



Design Success

DASware® design software—Applies Design of Experiments to bioprocesses

»Perfect companions: Design of Experiments and parallel bioreactor systems.«



DASbox® Mini Bioreactor System for cell culture and microbiology: the perfect tool for DoE approaches.

The route to effective bioprocess development

Design of Experiments (DoE) is a structured method to investigate the influence of critical process parameters, interactions, and dependencies in bioprocess development. In later manufacturing it streamlines post-approval changes and regulatory processes.

In early process development DoE is a time- and cost-effective way for clone and cell line screening or media optimization. Parallel cultivation systems fully support seamless DoE approaches.

Design your success through successful process design.

A reliable concept and diverse capabilities

The DASware design software was developed to apply DoE concepts to bioprocessing. It is part of the DASware software suite for comprehensive bioprocess management.

The Eppendorf DASbox® Mini Bioreactor Systems and DASGIP® Parallel Bioreactor Systems are ideal platforms for easy implementation of Design of Experiments in bioprocesses. The simultaneous operation of multiple bioreactors saves time, reduces manual operations and eliminates reproducibility issues.

Parallel bioreactor systems ensure defined and controlled process conditions to facilitate the screening of bacteria or cell cultures, and the optimization of media or substrate quantities on small scale.



DASware design: Accelerate your bioprocess development by Design of Experiments.

Full factorial design

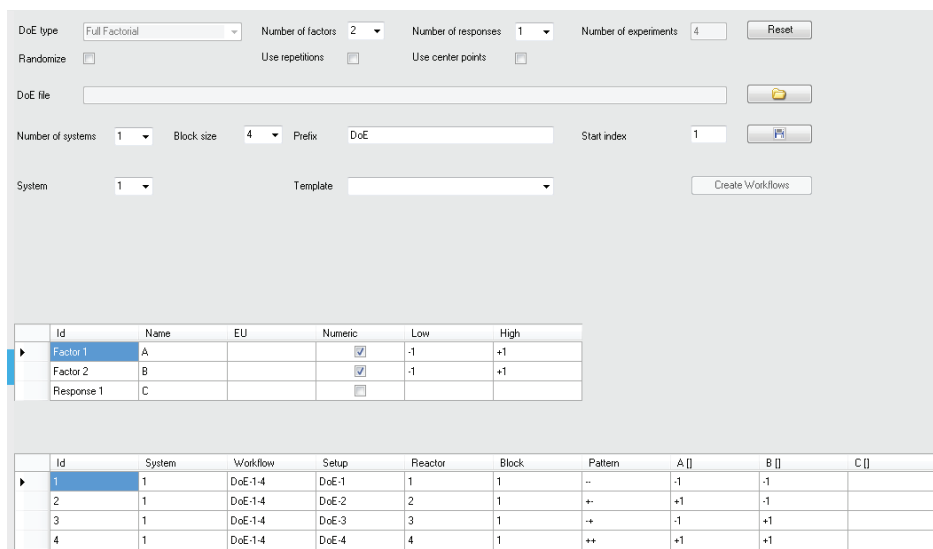
DASware design comes with a full factorial DoE builder. Users can easily define experimental factors and responses. The software automatically fills DoE data tables and positions runs on a random basis to eliminate human errors.

Third-party software integration

Alternatively to using the embedded DoE builder, a wide variety of designs for screening, process development, and optimization can be automatically imported from the most powerful third-party tools including JMP®, Modde®, Minitab®, and Design-Expert®.

Recipe generator and automated workflows

Parallel recipes incorporating factor variation e.g. for pH, dissolved oxygen, temperature set-points or feed rates are automatically populated. Following our easy Point-Click-Grow concept they can be carried out on a set of parallel operated bioreactors with a single mouse click.



The screenshot shows the DASware design DoE builder interface. At the top, there are configuration options: DoE type (Full Factorial), Number of factors (2), Number of responses (1), and Number of experiments (4). Below these are checkboxes for Randomize, Use repetitions, and Use center points. A DoE file input field is present. Further down, there are dropdowns for Number of systems (1), Block size (4), Prefix (DoE), and Start index (1). A System dropdown is set to 1, and a Template dropdown is empty. A 'Create Workflows' button is at the bottom right.

Id	Name	EU	Numeric	Low	High
Factor 1	A		<input checked="" type="checkbox"/>	-1	+1
Factor 2	B		<input checked="" type="checkbox"/>	-1	+1
Response 1	C		<input type="checkbox"/>		

Id	System	Workflow	Setup	Reactor	Block	Pattern	A []	B []	C []
1	1	DoE-1-4	DoE-1	1	1	--	-1	-1	
2	1	DoE-1-4	DoE-2	2	1	++	+1	-1	
3	1	DoE-1-4	DoE-3	3	1	++	-1	+1	
4	1	DoE-1-4	DoE-4	4	1	++	+1	+1	

DASware design DoE builder

> Get further information on DASware design including technical papers and applications on www.eppendorf.com/DASware-design or contact your local Eppendorf sales representative.

Ordering information

Description	Order no.
DASware® design, license for 1 vessel (DoE and local information management)	76DWDOE

Description	Order no. (system with glass vessels)	Order no. (system for single-use vessels)
DASbox® Mini Bioreactor System for Cell Culture Applications , max. 5 sL/h gassing		
4-fold system	76DX04CC	76DX04CCSU
8 fold system	76DX08CC	76DX08CCSU
16-fold system	76DX16CC	76DX16CCSU
24-fold system	76DX24CC	76DX24CCSU
DASbox® Mini Bioreactor System for Microbial Applications , max. 25 sL/h gassing		
4-fold system	76DX04MB	76DX04MBSU
8-fold system	76DX08MB	76DX08MBSU
16-fold system	76DX16MB	76DX16MBSU
DASGIP® Parallel Bioreactor System for Cell Culture* , max. 50 sL/h gassing		
4-fold system with Bioblock	76DG04CCBB	76DG04CCSU
8-fold system with Bioblock	76DG08CCBB	76DG08CCSU
16-fold system with Bioblock	76DG16CCBB	76DG16CCSU
4-fold system, benchtop	76DG04CC	**
8-fold system, benchtop	76DG08CC	**
16-fold system, benchtop	76DG16CC	**
DASGIP® Parallel Bioreactor System for Microbial Applications* , max. 250 sL/h gassing		
4-fold system with Bioblock	76DG04M BBB	76DG04MBSU
8-fold system with Bioblock	76DG08M BBB	76DG08MBSU
16-fold system with Bioblock	76DG16M BBB	76DG16MBSU
4-fold system, benchtop	76DG04MB	–
8-fold system, benchtop	76DG08MB	–
16-fold system, benchtop	76DG16MB	–

* DASGIP® Parallel Bioreactor Systems are configured to meet individual customer requirements. The systems shown are example configurations. Please contact us for more information. ** DASGIP® Parallel Bioreactor Systems (benchtop) can be operated with selected BioBLU® Single-Use Vessels using adaptor kits.

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