

# Product data sheet



MedKoo Cat#: 593062 Name: Direct Green 6 CAS: 4335-09-5 Chemical Formula: C <sub>34</sub> H <sub>22</sub> N <sub>8</sub> Na <sub>2</sub> O <sub>10</sub> S <sub>2</sub> Exact Mass: 812.0696 Molecular Weight: 812.6955		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

## 1. Product description:

Direct Green 6 is a green dye.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.23 mL	6.15 mL	12.30 mL
5 mM	0.25 mL	1.23 mL	2.46 mL
10 mM	0.12 mL	0.62 mL	1.23 mL
50 mM	0.03 mL	0.12 mL	0.25 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

1. Moradi Z, Madadkar Haghjou M, Zarei M, Colville L, Raza A. Synergy of production of value-added bioplastic, astaxanthin and phycobilin co-products and Direct Green 6 textile dye remediation in *Spirulina platensis*. *Chemosphere*. 2021 Oct;280:130920. doi: 10.1016/j.chemosphere.2021.130920. Epub 2021 May 21. PMID: 34162106.

2. Mahmoodi NM, Abdi J, Najafi F. Gemini polymeric nanoarchitecture as a novel adsorbent: synthesis and dye removal from multicomponent system. *J Colloid Interface Sci*. 2013 Jun 15;400:88-96. doi: 10.1016/j.jcis.2013.03.014. Epub 2013 Mar 21. PMID: 23582906.

### In vivo study

1. Barot J, Bahadur A. Behavioural and histopathological effects of azodye on kidney and gills of *Labeo rohita* fingerlings. *J Environ Biol*. 2013 Mar;34(2):147-52. PMID: 24620571.

## 7. Bioactivity

### Biological target:

Direct Green 6 is a green dye.

### In vitro activity

This study evaluated the remediation of the textile dye, Direct Green 6 (DG6), by *Spirulina platensis*, and investigated the novel possibility that DG6 treatment enhances production of the biopolymer, polyhydroxybutyrate (PHB). This study showed that both live

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and dead cells of Spirulina were capable of DG6 remediation, but live cells could be re-used with no loss of remediation efficiency. Furthermore, DG6 remediation by live cells resulted in increased algal biomass and trichome lengths, and stimulated production of valuable metabolites, including PHB, antioxidants, carbohydrates and pigments (phycobilins and astaxanthin).

Reference: Chemosphere. 2021 Oct;280:130920. <https://pubmed.ncbi.nlm.nih.gov/34162106/>

## In vivo activity

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The present paper emphasizes on the histopathological effects of an azo dye, Direct Green 6 on the kidney and gills of Labeo rohita by light microscopy.

Reference: J Environ Biol. 2013 Mar;34(2):147-52. <https://pubmed.ncbi.nlm.nih.gov/24620571/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*