

Ethoxylated hydrogenated castor oil

Cat. No.:	HY-126403	
CAS No.:	61788-85-0	
Target:	Biochemical Assay Reagents	
Pathway:	Others	Ethoxylated hydrogenated castor oil
Storage:	4°C, protect from light	

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : ≥ 100 mg/mL * "≥" means soluble, but saturation unknown.
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BIOLOGICAL ACTIVITY

Description	Ethoxylated hydrogenated castor oil (PEG-40 hydrogenated castor oil) is a combination of synthetic polyethylene glycol (PEG) with natural castor oil. Ethoxylated hydrogenated castor oil can be used to emulsify and solubilize oil-in-water (o/w) emulsions. Ethoxylated hydrogenated castor oil can be used as a cosolvent in vivo ^[1] .
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In Vivo	<p>20% PEG-40 hydrogenated castor oil (10 µl) is applied to the left ear of the mouse, and the right ear served as a control. The mice are observed for development of erythema for 6 days, no signs of irritation are observed in the mice^[1].</p> <p>PEG-40 hydrogenated castor oil (injection via the tail vein; 300, 900, and 2700 mg/kg; 4 weeks) is administered for short-term toxicity. At doses of 300 and 900 mg/kg PEG-40 Hydrogenated Castor Oil exhibits no systemic toxicity. However, at a dose of 2700 mg/kg, slight ataxia is observed and body weight is reduced significantly in the males and slightly in the females^[1].</p> <p>A toxicity study of blank nanoemulsion using PEG-40 hydrogenated castor oil as a surfactant is applied in order to load various active compounds for oral administration^[2].</p> <p>Nearly 20% of PEG-40 hydrogenated castor oil was used to emulsify the glyceryl monooleate (GMO) as an oil to the aqueous phase. In Webster mice, 5000 mg/kg blank nanoemulsion is given orally to mice once a day for 14 days, this nanoemulsion does not produce hazardous effects, and it has no effect on food intake^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
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REFERENCES

[1]. PEG-40 HYDROGENATED CASTOR OIL

[2]. Heni Rachmawati, et al. The In Vitro-In Vivo Safety Confirmation of PEG-40 Hydrogenated Castor Oil as a Surfactant for Oral Nanoemulsion Formulation. *Sci Pharm.* 2017 Mar 31;85(2):18. doi: 10.3390/scipharm85020018.

[3]. PEGylated Oils as Used in Cosmetics

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

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