

Kibron CMCeeker

High throughput screen for accurate, automatic and cost-efficient screening of critical micelle concentration

"The Centre for Materials Discovery focuses on the use of high throughput methods for the discovery of materials with entirely new properties or step-change improvements in performance.

The Kibron Delta-8 analyzer is an invaluable module in a number of our workflows, particularly in programs directed towards the design of new functional surfactants."

**Professor Andy Cooper,
Director of the Centre for Materials Discovery,
Liverpool University, UK**



www.kibron.com

Kibron CMCeeker > high performance CMC screening

The use of surfactants is growing fast in a diverse range of industries, all seeking for better performance of their products. The ideal formulation depends on the right choice and sufficient amount of the surfactants included. Surfactants, nearly without exception, are also the most expensive ingredients in these formulations. The question is, how to optimize the choice and content of surfactants, while improving product performance.

The key parameter needed to optimize the content of surfactants is the critical micelle concentration (CMC). To establish the best formulation requires a great number of tests. The Kibron CMCeeker makes, for the first time, CMC measurements a practical utility for modern industrial R&D, by offering the following features and benefits:

Automation & time savings

- CMC measurements over 100 times faster compared to existing methods, yielding CMC values for 8 compounds in only a few minutes
- simultaneous equilibration of 96 samples
- use of disposable 96 well-microtiter plates, reducing the risk of contamination
- automatic probe cleaning after each measuring cycle
- full control by an easy-to-use and intuitive software

Cost savings

The minimal sample volumes (50 microliters/data point) needed for CMC-determinations by the Kibron CMCeeker brings R & D labs significant savings in reagent expenditure.

Kibron CMCeeker vs. conventional methods

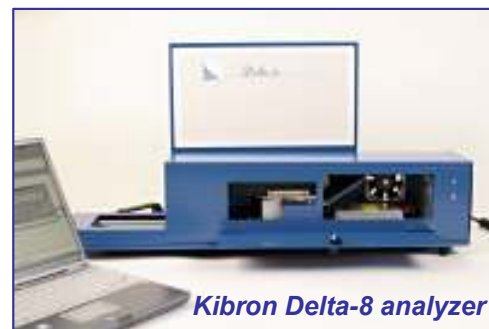
	<u>Kibron CMCeeker</u>	<u>Conventional method</u>
Sample volume	50 microliters	> 10.000 microliters
Speed of CMC measurements	10 min / 96 data points	~ 15 min / one data point
Sample equilibration time	simultaneous equilibration of 96 samples	individual equilibration of each sample
Probe cleaning	automatic	manual

Kibron CMCeeker components

The Kibron CMCeeker comprises the use of the *Kibron Delta-8 analyzer*, *CMCeeker software* and *CMCeeker kit*, including Kibron microtiter plates, sensors and automatic cleaning unit.

Kibron Delta-8 analyzer - basic features

- standard 96-well platform
- sample volume 50 microliters/well
- simultaneous equilibration of 96 samples
- measurement time of one plate 3-10 minutes
- 8 parallel high-precision microbalances and wire probes
- automatic probe cleaning after each assay
- integration possibility to robotics and automatic liquid handling systems
- robust and compact construction
- easy-to-use and minimal maintenance required



Kibron Delta-8 analyzer

CMCeeker kit

One CMCeeker kit includes 400 Kibron microtiter plates, one cleaning unit and 4 sets of probes, allowing for **3200** CMC determinations.

CMCeeker software

The CMCeeker is operated by a dedicated and intuitive software for screening of critical micelle concentration.

The software is easy to use and gives immediate data read-out. The data is stored into the RDBMS database server, including necessary maintenance tools to secure your data.

The software's event driven client/server architecture allows communication and easy integration with liquid handling and other robotic systems in WIN32 and .Net environments.