

DATE: January 3, 1983

REVISION: February 2, 1993

EFFECTIVE: February 8, 1993

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**APPROVED CAPTURE DRUGS AND DRUG ADMINISTERING EQUIPMENT****I. PURPOSE**

This Directive sets forth capture drugs and drug administering equipment approved by the State Veterinarian for use in the capture of companion animals by animal wardens and other officers as defined in §3.1-796.66 of the Comprehensive Animal Laws (ie, Title 3.1, Chapter 27.4 of the Code of Virginia).

**II. AUTHORITY**

Title 3.1, Chapter 27.4, §3.1-796.119 of the Code of Virginia states, in part, "All drugs and drug administering equipment used by animal wardens or other officers to capture companion animals pursuant to this chapter shall have been approved by the State Veterinarian".

**III. APPROVED DRUGS**

The following drugs are approved for use in the capture of companion animals only when: (i) the drug is administered by individuals appropriately trained and competency-certified to humanely administer the drug; (ii) the drug is used only in a species in which the U.S. Food and Drug Administration (FDA) has approved the drug for use; and (iii) the drug is administered via an approved route of administration and in accordance with the manufacturer's recommendations. (See Appendix A. for further details.)

**A. Acepromazine maleate**

Administered orally (tablet form only), subcutaneously, intramuscularly, or intravenously. (See Appendix A. for further details.)

\*DO NOT USE IN ANIMALS (ESPECIALLY CATS) POTENTIALLY EXPOSED TO ORGANOPHOSPHATES SUCH AS INSECTICIDES, DIPS, OR FLEA COLLARS BECAUSE THIS DRUG MAY POTENTIATE SUCH POISONS.

**B. Xylazine hydrochloride (trade name: Rompun)**

Administered intramuscularly only. (See Appendix A. for further details.)

**C. Ketamine hydrochloride**

Administered intramuscularly only.

\*NOTE: This drug is approved by the FDA for use only in cats and nonhuman primates. (See Appendix A. for further details.)

D. Ketamine hydrochloride-promazine hydrochloride-aminopentamide-hydrogen sulfate combination (Trade name: Ketaset-Plus)

Administered intramuscularly only.

\*Note: this drug is approved by the U.S. FDA for use only in cats and nonhuman primates. (See Appendix A. for further details.)

E. Drugs and/or methods prescribed by a licensed veterinarian for use in the species involved, but ONLY if performed by or under the direct and immediate supervision of the licensed veterinarian so prescribing the method.

IV. **APPROVED DRUG ADMINISTERING EQUIPMENT\***

Equipment manufactured by the following named firms are approved for the humane capture of companion animals on condition that:

- A. The users of the equipment are appropriately trained in the proper and humane use of the approved capture equipment;
- B. The users of the equipment follow the operating instructions prescribed by the manufacturer of the equipment;
- C. The equipment is well maintained and kept in a high state of repair at all times; and
- D. The animal is humanely captured.

Drug Administering Equipment

Company Name and Address

CAP-CHUR Equipment

Palmer Chemical & Equipment Co, Inc  
P.O. Box 867, Palmer Village  
Douglasville, Georgia 30133

DIST-INJECT Equipment

Glasgow Veterinary Supply  
Fort Peck Route  
Glasgow, Montana 59230

PAXARMS Equipment

Telonics  
932 East Impalla Avenue  
Mesa, AZ 85204-6699

SIMMONS Equipment

Zoolu Arms of Omaha  
10315 Wright Street  
Omaha, Nebraska 68124

TELINJECT Equipment

Telinject, U.S.A., Inc  
16133 Ventura Boulevard  
Suite 635  
Encino, California 91436

\*NOTE: The State Veterinarian does NOT recommend the equipment produced by one manufacturer over that produced by another.

## V. APPROVAL OF ADDITIONAL DRUGS AND DRUG ADMINISTERING EQUIPMENT

Advances in research relative to drugs and drug administering equipment for use in capturing companion animals will be monitored on a continuing basis by the Office of the State Veterinarian. Chemical restraint drugs (ie, capture drugs) and drug administering equipment which are proved to be acceptable will be added to the approved list.

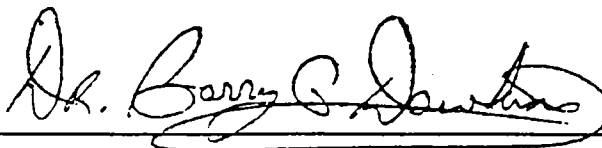
Firms or individuals seeking approval of specific drugs or drug administering equipment for use in capturing companion animals may submit a written request for the consideration of such proposals to the:

State Veterinarian/Director  
Division of Animal Health  
P. O. Box 1163  
Richmond, Virginia 23209  
PHONE: 804-786-2481

Requests to deviate from or to use an alternative to the approved drugs or drug administering equipment must be sent in writing to the State Veterinarian at the above address. The request must include a detailed explanation of the proposed deviation or alternative, substantive justification for the request, substantive reasons why the currently approved drugs or drug administering equipment cannot be used and how the proposed deviation or alternative will resolve the reasons/problems, and sufficient objective and supportable evidence that the proposed deviation or alternative is at least as humane as the currently approved drugs or drug administering equipment identified in this directive.

