

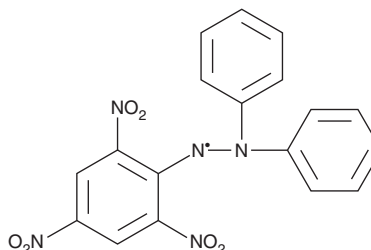
# PRODUCT INFORMATION



## DPPH

Item No. 14805

**CAS Registry No.:** 1898-66-4  
**Formal Name:** 2,2-diphenyl-1-(2,4,6-trinitrophenyl)-hydrazinyl  
**Synonyms:** 2,2-Diphenyl-1-Picrylhydrazyl, DPPH radical  
**MF:** C<sub>18</sub>H<sub>12</sub>N<sub>5</sub>O<sub>6</sub>  
**FW:** 394.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 327, 515 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

DPPH is supplied as a crystalline solid. A stock solution may be made by dissolving the DPPH in the solvent of choice, which should be purged with an inert gas. DPPH is soluble in organic solvents such as ethanol and dimethyl formamide. The solubility of DPPH in these solvents is approximately 10 mg/ml.

DPPH is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

2,2-Diphenyl-1-picrylhydrazyl (DPPH) is a stable free radical and colorimetric probe for the detection of free radical scavengers.<sup>1,2</sup> Upon reaction with antioxidants, DPPH turns from deep violet to yellow, which can be quantified by colorimetric detection at 515 nm as a measure of antioxidant capacity.<sup>3</sup> DPPH has commonly been used to measure the antioxidant potential of plant extracts, foodstuffs, and pure compounds.<sup>1-2,4</sup>

### References

1. Kedare, S.B. and Singh, R.P. Genesis and development of DPPH method of antioxidant assay. *J. Food Sci. Technol.* **48(4)**, 412-422 (2011).
2. Pyrzynska, K. and Pekal, A. Application of free radical diphenylpicrylhydrazyl (DPPH) to estimate the antioxidant capacity of food samples. *Anal. Methods* **5**, 4288-4295 (2013).
3. Molyneux, P. The use of the stable free radical diphenylpicryl-hydrazyl (DPPH) for estimating antioxidant activity. *Songklanakarin J. Sci. Technol.* **26(2)**, 211-219 (2004).
4. Idhayadhulla, A., Xia, L., Lee, Y.R., et al. Synthesis of novel and diverse mollugin analogues and their antibacterial and antioxidant activities. *Bioorg. Chem.* **52**, 77-82 (2014).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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