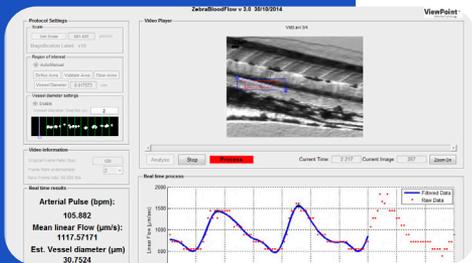

Easily extract results

ViewPoint developed MicroZebraLab to bring high level of precision to cardiovascular data recording, opening up the possibility to zoom into greater detail: measure cardiovascular feature automatically such as heart-heat, flow rate, and the size of the blood vessel under the microscope without fluorescence or other markers, and easily extract results from your videos.

New add on available allowing morphology analysis based on MicroZebraLab acquisition picture, more information page 11 «manual detection of morphology».

Cardiology measurements of zebrafish larvae

Cardiovascular parameters are important to many studies, particularly when studying the effects of compounds or drug targets in pre-clinical phase. Having access to cardiovascular data enriches your dataset.
MicroZebraLab software enables to automate this task and various experiments involving movement of organs.

Zebrafish models are often used for high throughput screening, therefore data quantity greatly increased. When testing compounds as drug targets
they often do not reach the pre-clinical stage due to cardiovascular effects. Detailed data on the cardiovascular system are extremely valuable prior to later stage mammalian studies. With high resolution and high-quality data in mind, MicroZebraLab has set new standards.
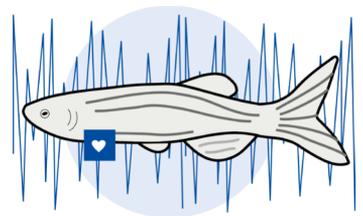
Heart-Beat and Bloodflow

In addition to heartbeat measurements, beats defect, QT interval, ejection fraction. MicroZebraLab can measure automatically the blood flow of your Larvae. Very easily and efficiently define the type of organ you wish to analyze and get instant results. No more hand scoring or use of time consuming labeling methods. Just place your fish under your microscope and get several physiological data on blood flow and gut transit.

VisioBox

OptoKinetic Response - OKR

VisioBox allows the automated observation and tracking of larval zebrafish visual behavior.

OptoKinetic Response test (OKR) and other tasks involving zebrafish vision may be automated using our solution. Advanced applications requiring live interaction of the larvae with the screen such as «virtual prey capture» of paramecia can be performed as well.

Oculomotor performance :

Define a specific environment projected around the larvae using the ZebraLab software.

• Get full control and adaptability of the zebrafish
• Environment and behavioral responses
• Adapt the environment to the subject's behavioral responses
• Dig deeper into your behavioral paradigms
• Eyes behavior of zebrafish in response to the stimuli
• Differentiate eyes Slow Phase Velocity (SPV) AND Fast Phase Velocity (FPV)
• New smaller version with hd flexible screen available soon.

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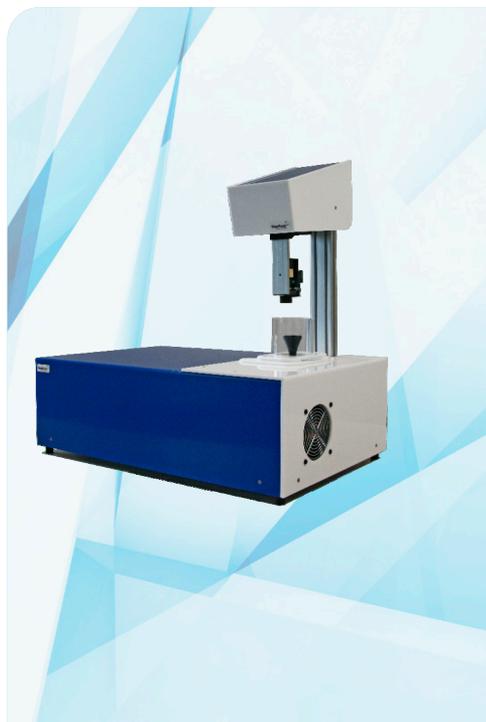
OMR

OptoMotor Response

OptoMotor Response (OMR) is a reflex behavior observed when an animal naturallly follows a rotationg grating around it.
OMR is widely used to assess the visual functions of zebrafish (larvae and adults).

