

Virbac

Zoletil™



The anesthetic that induces
Peace of Mind,
Convenience and
Confidence



Peace of Mind with Zoletil™...a Effective & Safe anaesthetic

Tiletamine

Dissociative anaesthetic providing excellent somatic analgesia for routine surgery²

Higher potency and duration of action compared to ketamine (the least potent of the dissociatives)

Zolazepam

Benzodiazepine tranquilizer known for profound muscle relaxation, amnesia, anti-convulsant and additional anxiolytic action^{2,3}

Least likely amongst benzodiazepines, to cause CNS depression



EFFECTIVE

- **Rapid onset of action** <1 min IV / 3-6 min IM¹
- Good myorelaxation & analgesia, ideal for short- to medium-duration procedures^{3,5}
- Gentle & **smooth recovery**

SAFE

- **Wide safety margin & wide therapeutic window**¹
- Ideal for **dogs, cats & wildlife animals** (especially difficult-to-manage animals)^{2,4}
- Limited side-effects¹
 - Less cardio-respiratory depression
 - No epileptic effect
 - Transient decrease in body temperature
 - Laryngeal, palpebral & pharyngeal reflexes are maintained

Recovery with Zoletil

► Due to a species-related difference in metabolic rate



CATS

Faster Tiletamine elimination vs Zolazepam

A longer recovery time

Better quality recovery comparatively



DOGS

Faster Zolazepam elimination vs Tiletamine

Shorter duration of tranquilisation than there is of anaesthesia.

- **Smooth recoveries are associated with avoidance of multiple administrations during surgery and providing a peaceful environment (avoidance of noise & light) during recovery**

References:

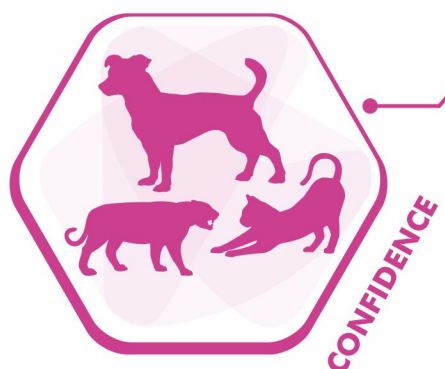
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Convenience with Zoletil™



- **Ready-to-use**, synergistic combination
- Multiple modes of administration: **IM or IV¹**
- **Flexible**, dose-dependent effect: **20-60 mins duration¹**
- No dependence on equipment

Administer with **Confidence...** a **Versatile** anaesthetic



- Widely used for **30 years** in small animal veterinary practice
 - Sole Anaesthetic
 - Sedative
 - Induction agent prior to Inhalant Anaesthesia
- Dosage guidelines & scientific studies covering a plethora of **wildlife species**



Proposed Zoletil only protocols



DOG

ZOLETIL™ 50

	IM	IV	Approximate Duration	Remarks
Examination General examination, chemical restraint, which can include radiographs or MRIs ²	7-10 mg/kgBW	5 mg/kg BW	10-20 mins	Allows a good quality sedation for painless procedures
Minor surgery Castration, ovariectomy, ovariectomy, draining abscesses or haematomas, dental cleaning	10-15 mg/kg BW	7.5 mg/kg BW	20-40 mins	Light surgical anaesthesia Premedication recommended with atropine, 15 minutes before administration to reduce salivation
Major surgery Orthopaedic surgeries, mastectomy, dental extraction	15-25 mg/kg BW	10 mg	35-60 mins	If a supplementary dose of Zoletil™ is required, this should not exceed the initial dose (1/3 – 1/2 of the initial dose). The total dose injected (initial and supplementary) should not exceed the maximum recommended dose of 26.4 mg/kg b.w., in dogs. Premedication recommended with atropine 15 minutes before administration to reduce salivation. For this type of surgery pain management should be considered in addition to the Zoletil™ based protocol
Induction		2-4 mg/kg/IV	10-20 mins	Induction agent prior to inhalant anaesthesia



