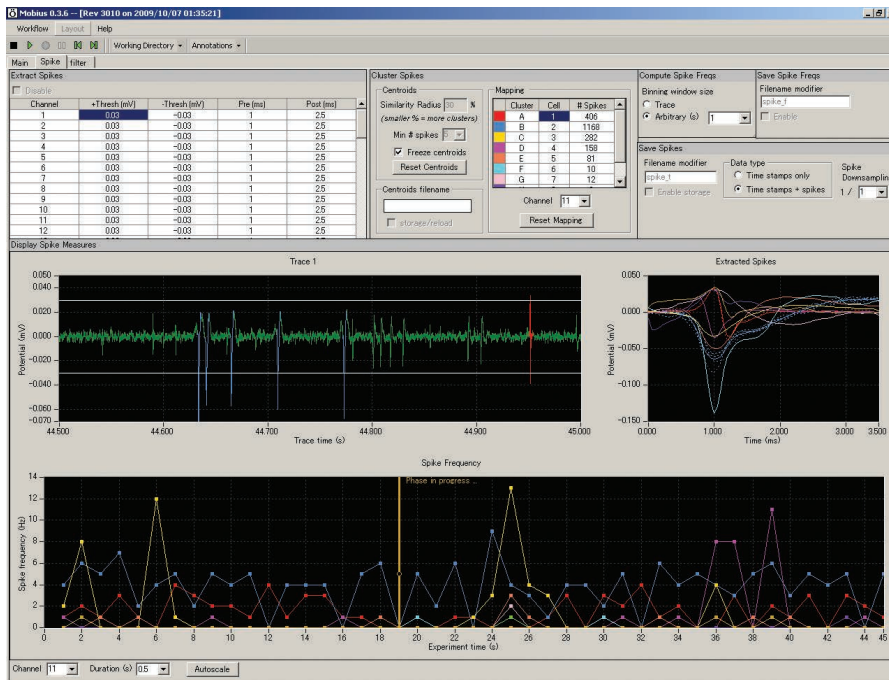# Highly-sophisticated, user-friendly software.

MED64 Mobius software

Highly-sophisticated, user-friendly software. MED64 Mobius software is a data acquisition and analysis package for the MED64 system, featuring a broad set of analysis functions available both online (i.e. during acquisition) and offline (i.e. post-acquisition). It is designed to be easy for beginners and powerful enough for advanced users. Mobius comes in various application-specific packages including "Evoked Potential Measurements", "Spike Sorter", "QT", as well as combined packages for multi-application users.

The Mobius user interface consists of various task-specific control panels, which can be quickly combined using a simple workflow editor to create custom experimental protocols and workflows. However, convenient pre-defined "workflow templates" are available for users who want to quickly set-up and run standard types of experiments.

Software Packages

EP (Evoked Potential) measurement package

- Evoked local field potentials (e.g. fEPSPs) on all 64 channels can be recorded in response to customizable user-defined stimulation parameters.
- Parameters for acquisition and stimulation including stimulus current amplitude and wave forms are designed easily with a simple control panel.
- Users can design and apply complex stimulation sequences independently for each stimulator. Templates are included for delivery of repetitive (e.g. theta) stimuli.
- Analysis of amplitude, slope and area parameters can be performed automatically during or after acquisition, and graphed independently for each channel. An arbitrary number of measures can be enabled, limited only by the processing power of your PC.

Spike Sorter Package

- Spikes are collected, extracted and sorted on 64 channels on-line and off-line.
- Spike time-stamps, waveforms of extracted spikes, and spike frequency charts can be saved in ASCII text file (csv) format, even WITHOUT saving raw data.
- Raw data can be exported to binary or ASCII text file (csv) formats.
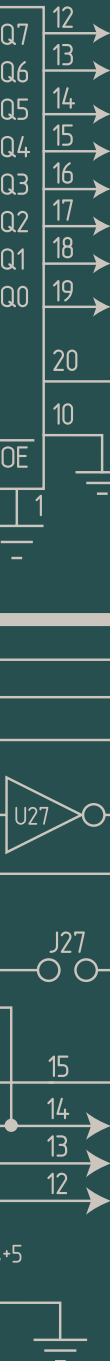
Features

• Ideal for recording and analysis of cardiomyocyte preparations, including iPS/ES cell-derived cardiomyocytes, primary myocyte cultures, and acute heart tissue.

• Signals are recorded at any of 64 channels according to user-defined acquisition parameters.

• Acquisition parameters and channels for analysis are selected easily in a simple control panel.

• Cardiomyocyte signals are automatically extracted according to user-defined thresholds and analyzed for beat frequencies and inter-spike intervals.

• Multiple types of slope, amplitude, time, and area measurements can be performed automatically on extracted signals.

