# Simethicone

**Cat. No.:** HY-109519

**CAS No.:** 8050-81-5

**Target:** Others

**Pathway:** Others

**Storage:** 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)


## SOLVENT & SOLUBILITY

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| **In Vitro** | DMSO : 100 mg/mL (Need ultrasonic) |
| **In Vivo** | 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline<br>Solubility: ≥ 2.5 mg/mL (Infinity mM); Clear solution<br>2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)<br>Solubility: ≥ 2.5 mg/mL (Infinity mM); Clear solution<br>3. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (Infinity mM); Clear solution |

## BIOLOGICAL ACTIVITY

**Description**

Simethicone is an orally active defoamer. Simethicone reduces the surface tension of air bubbles in the gastrointestinal tract, causing them to be expelled by vomiting, exhalation or absorption into the bloodstream. Simethicone has potential applications in flatulence and colic[1].

**In Vivo**

Simethicone (200 mg/kg; p.o.; single dose) has gastrointestinal regulation function in rats[2].
Simethicone (20 mg/kg; p.o.; single dose) shows jejunal regulation in rabbits[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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| Animal Model: | Female adult Wistar rats (200–250 g)[2]. |
| Dosage: | 50, 100 and 200 mg/kg. |
| Administration: | Oral gavage; single dose. |
| Result: | Improved colon permeability and hypersensitivity (200 mg/kg). |

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| Animal Model: | Adult New Zealand White (NZW) rabbits[3]. |
| Dosage: | 20 mg/kg. |

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| Administration: | Oral gavage; single dose. |
| Result: | Improved image quality scores for the jejunum without affecting left kidney, right kidney and gallbladder. |

## REFERENCES


[1]. Voepel-Lewis TD, et al. Evaluation of simethicone for the treatment of postoperative abdominal discomfort in infants. J Clin Anesth. 1998 Mar;10(2):91-4.

[2]. Bueno L, et al. Influence of simethicone and alverine on stress-induced alterations of colonic permeability and sensitivity in rats: beneficial effect of their association. J Pharm Pharmacol. 2013 Apr;65(4):567-73.

[3]. da Silva KG, et al. Influence of simethicone and fasting on the quality of abdominal ultrasonography in New Zealand White rabbits. Acta Vet Scand. 2017 Jul 17;59(1):48.





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