The swimming direction has to be monitored. If the fish responds to a rotating stimulus by swimming equal amounts of time clockwise or counter clockwise, they would be scored as not detecting the stimulus. If they spent most of their time swimming in the same direction as the stimulus, they detect it. The grating size could be adjusted to determine threshold detection.

Visual acuity performance :

Define a specific environment projected around the zebrafish using the ZebraLab software.

• A full screen square wave grating, which moves left- or rightwards
• Monitoring of the visual response of the fish
• Trigger of light conditioning
• Full control and adaptability of the zebrafish' environment (Stripes colors, number of stripes, rotating speed, contrast, brightness, half mask,...)
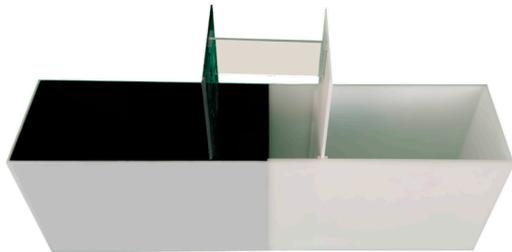• Adapt the environment to the subject's behavioral responses

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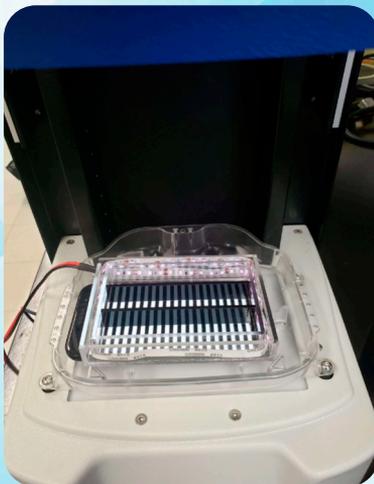
Other Hardware

Water Circulation

• Regulated temperature control

• Variable temperature control

Maze

Aquatic T-Maze
Aquatic Light/dark preference test
Larval aquatic light/dark
preference test in microplate

ToxMateLAB

ViewPoint
Behavior Technology

Long term multispecies screening of bioindicators

• Aquatic : gammarus, lymnea, radix...
• Terrestrial : spiders, mollusca...
• Airbornes : mosquitoes...

The ToxMateLAB is a brand new product developed by ViewPoint, able to perform long term and high throughput behavioral assessment in a controlled environment, up to 48 organisms tracked simultaneously :
• White light source for stimuli/circadian sequences
• Thermo regulation via a temperature control unit
• Oxygen with a continuous water circulation

BEHAVIOR ASSESSMENT

MULTISPECIES AND UP TO 48 ORGANISMS

CONTINUOUS MONITORING AND WATER FLOW

ViewPoint behavior technology

Our motto

Working for the well-being of the people and the Earth, in a spirit of benevolence and commitment..

Our core values

Viewpoint and all of its collaborators are committed to our customers and partners around the values they hold dear:

HONESTY
Motivate, respect our motto and our values

COMMITMENT
Motivate, set an example, don't take the easy way out

KINDNESS
Show mutual aid, solidarity and tolerance

PLEASURE
Working in a friendly and pleasant atmosphere, developing interest in the work

Don't miss our other technologies through the discovery of our catalog specific to rodent's and other mamals species behavior.
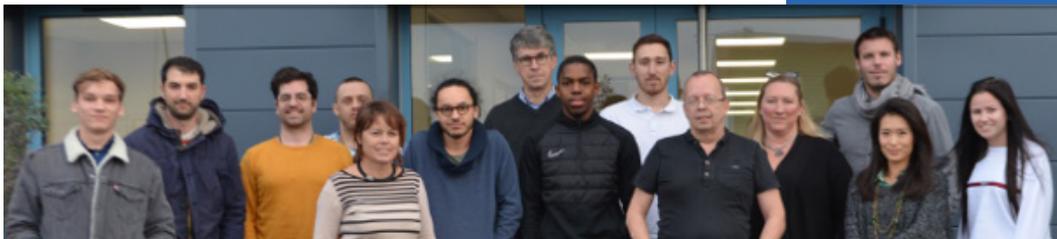
ViewPoint

Behavior Technology

ViewPoint
Behavior Technology

Created in 1990
More than 30 years of experience Worldwide

Rodent's Behavior Solutions

Contents

Introduction

Pioneer in automated behavior analysis

Established in 1990, ViewPoint has more than 30 years of experience in animal behavior analysis, and was the first company to offer automated tracking of behavior for Rodents and has since stayed an innovative leader providing various apparatus and capabilities.
We offer our expertise in video image processing to stakeolders working on the major challenges of the planet : health, water, food.

