

SCOPOLAMINE ADVISORY

Scopolamine (also known as hyoscine) is conventionally used in human medicine for the prevention of motion sickness. It is available by prescription in tablet and transdermal patch formulations. It has also had limited use in conjunction with general anesthesia in reducing airway secretions. It is associated with side effects of dizziness, drowsiness, blurred vision, nausea, and dry mouth.

Scopolamine has limited historical use in equine veterinary medicine to relieve intestinal spasms in the treatment of gas colic. However, gastrointestinal side effects, potential toxicity, and the development of safer, more effective medications have rendered its use as a therapeutic medication less common.

Scopolamine is an alkaloid present in Jimsonweed, a member of the poisonous plant species, *Datura*. Jimsonweed infests crop fields throughout North America and around the world. The live plant is associated with a strong odor and bitter taste and animals tend to avoid its consumption unless other feed sources are unavailable. Scopolamine has been detected in the blood and/or urine of animals having consumed hay containing Jimsonweed, as the odor and bitter taste dissipate during the curing process. Symptoms of scopolamine toxicity, as observed in horses having consumed Jimsonweed-contaminated hay include dilated pupils and intestinal paralysis and can persist for several days following ingestion.

The Association of Racing Commissioners International's Uniform Classification of Foreign Substances has assigned scopolamine a 4/C classification. This alphanumeric system categorizes substances by pharmacologic effect (1-5) and Penalty designation (A-D). Class 1 substances represent the greatest threat to the integrity of competition; Class 5 substances the lowest threat. "Class 4: Drugs in this category comprise primarily therapeutic medications routinely used in racehorses. These may influence performance, but generally have a more limited ability to do so" (www.arci.com/wp-content/uploads/2019/01/2019-01-01-Classification-Substances.pdf). The alphabetical classifications include consideration of the pharmacologic classification (1-5) and additional factors such as the indications for medication use, potential for misapplication, and FDA-approval status. Class A is associated with the most severe penalties whereas Class D is associated with lesser penalty recommendations.

Scopolamine is on the US Antidoping Agency's list of permitted medications.

For more information on scopolamine, please contact the RMTC at: contactus@rmtcnet.com