

Kuhner TOM: Online measurement for shake flask cultivations



Kuhner TOM (Transfer-Rate Online Measurement) provides online measurements of the oxygen transfer rate (OTR), carbon dioxide transfer rate (CTR), and respiratory quotient (RQ) for up to 16 individual shake flasks in a Kuhner incubator shaker. It is applicable for cell culture and for microbial cultivation processes. The TOM device provides the user with a better understanding of any bioprocess and allows for more efficient and effective optimization during process development. It is easily installed in any Kuhner shaker and is compatible with a variety of different shake flask types and sizes, including single-use shake flasks. Kuhner TOM has a modular design which allows the user to choose online measurements from 4, 8, 12, or 16 shake flasks. The TOM device is mounted above the shake flasks and requires no space on the shaking platform, maximizing the capacity for shake flasks in the incubator.

Kuhner TOM captures the progress of multiple cultivations over time, providing an opportunity for the user to selectively schedule off-line sampling and analysis at critical time points. The TOM system offers valuable insight on the viability and growth rate of shaken cultivations and also helps to identify sub-optimal cultivation conditions, including oxygen limitation, substrate limitation, or product inhibition. The TOM device also provides an opportunity for the systematic and rapid optimization of culture media and conditions (e.g. balancing different carbon sources or media additives, substrate uptake and product formation via RQ). The OTR, CTR, and RQ data captured from the TOM will accelerate any process development and facilitates scale-up.

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Link to product website: https://kuhner.com/en/products/data/Add-ons_KuhnerTOM.php

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