ViewPoint offers complete solutions for behavioral scientists, which give access to high throughput screening, reliable data, better time and cost efficiency and ground breaking studies.

Our products are applicable to virtually any behavioral experiment, allowing researchers to use our products in any field, to study an unlimited number of topics. Our team of engineers bring a vast amount of technical knowledges, and work closely with our user community to offer advanced solutions.

Innovation is the core of our company. ViewPoint is recognized as the leader in the industry, and is the go-to resource for the best scientists looking for reliable video tracking solutions.

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VideoTrack

Rodents Behavioral analysis

The VideoTrack system was the first of its kind and has been developed by ViewPoint since 1990.

Originally designed for the measurement of rodent behavior, VideoTrack can be adapted to virtually any type of maze or arena. Automated video tracking saves substantial time, and money.

The versatility of the system has made VideoTrack the researchers' choice over the years. You are able to automate a wide range of tests.
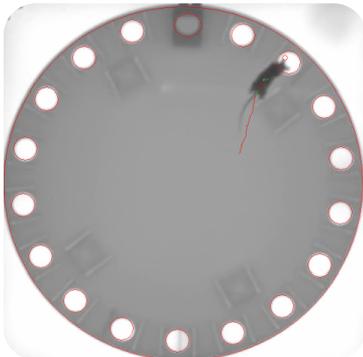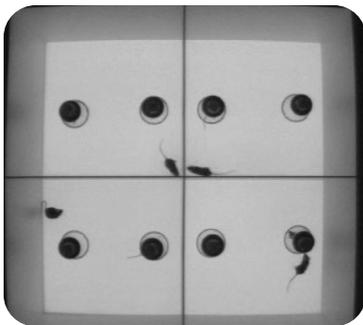
Wide range of tests:

• Morris water maze

• Object recognition

• Social interactions

• Elevated Plus Maze

• Place preference

• Drosophila monitoring

• Forced swim test

• Open field

• And many more ...

Mazes and equipments

ViewPoint offers a wide range of transparent infra red light standard & custom maze. We can provide you any specific size or shape. For any question, feel free to contact us.

• Conditioned place preference

• Black & white box

• T, Y, O Mazes

• Sociability Chamber

• Elevated Plus Maze

• Morris water tank

• Openfield

• Barnes Maze

• Cheese board

• Radial 8 arms maze

• ...

OneiRos

Wireless Electrophysiological System

ONEIROS is a new, miniaturized, low power consumption electrophysiological measurement system designed for conducting research on freely moving subjects. This new electrophysiological measurement system is capable of recording up to 8 electrophysiological signals (6 referential and two differentials), metabolic and behavior via an accelerometer for several days, up to three temperature sensors.

OneiRos is designed to provide researchers with a tool that overcomes the limitations of existing wireless devices.
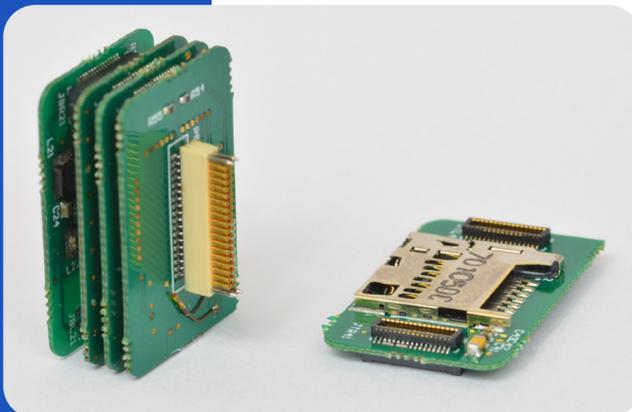
Product features:

• Wireless telemetric / data logger system
• Flexible configuration of the channel number
• Autonomy and sampling rate
• Customize data acquisition according to your needs

Wide adaptations on:

• Conduct research on different animal species. (rodent, bat, hen, aquatic species)
• Neuroscience applications (PTSD, addiction, diseases...),
• Behavioral tasks and brain related activities

Marlau

Environmental enrichment cage

In research, standardized conditions are extremely important. They are crucial for reproducibility and reliability of the data obtained.

