



DURAN BAFFLED, WIDE MOUTH BOTTLE GLS 80

During mixing in standard GLS 80 laboratory bottles, the liquid moves in a swirling motion that approximates a solid-body rotation. The entire fluid, and any suspended particles, moves like a carousel. This is a very inefficient flow pattern, and very little mixing actually occurs. By adding three vertical baffles into the inner surface of the GLS 80 bottles, the swirling motion is disrupted, and a much more effective mixing occurs. The baffles improve the top-to-bottom circulation and produce a greater radial mixing. The baffles also offer other advantages such as suppressing the formation of a central vortex, and reducing dead-zones where mixing does not occur.



Applications

- Aerating
- Dissolving
- Emulsifying
- Homogenizing
- Mixing
- Suspending

Features

- The baffled GLS 80 bottles are fully compatible with both the DURAN GLS 80 magnetic stirrers, and other magnetic stir bars.
- The baffled GLS 80 bottles are fully autoclavable.
- The wide 65 mm inner diameter of the GLS 80 wide mouth provides easy access to the contents, or for cleaning.
- The baffles are moulded into the glass side wall of the bottles and form a continuous, smooth inner surface making clean up easy.
- Compatible with full range of wide mouth GLS 80 connection cap systems for liquid addition or removal when mixing with stir bars.
- The bottles feature an easy-to-read graduated volume scale.

Bottles Baffled Wide Mouth, GLS 80, supplied complete with Polypropylene Pouring Ring and GLS 80 Cap, DURAN

Cat No.	Capacity ml	Height mm	Dia mm	Qty. Per Pack Pcs
21286 365	250	105	95	1
21286 445	500	152	101	1
21286 545	1000	222	101	1

Additional Attachments (Optional)

Cat No.	Description	Benefits	Qty. Per Pack Pcs
29118 91	DURAN GLS 80 blue polypropylene vented cap*	For use with magnetic stir bars. PTFE membrane vent allows gas exchange with the atmosphere, but protects from external contamination.	2
21263 91	DURAN Stirred reactor wide mouth cap for 250 ml bottle, GLS 80 supplied with impeller shaped magnetic stirrer, 4 connection ports (2x GL 18 and 2x GL 14)*	For use with 250 ml GLS 80 bottles. Allows the efficient mixing of the contents using a magnetic stirrer. Liquid may be added or removed via the optional tube connectors.	1
12003 79	DURAN Stirred reactor wide mouth cap for 500 or 1000 ml bottles, GLS 80 supplied with anchor shaped magnetic stirrer, 4 connection ports (2x GL 18 and 2x GL 14)*	For use with 500 or 1000 ml GLS 80 bottles. Allows the efficient mixing of the contents using magnetic stirrer. Liquid may be added or a removed via the optional tube connectors.	1

* Note: DURAN baffled wide mouth bottles GLS 80 must be ordered separately.

DURAN BAFFLED FLASKS

Why use baffled flasks?

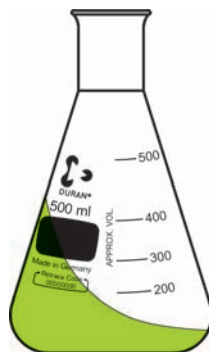
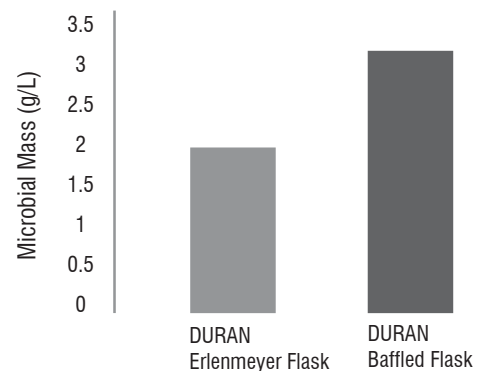
- Due to limited oxygen transfer, cell growth is restricted in standard Erlenmeyer flasks.
- Larger surface of the content results in a higher possible oxygen intake due to increased gas exchange area.
- Baffled flasks
 - interrupt the laminar flow to create a turbulent flow
 - increase the surface of the liquid and the gas exchange surface
 - produce a higher oxygen transfer compared to standard Erlenmeyer flasks

Benefits of DURAN baffled flasks

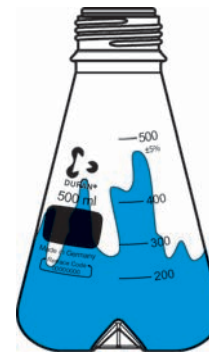
- completely automated machine manufacturing
 - reproducible geometry
 - comparable results
- complete with membrane screw cap (reproducible gas exchange)
- with retrace code (batch certificate via internet)



Comparison of the produced microbial mass (Experiment with *E.Coli* bacteria)



DURAN Erlenmeyer Flask



DURAN Baffled Flask

When cultivating microorganisms Erlenmeyer flasks on an orbital shaker, the oxygen intake is frequently the limiting factor for cell growth. The DURAN Erlenmeyer flask with four baffles on the bottom interrupts the laminar flow to create a turbulent flow. The surface of the liquid and the gas exchange surface is increased, so that the oxygen intake can be increased.

Cat No.	Description	Capacity ml	Qty. Per Pack Pcs
21283 36	DURAN baffled flask, GL 45 with bottom baffles, without cap	250	4
21283 44	DURAN baffled flask, GL 45 with bottom baffles, without cap	500	4
21283 54	DURAN baffled flask, GL 45 with bottom baffles, without cap	1000	1
29118 28	DURAN PP Membrane Cap with a PTFE permeable foil	GL 45	5
29242 28	DURAN PP Pouring Ring, Blue	GL 45	10