CAT

ZOLETIL™ 50

	IM	IV	Approximate Duration	Remarks
Examination General examination, which can include radiographs or MRIs, dental cleaning ²	10 mg/kg BW	5 mg/kg BW	20-40 mins	Light surgical anaesthesia Premedication recommended with atropine, 15 minutes before administration to reduce salivation
Surgery Ovariectomy, castration, ovariectomy, wounds, dental extraction	15 mg/kg BW	7.5 mg/kg BW	35-60 mins	If a supplementary dose of Zoletil™ is necessary, this should not exceed the initial dose (1/3 – 1/2 of the initial dose). The total dose injected (initial and supplementary) should not exceed the maximum tolerated dose of 26.4 mg/kg b.w., in cats. Premedication recommended with atropine, 15 minutes before administration to reduce salivation. For this type of surgery pain management should be considered in addition to the Zoletil™ based protocol
Induction		2.5-3 mg/kg/SC	15 mins	Induction agent prior to inhalant or injectable anaesthesia

Clinical Impact With Zoletil™ Administration

Conscious state and sensory perceptions	Loss dose related
Ataxia	Present
Response to nociceptive stimuli	Lack of response if anaesthesia is adequate
Response to external stimuli	Lack of response
Eyes	Open with dilated pupil
Corneal and palpebral reflex	Remains intact, animal can blink its eyelids
Cranial nerve and spinal reflexes	Remain grossly normal and must not be confused with inadequate anaesthesia
Swallowing, eructation and vomiting reflexes	Persist
Respiratory rate	In dogs respiratory rate increases. In cats respiratory rate generally decreases.
Heart rate	Increased heart rate, due to cardiovascular stimulation. In cats, no significant change in heart rate
Myoclonic or clonic convulsions	Associated with overdose
Excessive salivation	Yes, but can be controlled by use of anti-cholinergics

Presence of reflexes is not an indication that the anaesthesia is inadequate. The best way to evaluate the extent of Zoletil™ anaesthetic effect is to monitor the patient for deliberate conscious response to nociceptive stimuli.

Antidotes

- Doxapram: Has antagonistic activity against the tiletamine-zolazepam, increasing both heart and respiratory rates and reducing the arousal time (5.5mg/kg IV)
- Atipamezole (antagonist only if protocol contains α -2 agonists) 0.05 mg/kg IM (Kim HU 2007). Atipamezole should be administered intramuscularly 20 minutes after anaesthesia induction
- Flumazenil: Antagonist of Zolazepam only (Won, 2010)
 - Competitive benzodiazepine receptor antagonist
 - Reverses the sedative and muscle-relaxant effects of Zolazepam
 - 0.1 mg/kg at least 20 min after Zoletil™ at 10mg/kg IV

Contraindications

In animals with:

- Severe cardiac or respiratory disease, severe hypertension; cranial trauma and intracranial tumour
- Renal, pancreatic and hepatic functions impairment
- For Caesarean section and in pregnant animals

SPECIAL PRECAUTIONS

Zoletil™ is not advised after pre-anaesthesia with phenothiazines because of the heart-depressing and vasodilative effects

Do not use medications containing chloramphenicol during the pre or intraoperative period,

Zoletil™



A Smart Option For General Anaesthesia In Dogs And Cats.



Backed by
Virbac's
expertise in
Anaesthetics



Storage

Prior to opening:

Protect from exposure to light

Post re-constitution:

24 hours between 2 to 8°C

ONE VIAL OF 5 ML SOLVENT CONTAINS:

Sterile Water for Injections IP.....5ml

ONE ML OF RECONSTITUTED SOLUTION CONTAINS:

Tiletamine (as Hydrochloride).....25 mg

Zolazepam (as Hydrochloride).....25 mg

FOR FURTHER INFORMATION:

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Shaping the future of animal health

Virbac