Precise analysis requires precise sampling

Micro Support Co., Ltd. is a sampling equipment manufacturer based in Japan, specializing in sample analysis pretreatment. We offer micro-sampling solutions in various fields that require strict quality control or studies of advanced materials like, high molecular compounds, petrochemicals, electronics, and semiconductors. We offer our clients flexible, easy-to-use hardware and software. In addition, we also offer extensive training to satisfy clients that need extra support. Our goal is to help our clients’ research by contributing to increase efficiency and accuracy with our micro-sampling instruments.

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Sampling Equipments

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Setup According Applications

Setup
The AxisPro model is a Sampling Equipment that enables the collection of a few-μm-size subjects and processing of samples in a target area with precise position control.

The AxisPro offers an accurate solution for micro-sampling.

Special features of the AxisPro

- **All-in-one type manipulating system**
  - AxisPro is combined with an electric microscope, manipulator, controller, PC display, and others.
  - The strength point of all-in-one types is ease of operation: All operations such as observing samples and manipulating subjects are controlled by PC software.

- **Easy operation by PC-mouse**
  - All operations such as focusing sample and manipulating objects are controlled by PC-mouse.
  - You don’t have to touch the sample after placement on the sample stage, basically.

- **Various tools**
  - We have various tools based on sampling needs.

Standard Set “AXIS-US”

<table>
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<tr>
<th>Typical Application Areas</th>
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<td>Electronic component</td>
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<tr>
<td>Physical material</td>
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<tr>
<td>Medical device</td>
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Axis Pro helps support a variety of processes

- Analysis of foreign substances by fielded Microscopy
- Observation of rare materials using optical or electron microscopy
- Analysis of samples in handling micro-crystals: 0.1μm square, 100μm square, under high-temperature and pressure, and protein crystallization
- PDA study of reaction and analysis after extraction process
- Pendant marking

<table>
<thead>
<tr>
<th>Attachable Tools</th>
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<td>Tangent probe</td>
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<td>Tangent reader tool (2 items)</td>
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<td>Micro knife (2 items)</td>
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<td>Ruby knife (4 items)</td>
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<tr>
<td>Alligator</td>
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<tr>
<td>Other tools (3 items) available</td>
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**Sampling Equipments**

**Axis Pro FC vs Axis Pro SS**

**Full cover all electric system**
- Handles 5µm-size object with precise motion
- Full cover improves performance and safety
- Just move FC mouse after attaching sample
- Equipped with electric transferred disk in all models

**Custom-designed electric system**
- Handles 5µm-size object with precise motion
- Precise sample transfer by program control
- Adjust for various samplings
- Flexibility for custom-designed
- Just moves PC mouse after attaching sample
- Precise sample transfer by program control
- Easy setting with angle fixing arms

**Axis Pro FC exclusive specifications**
- Equipped with conventional drawer
- Double level glass plate

**Axis Pro SS exclusive specifications**
- Double level glass plate
- More a screen for optical image check

**Common specifications**
- High performance electric zoom objective
- Edge fixing arm
- Windows Embedded OS
- Easy operation by software
- PC mouse control

**Additional features**
- Designed for custom applications – ability to select only one arm, manual stage, etc.
- Suitable for tall samples as entire upper microscope moves up and down.
- Full cover body improves performance and safety.
- Equipped with front doors of all clear panel and a drawer for saving tools.
**Axis Pro**

**AxisProFC/SS common applications**

- **Pick up substance on a surface**
  - 2 μm ~
- **Surface exposed**
  - Foreign substance removal
  - 10 μm ~
- **Dig buried substance**
  - Detach and transfer
  - 10 μm ~

- **Pick up substance in a tiny hole**
  - 5 μm ~
- **Adsorb and release pico-liter liquid**
  - 5 μm ~
- **Collect few-μm size substances**
  - 1 μm ~

- **Pick up material from one layer of a multilayer structure**
  - 5 μm ~
- **Cut to depth direction (detachment)**
  - 5 μm ~
- **Pick up substance in adhesive**
  - 20 μm ~

- **Fill lift-out**
  - Posture control and transfer
  - 10 μm ~
- **Mark on hard material**
  - 2 μm ~
- **Probing**
  - Handle 5 μm-size wiring
  - 5 μm ~

**Application example (Tool-Accessory)**

- **TP-0005**
  - RK-005C
  - MK-510
  - MIL-1
  - MTW-1
  - MA-9
  - HPR-1R
Axis Pro

Software main function

[Setting tab]
1. Origin return
   - origin return of optional unit (Calibration)
2. Coordinate monitor
   - monitor the position of arms and stage
3. Picture recording
   - record operations with JPEG or BMP
4. Movie capture
   - real time capture with AVI
5. Measurement
   - measure distance and diameter of circle
6. Camera exposure correction
   - shift side light to cover or under
7. Marking mode
   - restrict axis and operate straight-line motion
8. Position memory
   - memorize sample position, transfer position and evacuation position
9. Magnification monitor
   - confirm optical magnification and total magnification
10. Motion unit choice
    - choose microscope, LH-arm and RH-arm
11. Change of microscope magnification
    - switch optical magnification by button
12. Transferred disk
    - move transferred disk by button
13. Depth measurement monitor
    - measure depth by microscope focusing

[Home tab]
1. Navigation map
   - tiling function gets wide-area information
   - tiling automatically by motorized stage
   - record a picture of tiling
   - move to a designated position by mouse-click
2. Arms position memory function
   - memorize each position depending on each tool
   - record and load positions
   - arm temporary evacuation function
3. Disk position memory function
   - memorize disk positions with three dimensions
   - record and load positions
   - transfer between plural number positions repeatedly
   - safety operation by automatic evacuation program
4. Automatic movement function
   - scrape on wide area and depth direction semi-automatically with Milling pro
   - unit choice: choose left-arm or right-arm
   - direction: move to center from edge with milling pro
   - direction: move to edge from center with knife
   - movement: scrape surface with number input
   - speed: change speed depending on situations