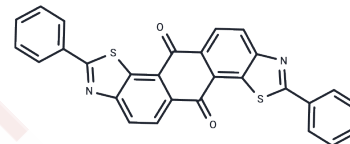


## C.I. Vat Yellow 2

## Chemical Properties

CAS No. :	129-09-9
Formula:	C <sub>28</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> S <sub>2</sub>
Molecular Weight:	474.55
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	C.I. Vat Yellow 2 (Calcoloid Yellow GCD) is a yellow dye agent that can also be used to detect adsorption behavior on natural sediments.
Targets(IC50)	Others
Cell Research	<p>Instructions</p> <p>I. Solution Preparation</p> <ol style="list-style-type: none"> <li>1. Stock Solution: Dissolve C.I. Vat Yellow 2 in an appropriate solvent, usually using a reducing agent such as sodium bisulfite or sodium hydroxide, to prepare a stock solution with a concentration of 1-5 mM.</li> <li>2. Working Solution: Dilute the stock solution to the required working concentration, usually 10-100 µM, depending on the experimental needs.</li> </ol> <p>II. Procedure</p> <ol style="list-style-type: none"> <li>1. Textile Dyeing: To dye textiles or cloth, prepare a dye bath and dissolve the dye in an appropriate solvent or aqueous solution. Usually C.I. Vat Yellow 2 will be reduced in the bath and applied under controlled temperature conditions, usually between 60-100°C.</li> <li>3. Adsorption Studies on Natural Sediments: To study the adsorption behavior of C.I. Vat Yellow 2 on natural surfaces such as soil, clay or other matrices, prepare a dye solution and soak the natural material in the solution. After a specified time, wash away the unadsorbed dye and quantify the adsorption using spectroscopic methods.</li> </ol> <p>3. Applications:</p> <ol style="list-style-type: none"> <li>1) Textile Industry: C.I. Vat Yellow 2 is mainly used for dyeing cotton, wool and synthetic fibers. It is widely used due to its bright yellow color and good washability of dyed fabrics.</li> <li>2) Environmental Studies: It can be used to study the interaction between dyes and natural surfaces to understand adsorption behavior, such as in the study of contaminated water, soil treatment or waste management.</li> </ol> <p>4. Calibration and Control:</p> <ol style="list-style-type: none"> <li>1) Control Group: Set up an experimental group without dye to ensure that the observed changes are indeed the interaction between the dye and the surface and not other variables.</li> <li>2) Standard Curve: If quantitative measurement is required (for example, in adsorption studies), a standard curve of C.I. Vat Yellow 2 of known concentration can be established by measuring absorbance or fluorescence at appropriate wavelengths</li> </ol>

Cell Research	(usually between 450–500 nm). Notes: 1) Stability: C.I. Vat Yellow 2 should be stored in a cool, dry place away from direct light to prevent degradation. 2) pH sensitivity: The behavior of the dye may be affected by pH, and the pH may need to be adjusted to obtain optimal results under different experimental conditions.  The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.
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### Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1073 mL	10.5363 mL	21.0726 mL
5 mM	0.4215 mL	2.1073 mL	4.2145 mL
10 mM	0.2107 mL	1.0536 mL	2.1073 mL
50 mM	0.0421 mL	0.2107 mL	0.4215 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Chen J, Chen MC. Decolourization performance in C. I. Vat Yellow 1 aqueous suspension using hydrophobically modified poly(acrylic acid). Water Sci Technol. 2011;63(8):1638-43.

Liu R, et al. Sorption Behavior of Dye Compounds onto Natural Sediment of Qinghe River. J Colloid Interface Sci. 2001 Jul 15;239(2):475-482.

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