ViewPoint recognized this crucial and essential problem in this area of behavioral research and introduces Marlau as the solution, which combining novelty and complex inanimate and social stimulations, influences brain plasticity and protects against the effects of brain insult.

The first of its kind, it offers researchers to standardize home cage enrichment, which consequently generates more reliable and more reproducible data. Researchers do not need to describe in detail the methods of enrichment used in their publication; enrichment is now a standardized piece of equipment that can be easily referenced.
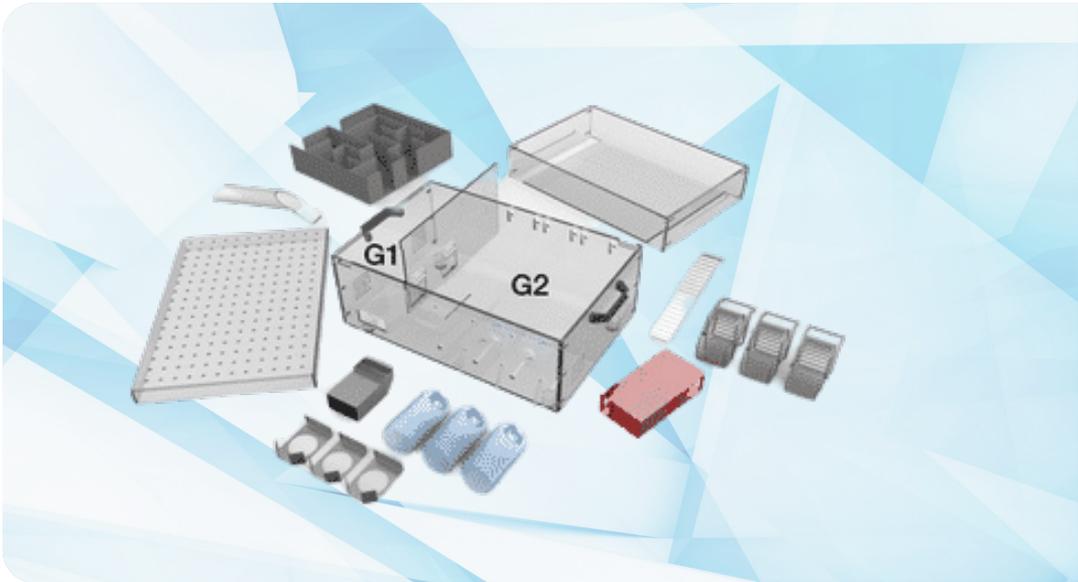
Activity : Increased activity is encouraged by the enlarged exploration area and free access to running wheels.

Complexity : Moving through a maze is motivated by the need to find food : water and pellets are placed in two separated compartments.

Novelty : the maze is changed 3 times a week (12 configurations available)

Wellbeing : Social interactions are promoted by the housing together of many of animals (12 rats or 18 mice per cage). A red tunnel protects them from light during the resting period.

SleepLab

Sleep deprivation for rodents

SleepLab is a software allowing the acquisition of electrophysiologist signals needed in the animal sleep analysis.

Sleep Deprivation System's goal is to wake the animals in a non-intrusive manner, no contact, no poke done.

Thanks to this system, an electrical pulse is applied to an electromagnet placed under the platform that pushes it up and wakes rodents up. This simple setup can be used to work on partial or total sleep deprivation.

ViewPoint provides a complete turnkey solution to study Sleep & Awakening phases from your electrophysiologist signal.

SleepLab software allows the acquisition of electrophysiologist signals required in animal sleep analysis. It offers the opportunity to quantify the distribution of various states of vigilance over several days and a spectral analysis.

Its scoring algorithm analyses vigilance stares, totally or partially overseen. It uses a probability approach with no threshold.