• Field potential duration (FPD) can be also measured from extracted waveforms for studying QT prolongation with the "Time of Amplitude Minimum (or Max) to Minimum (or Max)" measure

• Averages and standard deviations for the beat frequencies, inter-spike intervals, and waveform analyses on all 64 channels can be automatically computed and graphed for each user-defined phase of an experiment. Dose-response curves can thus be easily constructed.
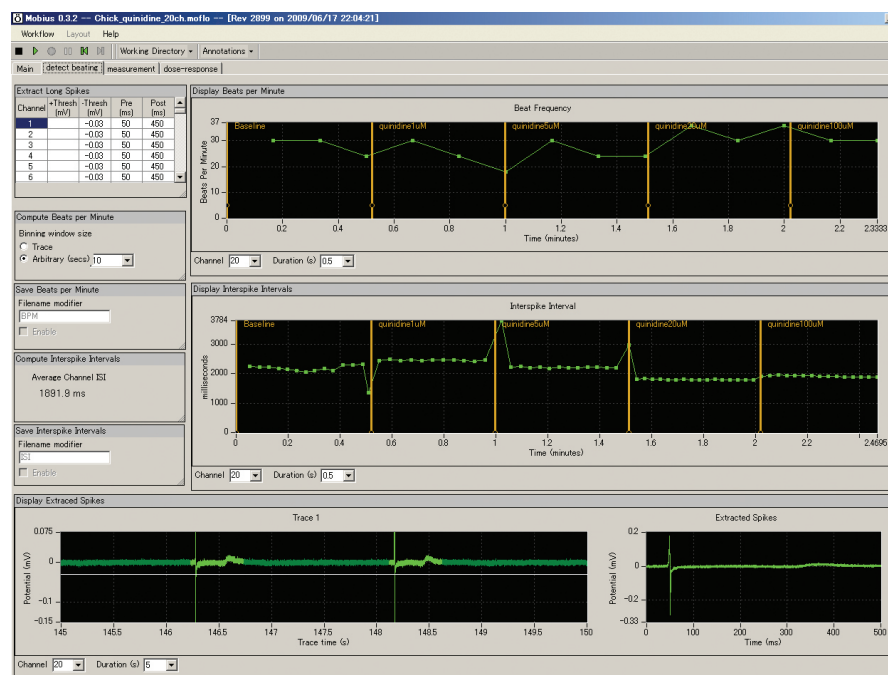
Data Output

Raw data can be exported in binary or ASCII text file (csv) format. Extracted spikes and all measurement charts can be saved as "csv" formatted text files.

Mobius QT

Mobius QT software allows MED64 users to acquire and analyze myocardial signals online and offline. It is the perfect solution for QT screening with iPS/ES cell derived cardiomyocytes.

Beat frequency and inter-beat interval are measured. Myocardial signals are detected (highlighted in bright green).
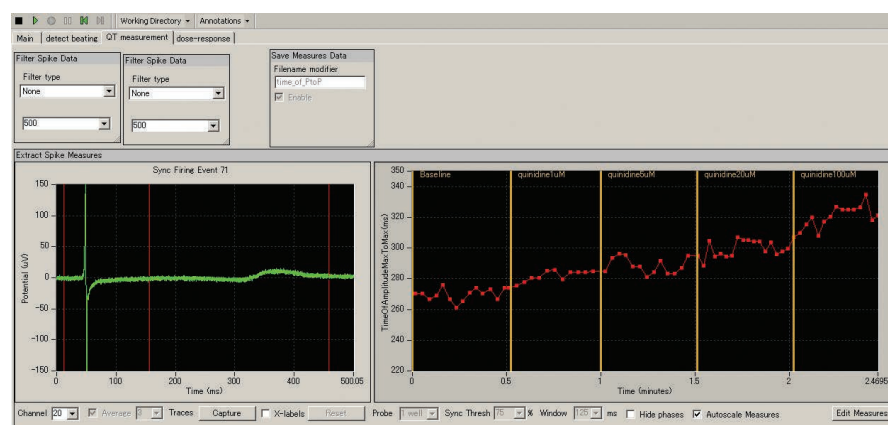
The time between peaks (i.e. QT interval) is measured and plotted over time.
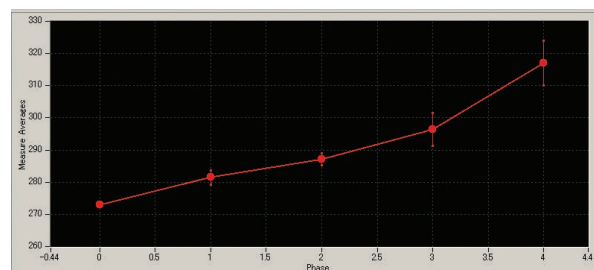
A dose-response curve is generated.