

8. Kyowa MCA-3 Microgoniometer

MCA-3 is an image analysis contact angle meter (a.k.a. goniometer) that can accurately drop and detect microscopic droplets (under 100 μm). The system has both a top view to study the droplet movement and a side view to study the wettability. Using this device we can test a multitude of phenomena such as wettability of surfaces, surface tensions of various working fluids, evaporation and condensation of droplets. The specifications include:

- A high magnification lens and a 12-fold zoom to provide a field of view from $75 \times 56 \mu\text{m}$ to $910 \times 680 \mu\text{m}$.
- Automatic recognition of drop deposition by FAMAS analysis software.
- Fine adjustable micro stage in x, y and z axes for exact positioning.
- Fast image capture system to allow accurate measurements.
- Inkjet head system, using piezoelectric technology to generate droplets from about 8 to 60 pL.
- 0.01 to 180 degrees contact angle measuring range with 0.01 degrees resolution and 0.5 contact angle accuracy.

