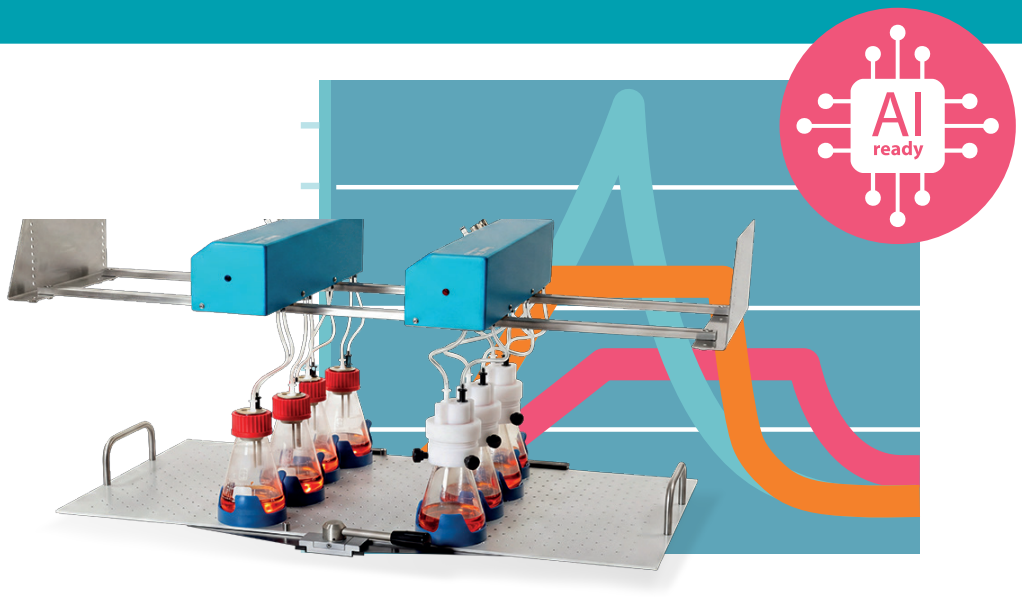
Kuhner shaker

Kuhner TOM

Maximize bioprocess knowledge. Minimize uncertainty.



Understand more. Decide faster.

- Generate **high-value online data** for **modeling and AI training**
- **Optimize process parameters** with confidence
- **Identify reliably optimal strains and media**
- **Accelerate your scale-up process** by data-driven decisions
- **Replace offline sampling with real-time online data -** reduce workload and analysis costs
- **Apply proven technology** backed up by 125+ publications across two technology generations

Reliable. Flexible. Cost-Efficient.

- **One system, endless possibilities –** for any type of cells, flasks, shaking conditions, lab & industrial media
- **Consumable-free –** connect your existing glass & single-use shake flasks (any type & size)
- **Minimal maintenance costs –** long-lasting sensors and non-shaken electronics
- **Modular setup to grow with your demands –** start with 4 shake flasks & add modules as required
- **Seamless integration –** upgrade any Kuhner incubator shaker with TOM, anytime.

ONLINE **No offline sampling required**

Retrofittable to all Kuhner shakers

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Kuhner shaker

Microbial or cell culture – which setup fits your workflow?

Working with microbial cultures?

Kuhner TOM Microbial is specifically designed for microbial cultivation, enabling reliable data acquisition in non-CO_2-controlled environments. By using a pressurized air-supply for aeration, it ensures efficient aeration – even for large flasks and high oxygen demand - while maintaining stable and comparable process conditions.

Kuhner TOM M

Focusing on cell culture?

Kuhner TOM Cell is specifically designed for cell culture applications, enabling precise data acquisition in humidified, CO_2-controlled incubators. Uses the air from the incubator chamber – no additional equipment required, and maximum comparability with your existing setup.

Kuhner TOM C

Compatible with cell culture flasks & caps

Our community uses Kuhner TOM to detect & measure…

- Growth, metabolic & production kinetics
- Cell viability, VCD estimation
- Growth in complex, turbid & industrial media
- Viscous culture broths
- Growth of filamentous organisms
- Media deficiencies
- Metabolic burden & product formation
- C-source depletion = end of culture growth
- Oxygen, substrate and pH limitations
- Overflow metabolism & diauxic growth
- High-temperature (up to 58°C) applications

Want to learn more? Please contact us with any questions & requests

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