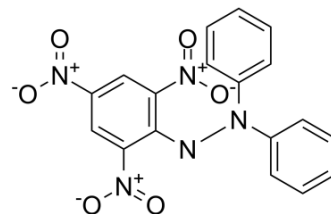


DPPH

Cat. No.:	HY-112053
CAS No.:	1898-66-4
Molecular Formula:	C ₁₈ H ₁₂ N ₅ O ₆
Molecular Weight:	394.32
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (63.40 mM; Need ultrasonic)					
	Ethanol : 1 mg/mL (2.54 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.5360 mL	12.6801 mL	25.3601 mL
5 mM			0.5072 mL	2.5360 mL	5.0720 mL	
10 mM		0.2536 mL	1.2680 mL	2.5360 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (5.27 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	DPPH (2,2-Diphenyl-1-picrylhydrazyl) is a stable free radical that can be used to measure the radical scavenging activity of antioxidants. The odd electron of nitrogen atom in DPPH is reduced by receiving a hydrogen atom from antioxidants to the corresponding hydrazine. DPPH method may be utilized in aqueous and nonpolar organic solvents and can be used to examine both hydrophilic and lipophilic antioxidants ^[1] .
In Vitro	DPPH shows a strong absorption band at 517 nm due to its odd electron and solution appears a deep violet colour, the absorption vanishes as the electron pairs off. The resulting decolorization is stoichiometric with respect to the number of electrons taken up. The alcoholic solutions of 0.5 mM are densely colored and at this concentration, the Lambert-Beer law is obeyed over the useful range of absorption ^[1] . DPPH assay is a rapid, simple, inexpensive and widely used method to measure the ability of compounds to act as free radical scavengers or hydrogen donors, and to evaluate antioxidant activity of foods. It can also be used to quantify antioxidants in complex biological systems, for solid or liquid samples. This method is easy and applies to measure the overall antioxidant capacity and the free radical scavenging activity of fruit and vegetable juice. This assay has been

successfully utilized for investigating antioxidant properties of wheat grain and bran, vegetables, conjugated linoleic acids, herbs, edible seed oils, and flours in several different solvent systems including ethanol, aqueous acetone, methanol, aqueous alcohol and benzene. It is a convenient method for the antioxidant assay of cysteine, glutathione, ascorbic acid, tocopherol and polyhydroxy aromatic compounds, for olive oil, fruits, juices and wines^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Environ Sci Pollut Res Int. 2021 Jun 4.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Kedare SB, et al. Genesis and development of DPPH method of antioxidant assay. J Food Sci Technol. 2011 Aug;48(4):412-22.

Caution: Product has not been fully validated for medical applications. For research use only.

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com