DETECTION TIME GUIDELINE

(FOR THERAPEUTIC AND SOME OTHER PROHIBITED SUBSTANCES)

This document is published in an attempt to assist veterinarians involved in equine veterinary practice. The intention is to help ensure the best possible treatment for particular conditions experienced by racehorses. The "Detection Times" set out below are presented for some of the more commonly used therapeutic substances in equine medicine. The definition of detection time as contained in this document is the last specimen collected time period at which the substance was shown to exceed the urine and/ or plasma screening limit concentration for that substance as observed within the population of horses from which this information was obtained.

Many of the Detection Times within this document correspond with the International Screening Limits (ISLs) and International Residue Limits (IRLs) approved and published by the International Federation of Horseracing Authorities (IFHA) for the control of therapeutic substances. As indicated on the website, The National Horseracing Authority is a signatory to selected ISLs and IRLs.

Note that these Detection Times are not Withdrawal Times and must not be interpreted as such. A withdrawal time is a period of time decided on by the veterinarian treating the horse and is calculated by adding a safety period to the Detection Time and taking into consideration a suitable margin of error. Additional consideration is required where there is a deviation from the particular preparation, the dose, and if multiple doses were administered, especially when these doses could have a drug accumulation effect. A deviation from the route of administration could also have a significant effect.

It must be stressed that the data used for these assessments is based upon administration trials using only limited numbers of horses. The data must not be construed as absolute and true for every horse to which the substances are administered and for every dosage regime used. The guideline does not take into account every possible dosing schedule and route of administration or the inter-animal variations on drug excretion. It must also be noted that a particular Detection Time could be associated with a specific concentration of preparation (or specific proprietary preparation of specific formulation), a specific volume (dose) of this preparation and a particular route of administration.

It must be considered that many factors, some of which are unknown or not completely understood, may affect the disposition of a drug in a horse that is treated. The pharmacokinetics of a drug may also be substantially altered when administered concurrently with other drugs. These factors may prolong the detection time beyond what is anticipated.

Note that the following aspects could affect the Withdrawal Time of a substance administered to a horse

- *The dose of the drug administered.*
- *The frequency and duration of administration of the drug.*
- *The route of administration of the drug. There are huge differences between for example intravenous, intramuscular, intra-articular and subcutaneous administrations.*
- *The use of immediate release versus controlled release formulations.*
- *The health of the horse, including its liver and kidney function.*
- *The nutritional and hydration status of the horse.*
- *The accumulation of the particular substance in the horse.*
- *The formulation of the drug preparation (which show variation between manufacturers).*
- *The potential for recycling of the drug through environmental contamination and associated oral or topical uptake.*
- *Local injection site reactions.*
- *Concurrent drug administration, especially co-administration with a diuretic.*
- *The potential for the formation of tissue reservoirs of the substance at injection sites.*

The information contained in this guide must always be carefully assessed and compared with the horse's total clinical situation and there must be reliance on best professional judgement when estimating a withdrawal time.

Note that the information provided is not necessarily sourced from administration studies conducted under the control and supervision of the National Horseracing Authority of Southern Africa. Detection times were only considered and indicated on this list where proper quantification studies were undertaken on the indicated substances and preparations and where full sets of data from such studies were available to investigate. Where available, administration details such as the exact dose, treatment route and regime are indicated.

The NHA does not assume any legal, professional or other responsibility or duty whatsoever as to the accuracy of the data presented in this guideline. Please note that reliance on and use of the information set out in this document does not absolve or diminish a trainer or owner from being responsible for ensuring that the horse complies with the rules relating to the presence of drugs and prohibited substances when presenting a horse for a race. The provisions of Rule 76.8.2 remain applicable.

It is recommended that Withdrawal Times are at least about 1.4 times the Detection Times for oral and intravenous administration. It is recommended that Withdrawal Times are at least twice the Detection Time for intramuscular or topical administration.

Substance	***Preparation***	***Dose***	***Detection Time***
Acepromazine	Injectable preparation	30 mg IV (single admin)	72 h
Acepromazine	Oral preparation	75 mg PO (single admin)	72 h
Butorphanol	Torbugesic	50 mg IV (single admin)	72 h
Carprofen	Rimadyl	350 mg IV(single admin)	264 h
Clanobutin	Bykerhepar	2000 mg IV (single admin)	96 h

Substance	*Preparation*	*Dose*	*Detection Time*
Dantrolene	Dantrium	500 mg PO (daily for 3 days)	48 h
Dembrexine	Sputolysin	150 mg PO (9 doses, 1 every 12 h)	96 h
Detomidine	Domosedan	20 mg IV (single admin)	48 h
Dipyrone	Buscopan Compositum	15000 mg IV (single admin)	72 h
Dimethyl sulfoxide (DMSO)	Infusion	63 mg Infusion (single admin)	36 h
Dimethyl sulfoxide (DMSO)	90% DMSO Gel	Transdermal 30 g (single admin)	36 h
Firocoxib	Previcox	57 mg PO (daily for 5 days)	13 days
Flunixin	Finadyne	550 mg IV (single admin)	120 h
Furosemide	Salix Injection	500 mg IV (single admin)	48 h
Ketoprofen	Ketofen Injection	1000 mg IV (daily for 5 days)	72 h
Lidocaine / Lignocaine	Lignocaine 2%	400 mg SC (single admin)	60 h
Meloxicam	Oral formulation	300 mg PO (daily for 5 days)	72 h
Mepivacaine	Injectable	400 mg SC to limb (single admin)	96 h
Methylsulfonylmethane (MSM)	DMSO	Transdermal 30 g (single admin)	36 h
Methylsulfonylmethane (MSM)	MSM supplements	15 g MSM PO (single admin)	96 h
Naproxen	Naprosyn	5000 mg PO (single admin)	>15 days
N-Butylscopolammonium bromide	Buscopan Compositum	120 mg IV (single admin)	72h
Procaine (Penicillin)	Depocillin	6000 mg IM (daily for 5 days)	12 days
Romifidine	Sedivet 1% Injection	40 mg IV (single admin)	60 h
Salbutamol (Albuterol)	Oral	4 mg PO (single admin)	7 days
Salbutamol (Albuterol)	Asthavent, Venteze	20 mg Nebulised	48 h
Vedaprofen	Quadrisol	1000 mg IV (single admin)	96 h
Xylazine	Chanazine	200 mg IV (single admin)	72 h

NOTE
The term **Substance** refers to the listed drug substance as well as the metabolite(s)

mg = milligram
µg = microgram (mcg)