Attachment:  
APPENDIX A

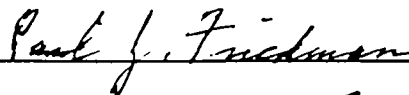
REVIEWED AND APPROVED



DATE

2-2-93

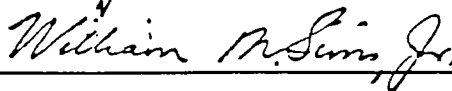
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DATE

2-4-93

FINAL APPROVAL



DATE

2-2-93

## APPENDIX A.

## I.

APPROVED DRUG*	SPECIES APPROVED FOR USE IN*	ROUTE OF ADMINISTRATION*	DOSAGE
Acepromazine maleate	Dogs	Intramuscular or Subcutaneous	0.25 to 0.5 mg/lb.
		Orally	0.25 to 1 mg/lb.
	Cats	Intramuscular or Subcutaneous	0.5 to 1 mg/lb.
		Orally	0.5 to 1 mg/lb.
Xylazine hydrochloride	Dogs	*Less than 50 lbs. Intramuscular or Subcutaneous	1 mg/lb.*
		*More than 50 lbs. Intramuscular	0.5 mg/lb.*
	Cats	Intramuscular	1 mg/lb.
Ketamine hydrochloride	Cats	Intramuscular	5 to 15 mg/lb.
	Non-human primates	Intramuscular	3 to 15 mg/lb.
Ketamine HCL, Promazine HCL, and Aminopentamide hydrogen sulfate combination (ie., Ketaset-Plus)	Cats	Intramuscular	15 to 20 mg/lb.

\*Species, routes and dosages approved by the FDA and listed in the manufacturers' recommendations.

\*\*Also see section IV. of Appendix A.

## II. Competency Certification Required

- A. Any companion animal captured is only to be captured by a person or by persons that have been certified in writing by a Virginia-licensed veterinarian or other qualified individual as being properly trained and competent in the humane capture of animals by use of the specified approved capture drug(s) and equipment being used.

(Revised 2/2/93)

## APPENDIX A (cont'd.)

- B. See Appendices A-D of Division of Animal Health Directive 79-1 for competency certification requirements.

III. **Capture drugs are to be administered only:**

- A. By individuals that are appropriately trained and competency-certified to humanely use and administer the approved capture drug(s);
- B. In the species in which the FDA has approved the drug(s) for use;
- C. When administered via an approved route of administration for the species being given the approved drug and in accordance with the manufacturer's recommendations.

IV. **General Considerations**

- A. If xylazine is to be given alone, the dosage and dose of the xylazine must be determined by a supervising, licensed veterinarian. As a rule, dogs weighing under 25 pounds should NOT be captured by chemical means using remote injection (eg, by use of a dart gun).
- B. According to author Leon Nielson, in his book Chemical Immobilization in Urban Animal Control Work,

"The dosage suggested..." for the ketamine/xylazine combination is 5.0 mg of ketamine/kg\* of body weight and 1.0 mg of xylazine/kg of body weight ....for intramuscular injection in dogs only."

Nielson further states that,

"This regimen has produced immobilization (recumbency) in dogs in 2.6 - 3.6 minutes, with a recovery time of 131 and 110 minutes, respectively. The most practical way of preparing the mixture is to add 2 ml (200 mg) of xylazine to a 10 ml (1,000 mg) vial of ketamine. Testing has shown that this pre-mixed solution will remain stable with undiminished potency for 6 months. The dosage to use of the 5:1 combination is 6.0 mg/kg...."

The above dosage of the drug combination is calculated to be 0.027 ml per pound of body weight, or 0.81 ml per 30 pounds of body weight, using a 10% concentration of xylazine.

\*Remember: 1.0 kilogram (or "1 kg") = 2.2 pounds.

**NOTE:**

Currently, ketamine hydrochloride has NOT been approved by the Food and Drug Administration for use in dogs. Therefore, although the combination of xylazine and ketamine hydrochloride given at the dosages described above and using the appropriate drug administering equipment for the

## APPENDIX A (cont'd.)

drug, animal and situation involved is considered effective for use in the chemical capture of dogs, the State Veterinarian can only acknowledge the effectiveness of this drug combination, but DOES NOT sanction the procurement or use of ketamine or any other drug in violation of state or federal law. Therefore, should this drug combination be used, it would be approved for use only if done under the lawful supervision of a licensed veterinarian.

- C. According to the Virginia Board of Pharmacy, §54-524.59 of the Code of Virginia authorizes animal wardens/animal control officers and law-enforcement officers "... in the employ of the United States government or of any state, territorial, district, county, municipal, or insular government..." to purchase, receive or possess any approved capture drug for use in the lawful capture of animals pursuant to Title 3.1, Chapter 27.4 of the Code of Virginia "...by reason of his official duties."