

NEW EXTENDED Food Hoppers



The NEW BioDAQ EXTended food hoppers capture 5 times more spillage than previous hoppers. The deeper catch tray retains the crumbs so that the weight is recorded as uneaten. A Polycarbonate stand (required) elevates two cages to the proper level.

BioDAQ food modules limit the amount of diet spillage. Spillage is captured on the integrated tray at the hopper base.



The same electronic components can be used for food or liquid monitoring, and for both rat and mouse hardware. Each species' cage mount can be used for food or liquid hoppers, maximizing flexibility.

BioDAQ Unplugged ●

Manual Periodic Intake



The BioDAQ Unplugged cages consist of BioDAQ cages and hardware with an adapter instead of an electronic sensor. They are used for manual periodic intake measures, reducing spillage and researcher/animal interaction, limiting stress, improving manual measures, and saving time.

Add electronic components to upgrade to BioDAQ E2 Electronic capabilities.



Specially modified standard home cages provide reduced novel-environment stress and shortened acclimation times. Animals can live chronically in BioDAQ cages. Researcher contact is limited by design, further reducing confounding stressors.

BioDAQ E2 Electronic ●

Automated Episodic Intake



MONITOR 32 MODULES

A BioDAQ Central Controller will monitor up to 32 modules/sensors at one time. A minimum system is available with 8 modules/sensors, and can be expanded to 32 as needed.

NO LEAKS

The BioDAQ liquid intake bottle is designed not to leak. The drinking bout data is the animal's fluid intake, not a combination of intake and dripping.

RECORDS BOUTS

BioDAQ collects and records the smallest unit of consumption: the bout. A bout is an episode of uninterrupted feeding or drinking, having a start time, duration, and amount consumed. A freely feeding mouse or rat will interact with its food and water hundreds of times each day. Each of these bouts of feeding or drinking, and their relationship to each other, comprise the animals' intake behavior.

BioDAQ E3 Automated Gate Controller ●

Program access by time or amount consumed



The BioDAQ Automated Gate Controller allows the investigator to program the gate to open or close at a specified time, and/or when a specified amount of food or liquid is consumed. The automated gate is featured on BioDAQ E3 and can be added to an existing BioDAQ E2 system by upgrading the Central Controller, laptop, and each sensor to be controlled.



The Automated Gate Controller is mounted to the sensor and interacts with the manual gate mechanism of the BioDAQ feeding or drinking module. Automated control limits the researchers' need to visit the animal room, insuring accuracy, reducing stress, and increasing efficiency.

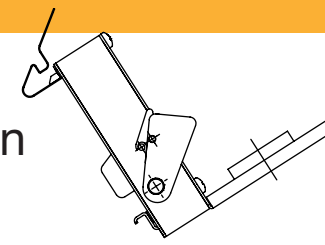
- Food Restriction
- Liquid Restriction
- Intermittent Access
- Pair Feeding

Defined Schedules	
1	Limit rats to 16 grams per day
2	Open gate for 15 minutes every hour
3	Limit rats to 2 grams 8 times a day
4	ad libitum during light cycle
5	ad libitum during dark cycle
6	New Schedule

Set researcher defined schedule to open and close the gate based on time and/ or amount consumed.

Want to upgrade your current BioDAQ system to include automated gates?





researchdiets.com/biodaq

Automated Episodic Food & Liquid Intake Monitor for Rats and Mice

BioDAQ@ResearchDiets.com

Features	BioDAQ E3	BioDAQ E2	BioDAQ Unplugged
Automated Gate Controller	X	with Upgrade	
Electronic Episodic Monitoring (8 min. / 32 max. per Central Controller)	X	X	with Upgrade
Data Analysis Software	X	X	with Upgrade
Perimeter Mounted Hoppers	X	X	X
Measure ad libitum FOOD Intake	X	X	X
Measure ad libitum LIQUID Intake	X	X	X
Fit Multiple Hoppers	X	X	X
Singly-housed MICE	X	X	X
Singly-housed RATS	X	X	X
Tethered animals (with optional slotted cage top)	X	X	X
Manual Periodic Weighing			X

Use OpenSource Diets



The BioDAQ food hopper works best with 1/2 inch diameter pelleted OpenSource Diets from Research Diets, Inc. Our specialty is formulation and production of custom purified ingredient OpenSource Diets for laboratory animals. A key benefit of our OpenSource Diets is the complete control researchers have over the diet composition. By carefully designing the diet formulas, researchers can test the effects of small or large controlled changes in nutrient composition.