This feature offers the ability to make a specific deprivation of slow wave sleep (SWS) or paradoxical sleep (REM sleep) when coupled to a SleepLab chamber.
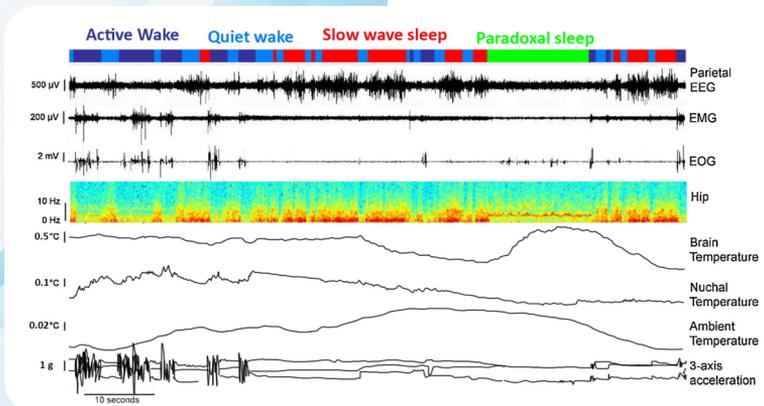
GaitLab

Quantitative gait analysis system for Rodents

A quantitative gait analysis system for Rodents GaitLab is an automated quantitative gait analysis system for rodents, based on the CatWalk Method. A single system can work on both : mice and rats.

The GaitLab turnkey system allows evaluation of many locomotor defects, such as those occurring in Parkinson's disease, arthrosis, spinal cord injury.

Different endpoints can be assessed depending on your field of interest (animal speed, footprint area, paw area, mean intensity, number of contact areas…)

Gait parameters
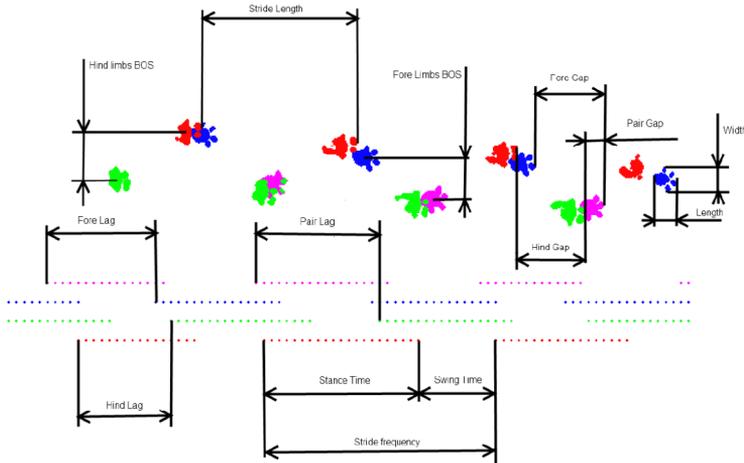
Available calculations:

- Animal speed
- Footprint area stride length and frequency
- Stance time, swing time
- Individual paw length and width
- Fore lag, pair lag, hind lag
- Fore gap, pair gap, hind gap
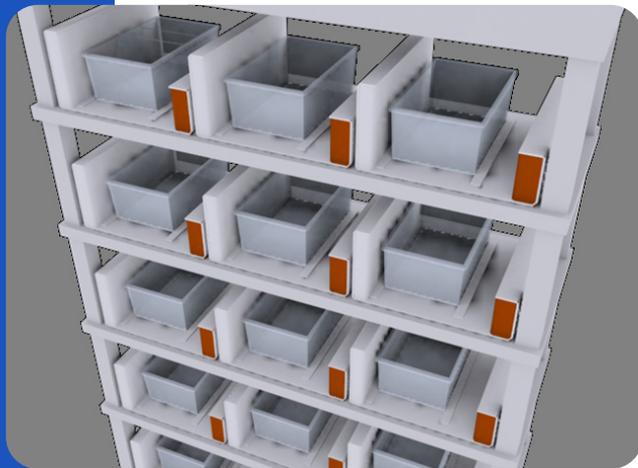- Number of contacts per paw

Easy analysis !

- Save time
- Accurate results
- Reliable imaging over time
- Real time trial validation
- Easy access to the animal

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Phenorack

Home cage monitoring system

PhenoRack is the most cutting edge home cages monitoring tool on the market today.


Plug and play !

In a few steps, start monitoring the behavior of your animals in a stress-less environment.

Phenorack analysis locomotion, activity and many behaviors of your animal 24/7 for an unlimited number of boxes.

