



## Microbatch-under-oil for in situ DLS

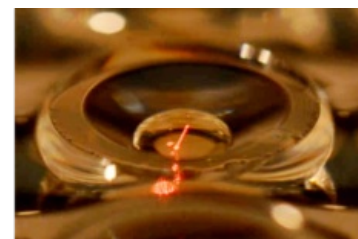
### Dear Crystallographer

Did you know the [Oryx8](#) in combination with the [SpectroLight 600](#) by Xtal Concepts can identify promising conditions for structure determination by cryoEM and crystallization.

- Make DLS measurements from 96 well plates
- [Microbatch-under-oil](#) allows accurate measurement
- Aqueous drop has no liquid-air interface

For cryoEM, screens comprising of detergents, ions from the extremes of the Hofmeister series, buffers and substrates can be used. Favorable conditions can then be optimized before setting up cryoEM grids.

Microbatch Under Oil Optimization			
View	Concentration	Show Units	Microbatch Under Oil Opt
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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12	10.00 µg/ml Protein	1.34	5.000
	4.000 M Trisacetate	10.000	0.000
	NaCl Solution pH	7.00	7.00
	Total Buffer Concentration	0.00	0.00
11	10.00 µg/ml Protein	11.4	5.000
	4.000 M Trisacetate	10.000	0.000
	NaCl Solution pH	7.00	7.00
	Total Buffer Concentration	0.00	0.00
10	10.00 µg/ml Protein	10.4	5.000
	4.000 M Trisacetate	10.000	0.000
	NaCl Solution pH	7.00	7.00
	Total Buffer Concentration	0.00	0.00



Screening and optimization experiments (with cryoEM and/or crystallography in mind) can be dispensed by the Oryx8, then efficiently analyzed by the SpectroLight 600.

Several hundred samples can be analyzed per day, before choosing the best to pass on for analysis by cryoEM.



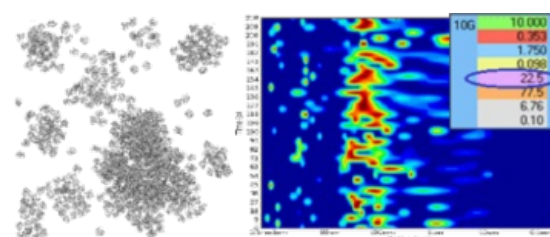
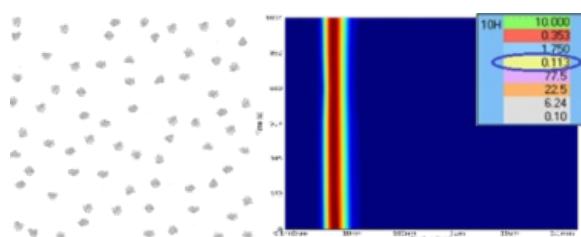
### [Oryx8](#) screening under oil

- Only 10.0 µl of protein required for a 96-well screen (100 nL + 100 nL)
- Robotic oil dispensing
- Simultaneously dispense additives to the drop using a 3, 4 or 7 channel dispensing tip.
- Optimize conditions with up to 7 ingredients using [XStep](#)



### [SpectroLight 600](#) in-plate DLS

- Size distribution determination noninvasively by in-situ DLS fully automated imaging system
- Operates on standard plates to perform high throughput in sub-microliter volumes
- Characterization of biomolecules for further sample evaluation including NMR, CryoEM, SAXS or Crystallization
- Typical results for a DLS measurement with SpectroLight 600 below.



To request a quotation or demonstration please contact [Patrick@douglas.co.uk](mailto:Patrick@douglas.co.uk)

For product support contact [Stefan@douglas.co.uk](mailto:Stefan@douglas.co.uk)

For anything else please contact [Info@douglas.co.uk](mailto:Info@douglas.co.uk)

Douglas Instruments will be at the following meetings:

Visit our booth and pick up a microseeding toolkit containing everything you need to do a [rMMS](#)



BCA Spring Meeting, Warwick, UK

26 March - 29 March 2018



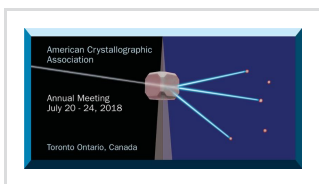
FEBS Advanced Methods in Macromolecular Crystallisation VIII, Nove Hradý, Czech Republic

10 June - 16 June 2018



AFC 2018, Lyon, France

10 July - 13 July 2018



ACA, Toronto

20 July - 24 July 2018



ECM31, Oviedo, Spain

22 August - 27 August 2018

Recent citations of Douglas Instruments products

[Molecular basis of the flavin-based electron-bifurcating caffeyl-CoA reductase reaction](#)

Demmer, J.K., Bertsch, J., Öppinger, C., Wohlers, H., Kayastha, K., Demmer, U., Ermler, U. and Müller, V.

FEBS letters. 2018 Jan 11

[Structure-guided design of \*Serratia marcescens\* short-chain dehydrogenase/reductase for stereoselective synthesis of \(R\)-phenylephrine](#)

Liu, J.S., Kuan, Y.C., Tsou, Y., Lin, T.Y., Hsu, W.H., Yang, M.T., Lin, J.Y. and Wang, W.C.

Scientific reports 8.1 (2018): 2316.