

Instructions

ibidi Anti-Evaporation Oil



The ibidi Anti-Evaporation Oil was developed for preventing evaporation effects in cell culture applications. It is optimized for ibidi μ -Slides, μ -Dishes, and μ -Plates. It decreases evaporation when overlaid over the cell culture medium or when used to seal the lid of cell culture dishes. This silicone oil is highly gas permeable for O_2 and CO_2 but blocks humidity loss very well. It is non-toxic and tested for biocompatibility with cell culture.

Overview

This document is applicable to the following product numbers:

Cat. No.	Product Name
50051	ibidi Anti-Evaporation Oil: silicone oil for cell culture, sterilized

Material

The ibidi Anti-Evaporation Oil is a dry-heat sterilized silicone oil with an optimized viscosity for cell culture. It is highly gas permeable for O_2 and CO_2 but blocks humidity loss very well. It is non-toxic and tested for biocompatibility with cell culture. Unlike mineral oil which is harmful to ibidi μ -Slides, silicone oil is compatible with cell culture polymers and glassware.

Specifications	
Appearance	Optically clear in dry atmosphere
Density (20°C)	1.05 g/ml
Viscosity (20°C)	ca. 200 mPa s
Refractive index n_D (589 nm)	1.453
Temperature stability	121 °C (dry-heat only)

Shipping and Storage

Shipping conditions	Ambient
Storage conditions	RT (15–25°C)
Shelf life	24 months

Applications

ibidi Anti-Evaporation Oil is designed to drastically reduce evaporation rates of cell culture medium. It decreases evaporation when overlaid over the cell culture medium or when used to seal the lid of cell culture dishes. Additionally it preserves sterility for a certain while when working in unsterile environments, e.g. a microscope stage-top incubator.

Usage

1. Equilibrate oil and cell medium inside the incubator overnight. This step helps in avoiding the formation of air bubbles and pre-warms all solutions to 37°C. Use aliquoted silicone oil inside a slightly opened vial.
2. Fill your slide/dish with cells and medium.
3. Overlay the medium's surface with an appropriate amount of oil. Do not drip the oil directly onto the surface, rather let it run down the edges by pressing the pipette tip onto the upper side of the reservoir. As a guideline, use the recommended volumes on page 2.

Optional: To prevent the uptake of lipophilic components from the cell culture medium over time, the silicone oil can be equilibrated following this protocol:

- In a sterile bottle, add 20 ml of silicone oil and 20 ml cell culture medium.
- Mix at room temperature.
- Let oil/medium settle overnight in the incubator.
- Decant and use oil the next day.

This equilibration with culture medium may not be necessary but is recommended when working with silicone oil for long-term live cell imaging microscopy.

Tip:

After longer time in humid incubators or condensation conditions, the silicone oil can become slightly turbid. This effect is due to dispersed water inside the oil and will be reversed after storing the oil under dry-heat conditions.

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Recommended Volumes

Open Wells and Dishes

Product	Medium volume per well [μ l]	Oil volume [μ l]
Glass Bottom Dish ^{35 mm}	400	1000
μ -Dish ^{35mm, high}	400	1000
μ -Dish ^{35mm} Quad	300	300
μ -Dish ^{35mm, low}	400	1000
μ -Dish ^{50mm, low}	700	2000
μ -Slide 2 Well	800	700
μ -Slide 2 Well ^{Ph+}	Not recommended for silicone oil	-
μ -Slide 2 Well Co-Culture	50 in small wells	600 per large well
μ -Slide 4 Well	400	300
μ -Slide 4 Well ^{Ph+}	Not recommended for silicone oil	-
μ -Slide 8 Well	300	100
μ -Slide 8 Well ^{high}	300	100
μ -Slide 18 Well – Flat	Not recommended for silicone oil	-
μ -Slide Angiogenesis	10	30
μ -Plate 24 Well	1000	500
μ -Plate 96 Well	300	150
μ -Plate 384 Well	50	25
3 Well Chamber, removable	150	300
8 Well Chamber, removable	300	150
12 Well Chamber, removable	300	75
Culture-Insert 2 Well	40	30
Culture-Insert 3 Well	40	30
Culture-Insert 4 Well	100	50
micro-Insert 4 Well	10	200 per large well
micro-Insert 4 Well FulTrac	10	200 per large well

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Channel Slides

Product	Medium volume per reservoir [µl]	Oil volume [µl]
µ-Slide I	600	600
µ-Slide I ^{0.2} Luer	Not recommended for silicone oil	-
µ-Slide I ^{0.4} Luer	50	20
µ-Slide I ^{0.6} Luer	50	20
µ-Slide I ^{0.8} Luer	50	20
µ-Slide I Luer 3D	50	20
µ-Slide III 3D Perfusion	50	20
µ-Slide Spheroid Perfusion	50	20
µ-Slide III ³ⁱⁿ¹	Not recommended for silicone oil	-
µ-Slide VI ^{0.1}	Not recommended for silicone oil	-
µ-Slide VI ^{0.4}	50	20
µ-Slide VI – Flat	0	20
µ-Slide y-shaped	50	20
µ-Slide Chemotaxis	Not recommended for silicone oil	-

Ordering Information

Cat. No.	Description	Amount
50051	ibidi Anti-Evaporation Oil: silicone oil for cell culture, sterilized	1 × 125 ml

For research use only!

Further information can be found at [ibidi.com](https://www.ibidi.com). For questions and suggestions please contact us by e-mail info@ibidi.de or by telephone +49 (0)89/520 4617 0.

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