

Product Information

DMAO, 2 mM in DMSO

Catalog Number: 40012

Unit Size: 1 mL

Storage and Handling

Store at room temperature or below, protected from light. Product is stable for at least 2 years from date of receipt when stored as recommended. DMAO dye binds to nucleic acids. The mutagenicity or toxicity of DMAO is currently unknown. It should be handled using universal laboratory safety precautions.

Spectral Properties

Ex/Em: 496/528 nm (with DNA)

Product Description

DMAO is a membrane-permeable green fluorescent dye, excellent for staining live bacteria. DMAO is a DNA-binding dye that is able to stain both gram-positive and gram-negative bacteria, as well as both live and dead bacteria. Bacteria stained with DMAO can be detected in the FITC or GFP channels of a fluorescence microscope or a flow cytometer.

We also offer DMAO paired together with a dead cell stain (Ethidium Homodimer III, or EthD-III) in our Viability/Cytotoxicity Assay for Bacteria (catalog # 30027).

In live mammalian cells, DMAO shows both nuclear and cytoplasmic staining. See our NucSpot® Live or RedDot™ 1 dyes for nuclear staining of live mammalian cells.

Unlike the SYBR dyes, DMAO is extremely stable and can be routinely handled and stored at room temperature without degradation.

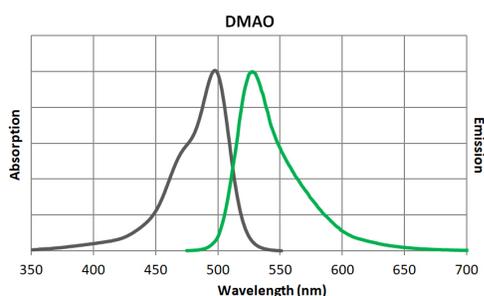


Figure 1. Normalized absorption and emission of DMAO.

Please visit our website at www.biotium.com for information on our life science research products, including environmentally friendly EvaGreen® qPCR master mixes, microbiology stains, apoptosis reagents, fluorescent probes, and kits for cell biology research.

Materials from Biotium are sold for research use only, and are not intended for food, drug, household, or cosmetic use.

Bacteria Staining Protocol

This protocol has been developed for staining laboratory bacteria strains in liquid culture. Some optimization may be needed for other sample types.

1. Grow your cells in the appropriate growth medium and growth conditions. We typically grow bacteria overnight at 37°C.
2. Collect the cells by centrifugation and resuspend in 0.85% (150 mM) NaCl.

Note: Staining in 0.85% NaCl or 10 mM Tris pH 7.5 gives the brightest signal. Staining in PBS or culture media results in dimmer signal.

3. Add DMAO dye to the bacterial sample at a final concentration of 25 µM. For example, if the sample volume is 500 µL, add 6.25 µL dye and mix well. Other stains, including dead cell stains such as Ethidium Homodimer III (EthD-III), may be added at the same time.

Note: DMAO concentration may be optimized for different cell or sample types; we recommend testing a range from 5-50 µM, and using the lowest concentration that gives a bright signal.

4. Incubate at room temperature or 37°C for 30 minutes, in the dark.
5. Collect cells by centrifugation and resuspend in fresh buffer of your choice.
6. For fluorescence microscopy, you may mount 5 µL of the sample on a slide with an 18 mm coverslip. Alternatively, you may pipet 100 µL of sample into a 96-well optical bottom plate. Image cells in the FITC or GFP channel.
7. For flow cytometry, you can dilute the sample 1:10 in FACS wash buffer (PBS + 1% serum) or similar buffer. You may need to further dilute the sample in FACS buffer to achieve the desired flow rate. Detect cells in the FITC channel.

Related Products

Catalog number	Product
40101	BactoView™ Live Red
40102	BactoView™ Live Green
40051	Ethidium Homodimer III (EthD-III), 1 mM in DMSO
40060	RedDot™ 1 Far-Red Nuclear Stain
40081, 40082	NucSpot® Live Cell Nuclear Stains
32001	Bacterial Viability and Gram Stain Kit
30027	Viability/Cytotoxicity Assay for Bacteria
32000	Live Bacteria Gram Stain Kit
40069	PMAxx™ Dye for Viability PCR, 20 mM in Water
40019	PMA Dye for Viability PCR, 20 mM in Water
E90002	PMA-Lite™ LED Photolysis Device
31033-31053	Real-Time PCR Bacterial Viability Kits (choose from kits for 8 bacterial strains)
32002-32009	Live-or-Dye™ Fixable Viability Staining Kits
29021-29064	CF® Dye Wheat Germ Agglutinin (WGA)
10063	CTC, bacterial respiration dye
31062	Yeast Vitality Staining Kit
31063	Yeast Viability Staining Kit
31064	Yeast Fixable Live/Dead Staining Kit