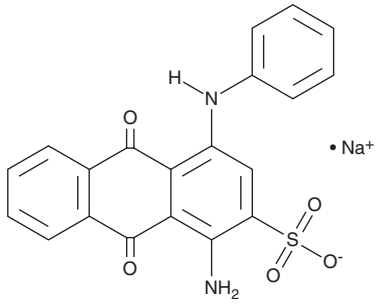
PRODUCT INFORMATION

Acid Blue 25

Item No. 44528

CAS Registry No.:	6408-78-2
Formal Name:	1-amino-9,10-dihydro-9,10-dioxo-4-(phenylamino)-2-anthracenesulfonic acid, monosodium salt
Synonyms:	AB25, 2-Anthraquinonesulfonic Acid, C.I. 62055, C.I. Acid Blue 25
MF:	$C_{20}H_{13}N_2O_5S \bullet Na$
FW:	416.4
UV/Vis.:	λ_{max}: 254, 630 nm
Absorbance:	600 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Acid blue 25 is supplied as a solid. A stock solution may be made by dissolving the acid blue 25 in the solvent of choice, which should be purged with an inert gas. Acid blue 25 is soluble (≥10 mg/ml) in DMSO and sparingly soluble (1-10 mg/ml) in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of acid blue 25 can be prepared by directly dissolving the solid in aqueous buffers. Acid blue 25 is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Acid blue 25 is an anionic anthraquinone textile dye.[1] It displays an absorption maximum at 600 nm. Acid blue 25 inhibits NAD(P)H:quinone acceptor oxidoreductase 1 (NQO1; K_i = 22 nM).[2] It also activates large-conductance calcium-activated potassium channels (K_{Ca}/BK) in rabbit bladder smooth muscle preparations in an inside/out patch-clamp assay (EC_{50} = 5.9 µM).[3] Acid blue 25 has been found as a contaminant in wastewater.[1]

References

1. Bongard, R.D., Lepley, M., Gastonguay, A., *et al.* Heterogeneous photocatalytic degradation of the anthraquinonic dye, Acid Blue 25 (AB25): A kinetic approach. *J. Photochem. Photobiol. A Chem.* **168(1-2)**, 23-30 (2019).
2. Prestera, T., Prochaska, H.J., and Talalay, P. Inhibition of NAD(P)H:(quinone-acceptor) oxidoreductase by cibacron blue and related anthraquinone dyes: A structure-activity study. *Biochemistry* **31(3)**, 824-833 (1992).
3. Roy, S., Large, R.J., Akande, A.M., *et al.* Development of GoSlo-SR-5-69, a potent activator of large conductance Ca^{2+}-activated K^+ (BK) channels. *Eur. J. Med. Chem.* **75**, 426-437 (2014).

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