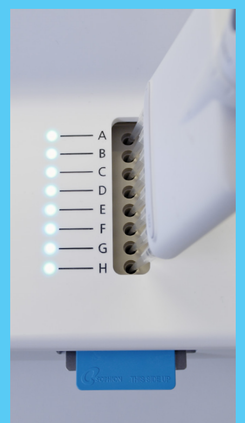
Sophion has developed a product that combines the flexibility of manual patch clamping with the consistency of automated patch clamp

We call it

QPatch® Compact



QPlate® 8/8X

The electrophysiological recording is done by **QPatch Compact** with cells, solutions and compounds added to the QPlate. This planar patch-clamp consumable is silicon-based with the orifice in the chip and the electrode pairs replacing conventional glass pipettes, coverslip, reference electrode and flow chamber.

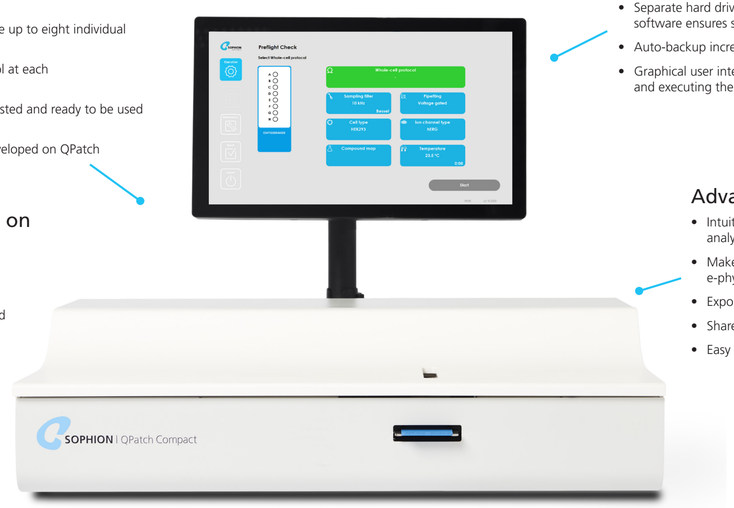
- Giga-Ω seal in physiological Ringer's solutions
- No carry-over of compound from yesterday's experiments
- Fast and complete liquid exchange via microfluidic channels
- Glass surfaces to prevent adherence of sticky compounds
- Ready-to-use individual electrode pairs – no need to ever re-chloride your ground electrode again
- Proven technology with one (QPlate 8) or 10 (QPlate 8X) patch-clamp orifices in each of the eight recording sites

Fully integrated system

- No need to assemble antivibration table, Faraday cage, microscope, micro-manipulator, electrode puller, perfusion system, etc.
- Eight built-in amplifiers to handle up to eight individual experiments simultaneously
- Water-based temperature control at each measurement site
- Everything included, installed, tested and ready to be used right out of the box
- Based on proven technology developed on QPatch

Experiments conducted on QPatch Compact are

- Standardized
- Unbiased
- With controlled and high-speed liquid addition
- Designed to give high reproducibility



Powerful internal PC and user-friendly software

- 512 GB storage suited for data rich ion channel recordings
- Separate hard drive for database and execution software ensures stability
- Auto-backup increases data safety and security
- Graphical user interface guides for setting up and executing the experiments

Advanced Analysis

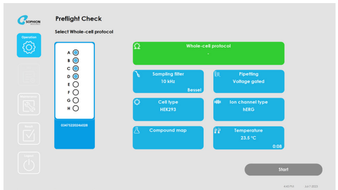
- Intuitive software for data handling and analysis
- Make all the analyses you normally do with e-phys data
- Export the data to other software if needed
- Share data with colleagues and collaborators
- Easy to keep track of what you did and when

