

Live Cell Alternating Magnetic Field Exposure System for In Vitro Time Lapse Imaging

The desire among researchers to perform *in vitro* time lapse imaging while exposing live cells to an alternating magnetic field has increased over the past decade.

NanoTherics has now conquered the difficulties involved in performing such experiments, and is launching the Live Cell AMF exposure system for *in vitro* time lapse imaging. The ergonomic design of this setup enables the user to mount it on any microscope compatible with 6/24/96 tissue culture plates.



Figure 1: Live Cell AMF exposure system for *in vitro* time lapse imaging mounted onto a Leica inverted fluorescence microscope.

Achievable Frequencies

Capacitance (nF)	Frequencies (kHz)
*600	128.8
*300	182.2
200	223.1
88	336.4
22	672.8
11	951.5

*Optional additional frequencies

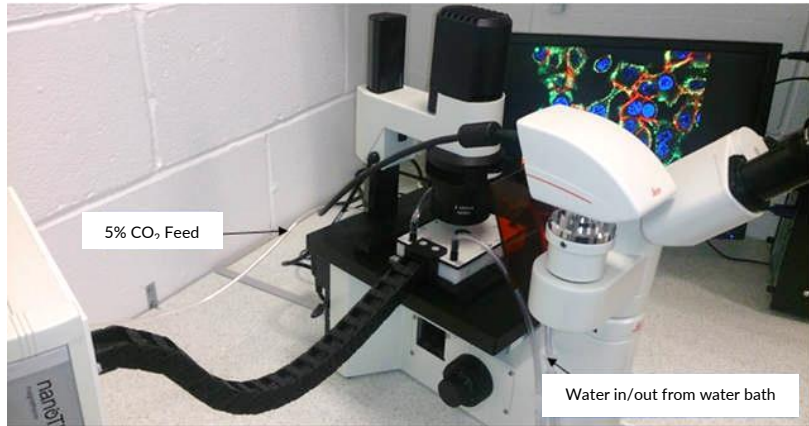


Figure 2: Complete connections for the time lapse imaging AMF exposure setup.

Flexible Compatibility

The Live Cell AMF setup can be connected to any magneTherm system, both old and new, which means that all existing users can use this unique setup. The setup enables physiological temperature control and a 5% CO₂ atmosphere, so that the cells can grow uninterrupted for the required time scale. The setup allows microscope experiments with AMF exposure at frequencies ranging from 100 kHz to 1 MHz with a field amplitude of up to 20 mT.

Unique additional features also allow researchers to use this setup to perform time lapse imaging with any type of microscope. This is a significant benefit over costly imaging setups that are usually compatible with one specific microscope type.

Specifications

CO ₂ input	5 %
Recirculating water bath output	320 ml / minute
Temperature stability	+/- 0.2 °C
Highest frequency available	951.5 kHz (13.2 mT) *
Lowest frequency available	128.8 kHz (20 mT) *
Dimensions	127 x 85 x 26 mm
Tissue culture plate	35 mm tissue culture dish

* will slightly change depending on the inductance and capacitance tolerance.



For more information or to request a quotation please visit
www.nanotherics.com.