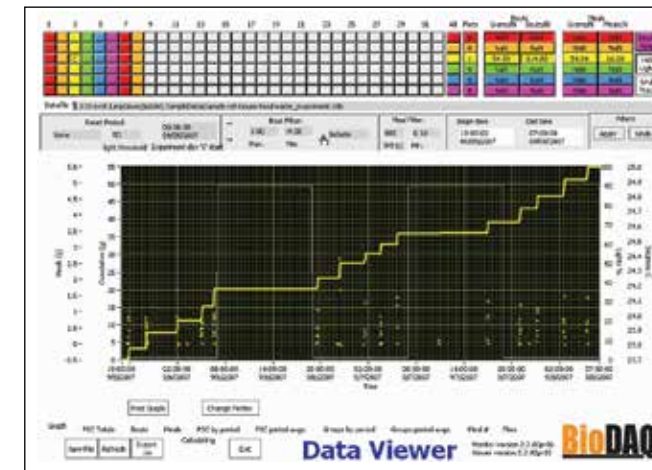
Incorporate Test Compounds

Research Diets, Inc. will incorporate your test compound into pelleted diets for simple, safe dosing. Feeding test compounds eliminates dosing related stress to the animal, eliminates vehicle effects, and saves time and labor.

The scientists in our Resource Center are available for consultations to discuss your research and formulate a diet to promote a desired phenotype. We have over 30 years experience formulating and producing custom diets for research and are the largest provider of purified diets in the world.

Data Analysis Software

BioDAQ data is viewed, graphed, and analyzed using the BioDAQ DataViewer software. Researchers can mine bout data to study periods of interest, the meal structure, and intake patterns of the animals. The software integrates collected light cycle data for quick circadian analyses. Raw bout data and researcher defined analyses are exported to Excel spreadsheets with the click of a button.



Home Cage

The BioDAQ Food and Liquid Intake Monitor (BioDAQ) is a home cage based instrument that automatically collects and records an animal's native feeding and drinking behavior. The singly housed animal can live chronically in the BioDAQ. Feeding and drinking modules are adapted to standard laboratory cages. The cages and hardware can be cleaned using standard animal facility procedures.

Reduced Stress

The feeding and drinking modules are mounted on the outside of the home cage and are easily accessible to both the animal and the researcher. The feeding and drinking interfaces are similar to typical laboratory home cages, allowing for a low stress transition to the system. When networked, the system and real time data can be remotely accessed, limiting the need for researchers to enter the colony room.

Electronic Sensors

Each feeding and drinking module is fitted with an electronic sensor that monitors the weight of the hopper on a second by second basis. The software measures changes in stable weight, which correspond to the animals interactions with the food or liquid source. Each distinct interaction recorded is a bout of feeding or drinking. An integrated environmental monitor automatically records light cycles, temperature, and humidity.

Flexible Design

The flexible hardware design allows the researcher to configure the animal's cage to fit their specific study design.

- Food intake
- Liquid intake
- Food and liquid intake
- Food choice
- Liquid choice
- Place preference
- Taste preference
- Intermittent access

Automated Gate

An optional automated gate controller allows the researcher to remotely control the animal's access to any food or liquid module by time and/or amount.

Data Analysis Software

The BioDAQ DataViewer is a data analysis software program that allows the researcher to view the data in real time, and to analyze the collected bout data.



Food



Food CHOICE



Food & Liquid



Liquid CHOICE

Applications

BioDAQ home cages can be fitted with one or multiple feeding and/or drinking modules depending on the study design. The hardware that attaches to the cage openings accommodates both food hoppers and liquid bottles, allowing the researcher to change the format to fit their needs. A standard home cage top and water bottle is provided.



Place preference shown with optional slotted lid



Gate Controlled Access

Custom Diets SHIPPED in 5 to 7 days



Where NutriPhenomics Begins

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