High accuracy in supplying data:

• Phenorack analyses from live in real time any number of animals
• High resolution and filters make it possible to adapt to the most demanding laboratory environments
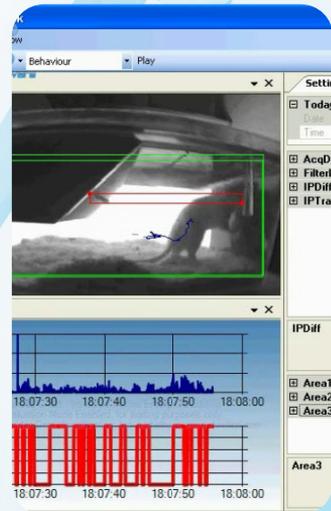
Our software is developed according to good laboratory practice:

• Data security and reliability are maximized
• Results can be easily transferred to your spreadsheet or statistical software

Hamlet Test

A leaming task analysing animals' ability

A learning task analyzing animals' ability to familiarize with a complex environment and decidedly adopting an anthropomorphic approach. The Hamlet Test apparatus mimics a small village, comprising a central agora and streets leading to functioned houses.

Animals can be trained in the Hamlet for days or weeks in groups and their ability to orientate can be tested after short or long time periods, in normal or pathological conditions. The tracking system can be used in dark conditions thanks to the IR light floor.

The Hamlet test offers the unique opportunity to introduce new paradigms :

• Play with novomaze
• Run into activity wheel (distance travelled, speed)
• Interact with a congener
• Drink (liquid consumption- ml/ animal)
• Eat (food consumption - g/ animal)
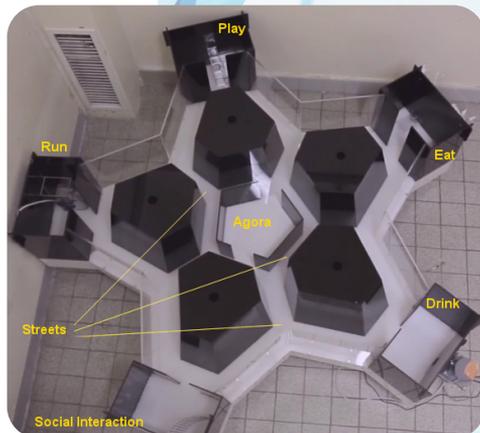
Vigie Primate

## *An automated system that measures primate activity*

VigiePrimate is a high throughput system able to perform long-term observation of primates in their cages. Indeed, it monitors the behavior of your animals in a stress-less environment. VigiePrimate analyses behaviors and movements of the animals continuously 24 hours a day, 7 days a week for up to 16 cages at the same time. It also allows you to use your existing telemetry system to score physiological information.

The system is composed of : autonomous InfraRed lighting wall panels, cameras which can be placed either on the side and/or at the to and/or in front of the cage, and of our most advanced automated behavioral analysis software.
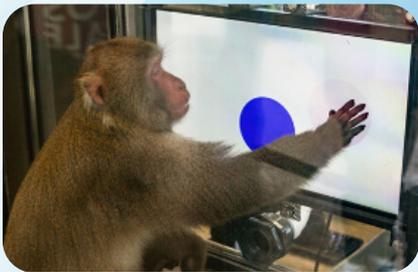
Available calculations :

• **Locomotion :** distance traveled, speed and duration of movements
• **Behavior :** climbing, resting, food intake (eating, drinking)
• **Activity levels :** freezing, ambulatory movements and burst
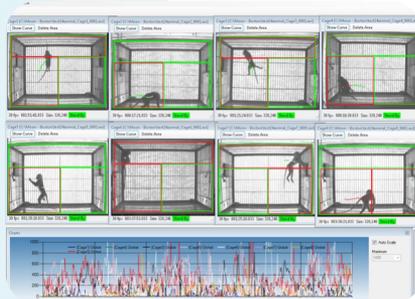
ViewPoint behavior technology

Our motto

Working for the well-being of the people and the Earth, in a spirit of benevolence and commitment..

Our core values

Viewpoint and all of its collaborators are committed to our customers and partners around the values they hold dear :

HONESTY
Motivate, respect our motto and our values

COMMITMENT
Motivate, set an example, don't take the easy way out

KINDNESS
Show mutual aid, solidarity and tolerance

PLEASURE
Working in a friendly and pleasant atmosphere,developing interest in the work

Don't miss our other technologies through the discovery of our catalog specific to zebrafish and other aquatic species behavior.

ViewPoint

Behavior Technology