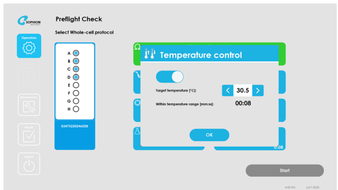
Maintenance-free

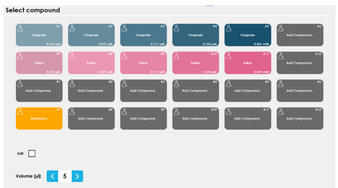
- No need to worry about maintenance; only cleaning required
- Periodic service is done on a modular basis – you can even do it yourself
- Smooth surfaces ensure easy cleaning
- Waste compound and biology is collected in the QPlate and is disposed of along with the plate

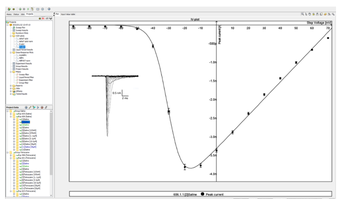
Ergonomically appropriate work environment

- Liquid addition guided by on-site light and audio guidance
- Easy to find comfortable work positions
- Touch screen is adjustable and maintains continuous running status overview
- Horizontal surfaces to place small labware within reach









SOPHION BIOSCIENCE

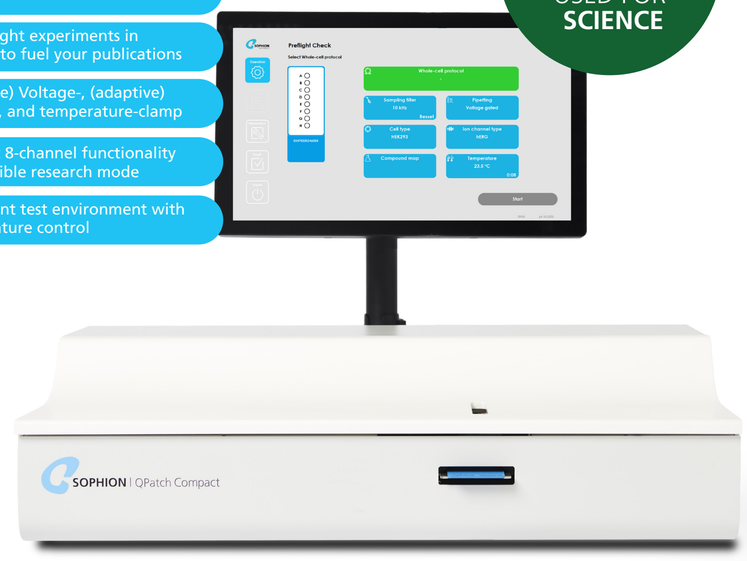
QPatch Compact

SEMI-AUTOMATED PATCH CLAMP SYSTEM

- No hassle – just data
- Minimum training required
- Up to eight experiments in parallel to fuel your publications
- (adaptive) Voltage-, (adaptive) current-, and temperature-clamp
- Efficient 8-channel functionality and flexible research mode
- Consistent test environment with temperature control

DESIGNED FOR **CONVENIENCE**

USED FOR **SCIENCE**



Instrument specifications and requirements

- W61 x D33 x H17 cm
- 15.6" Full HD 10-touch screen
- 22 kg (QPC), 4.8 kg (monitor), 7 kg (circulator)
- Pressure range: 4 - 8 bar (58 - 116 psi), peak consumption of 3 L/min (ISO 8573-1:2010)
- Vacuum: min. -700 mbar (~ -10 psi), peak consumption of 3 L/min
- Pipettes must be compatible with Thermo Scientific ART3551, product code 10242621
- Temperature control range: 18 - 40° C (64-104° F)

Amplifier specifications

Sampling rate: 50 kHz, 16 bit
RMS noise <12 pA in full bandwidth
Digital C_{fast}, C_{slow} and R_{series} compensation in single-hole
C_{total} in multi-hole
Bandwidth: 20 kHz
Input current range: ±25 nA, ±50 nA and ±100 nA
Control output voltage range: –400 mV to +600 mV
Bessel filter: 2, 4, 6 or 8th order
Butterworth filter: 2, 4, 6 or 8th order

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