

KIBRON MicroTroughX

**YOUR OWN LANGMUIR AND
LANGMUIR-BLODGETT LABORATORY**

The Leading Edge in Monolayers

The Kibron logo features a stylized white graphic of three curved lines above the word "Kibron" in a bold, white, sans-serif font.

Kibron



**MICROTROUGHX —
MULTIPURPOSE LANGMUIR AND
LANGMUIR-BLODGETT INSTRUMENT**



Kibron MicroTroughX

The Kibron MicroTroughX is an all-in-one lab tool for a variety of surface chemistry experiments. Using Kibron accessories you can convert the instrument into a Langmuir-Blodgett trough, a standard tensiometer, or a surface potential recording device.

- Recording surface pressure and isotherms
- LB deposition on Electron Microscopy-grids and mica
- Fluorescence microscopy of monolayers
- X-ray and IR-measurements

The core technology, the proprietary Kibron sensor (0.2 microgram resolution), allows to detect surface pressure and measure compression isotherms with a very high sensitivity, better than 0,01 mN/m, yielding excellent reproducibility. The technology also allows for very small subphase volumes with regard to both surface tension and pressure measurements; accordingly, LB coatings can be deposited on small surface area substrates. Open architecture facilitates the integration and interfacing of the system with other experimental techniques.

"The monolayer and Langmuir-Blodgett equipment of Kibron has renewed my interest in a technique that I remembered as clumsy and complicated. In addition, I have been nicely impressed by the kindness and efficiency of the Customer Service. My students are delighted with Kibron".

Prof.Dr. Félix M^a Goñi Urcelay,
Head of Unidad de Biofísica (CSIC-UPV/EHU)
University of the Basque Country

TECHNICAL DATA

Surface pressure

- is measured with the Kibron DyneProbe – a small diameter (0,51 mm) rod suspended across the air-water interface. No artefactual hysteresis as when using the conventional Pt plates. No drying and accumulation of salt which cause significant errors when filter paper is used.

- Microbalance range
0 – 300 mN/m
- Microbalance resolution:
1 μ N/m

Control of film area

- Barrier motion
High precision microstepping for smooth control of area
- Barrier speed
0,004-280 mm/min

Deposition accessory

- Dipping speed:
0,1* – 10 mm / min
- Dipping range:
40mm

Surface potential

- Kibron MicroSpot has low noise of less than 1 mV

Subphase temperature control

- Aluminum temperature plate that connects to a circulating water bath

Troughs

- Standard troughs available in two sizes, made of either PTFE or stainless steel

Short: 232x59mm, 137 cm², aspect ratio: 3.6:1, compression ratio: 15:1

Long: 405x59mm, 239 cm², aspect ratio: 6.4:1, compression ratio: 27:1

A range of different trough designs can be manufactured according to customer specifications

Dimensions and weight

- Complete system with acrylic casing:
Short: 2,70kg : 33 x 15 x 19 cm
Long: 4,85kg : 52 x 20 x 19 cm
- Electronics unit:
29 x 22 x 55 cm
1,35kg

* Model year 2015

WITH THE ACCESSORIES OF YOUR CHOICE YOU CAN BUILD YOUR OWN COMPLETE LANGMUIR- AND LANGMUIR-BLODGETT LABORATORY.

FEATURES & BENEFITS

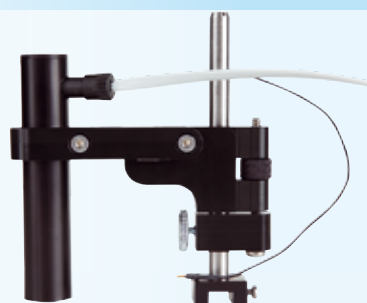
DyneProbe

- Inert metal alloy Ø 0.51mm
- Small diameter means minimal interference/disturbance during different experiments.
- Allows for small sample volumes
- Easy to clean, economical to use



Coating facility – LayerX

LayerX is an independent coating facility to transfer monolayer(s) to a solid substrate by the Langmuir-Blodgett (vertical) or Langmuir-Schaefer (horizontal) technique.



Surface Potential – MicroSpot

Kibron MicroSpot is a miniature size plug-and-play accessory for recording surface potential of monolayers. MicroSpot uses non-destructive vibrating capacitor method and the trough bottom acts as the counter electrode. The noise is less than 1 mV.



Electronics unit

- Easily connect and control a variety of analog and digital sensors; even up to four microbalances.
- Comes with a FilmwareX monolayer Control Software
- Upon request: ActiveX or Software & Drivers for command level control



Ribbon Trough

Special compression mechanism designed for measurements at extremely high surface pressures (>70 mN/m). Ribbon Trough fits into the base plate of MicroTrough and a Teflon ribbon forms a closed rectangular loop acting as a barrier.

Barriers

Compression barriers for the MicroTroughX. All the systems come with barriers made of PTFE. Extra compression barriers made of PTFE/Delrin are available upon request.



A RANGE OF DIFFERENT TROUGH DESIGNS, MADE OF DIFFERENT MATERIALS CAN BE MANUFACTURED ACCORDING TO CUSTOMER SPECIFICATIONS



Kibron Troughs

Interchangeable/removable troughs to expand the range of experimental possibilities; enzyme kinetics, LB/LS deposition, surface potential, microscopy, and more.

Hydrophobic troughs: precision manufactured from purest PTFE to keep the subphase free of contaminants and surfactants.

Hydrophilic troughs: shallow, low volume troughs machined out of stainless steel (grade 316).



MORE TOOLS, PLATES, TROUGHS AND OTHER ACCESSORIES ON WWW.KIBRON.COM



Kibron Inc. manufactures state-of-the-art tensiometers, langmuir-blodgett troughs and gravimetric balances as well as customer specified surface chemistry equipment and screening technology to overcome today's challenges in chemical industry. Since its founding, 1994, Kibron has focused on innovation, user benefits and dependable service.

Kibron Inc.
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