

Glycerin may also be used orally in doses of 1.0–1.5 g/kg body-weight to reduce intraocular pressure.

When used as an excipient or food additive, glycerin is not usually associated with any adverse effects and is generally regarded as a nontoxic and nonirritant material.

- LD₅₀ (guinea pig, oral): 7.75 g/kg⁽⁸⁾
- LD₅₀ (mouse, IP): 8.98 g/kg
- LD₅₀ (mouse, IV): 4.25 g/kg
- LD₅₀ (mouse, oral): 4.1 g/kg
- LD₅₀ (mouse, SC): 0.09 g/kg
- LD₅₀ (rabbit, IV): 0.05 g/kg
- LD₅₀ (rat, IP): 4.42 g/kg
- LD₅₀ (rat, oral): 12.6 g/kg
- LD₅₀ (rat, SC): 0.1 g/kg

15 Handling Precautions

Observe normal precautions appropriate to the circumstances and quantity of material handled. Eye protection and gloves are recommended. In the UK, the recommended long-term (8-hour TWA) exposure limit for glycerin mist is 10 mg/m³.⁽⁹⁾ Glycerin is combustible and may react explosively with strong oxidizing agents; see Section 12.

16 Regulatory Status

GRAS listed. Accepted as a food additive in Europe. Included in the FDA Inactive Ingredients Guide (inhalations; injections; nasal and ophthalmic preparations; oral capsules, solutions, suspensions and tablets; otic, rectal, topical, transdermal, and vaginal preparations). Included in nonparenteral and parenteral medicines licensed in the UK.

17 Related Substances

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18 Comments

The EINECS number for glycerin is 200-289-5.

Some pharmacopeias also contain specifications for diluted glycerin solutions. The JP 2001 contains a monograph for 'glycerin' that contains 84–87% of propane-1,2,3-triol (C₃H₈O₃). The PhEur 2002 contains a monograph for 'glycerol 85 per cent' that contains 83.5–88.5% of propane-1,2,3-triol (C₃H₈O₃).

19 Specific References

- 1 Spiegel AJ, Noseworthy MM. Use of nonaqueous solvents in parenteral products. *J Pharm Sci* 1963; 52: 917–927.
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- 4 Viegas TX, Van-Winkle LL, Lehman PA, et al. Evaluation of creams and ointments as suitable formulations for peldesine. *Int J Pharm* 2001; 219(1–2): 73–80.
- 5 Sweetman SC, ed. *Martindale: The Complete Drug Reference*, 33rd edn. London: Pharmaceutical Press, 2002: 1616–1617.
- 6 Hägnevik K, Gordon E, Lins LE, et al. Glycerol-induced haemolysis with haemoglobinuria and acute renal failure. *Lancet* 1974; i: 75–77.
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- 8 Lewis RJ, ed. *Sax's Dangerous Properties of Industrial Materials*, 10th edn. New York: Wiley, 2000: 1874–1875.
- 9 Health and Safety Executive. EH40/2002: *Occupational Exposure Limits 2002*. Sudbury: Health and Safety Executive, 2002.

20 General References

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21 Author

JC Price.

22 Date of Revision

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