



## ILLICIT SUBSTANCES

The following illicit substances, including other substances with a similar chemical structure or similar biological effect(s), are not to be administered to a horse at any time:

1. Non-approved substances

Any substance not addressed by any of the subsequent classes of substances, and which has no current approval by any government regulatory authority for veterinary use, or any substance not universally recognised by veterinary regulatory authorities as valid veterinary therapeutic treatment.

2. Anabolic agents

2.1 anabolic androgenic steroids;

2.2 other anabolic agents, including but not limited to selective androgen receptor modulators (SARMs); and

2.3 beta-2 agonists, unless the substance is prescribed by a veterinarian as a bronchodilator at the appropriate dose and is reflected in the treatment record of the horse.

3. Peptide hormones, growth factors and related substances

3.1 erythropoiesis-stimulating agents, including but not limited to erythropoietin (EPO), epoetin alfa, epoetin beta, darbepoetin alfa, and methoxy polyethylene glycol-epoetin beta, peginesatide, hypoxia inducible factor (HIF)-1 stabilisers;

3.2 growth hormones and growth hormone releasing factors, insulin-like growth factor-1 (IGF-1), and other growth factors; and

3.3 synthetic proteins and peptides and synthetic analogues of endogenous proteins and peptides not registered for medical or veterinary use.

4. Hormones and metabolic modulators

4.1 aromatase inhibitors;

4.2 selective estrogen receptor modulators (SERMS) and other anti-estrogenic substances;

4.3 agents modifying myostatin function, including but not limited to myostatin inhibitors;



- 4.4 insulins; and
- 4.5 peroxisome proliferator activated receptor  $\delta$  (PPAR $\delta$ ) agonists, including but not limited to GW 1516, (f) AMPK activators, including but not limited to AICAR (5-aminoimidazole-4-carboxamide-1- $\beta$ -D-ribofuranoside).
- 5. Human Recreational Drugs of Abuse and Ethanol.
- 6. Snake venom or other venoms.
- 7. Any oxygen carriers.
- 8. Any agent that directly or indirectly affects or manipulates gene expression which shall include:
  - 8.1 The administration of the following as part of genetic therapies:
    - 8.1.1 oligomers or polymers of nucleic acid
    - 8.1.2 nucleic acid analogues
    - 8.1.3 genetically unmodified or genetically modified cells

### **Confirmed/Confirmatory Laboratories**

- 9. The following Laboratories are designated by the HRD to conduct analysis of equine and human samples:
  - 9.1 QuantiLAB Ltd, Mauritius;
  - 9.2 Hong Kong Jockey Club Racing Laboratory; and
  - 9.3 LCH Laboratoire des courses Hippiques, France.

### **PROHIBITED SUBSTANCES**

- Illicit: Illegal, illicit or unapproved substances that have highest potential to affect the performance of horses.
- Class 1: Substances which have no place in horse racing and not generally accepted veterinary use.
- Class 2: Substances which have an obvious effect on the performance of the horse.
- Class 3: Substances which have the potential to effect on the performance of the horse with the potential to be abused.



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Class 4: Substances which have a generally accepted veterinary (therapeutic) use in the race horses but which have the potential to affect the performance.

Class 5: Substances which have an accepted veterinary (therapeutic) use in the race horses but which may have performance modifying ability.

CLASS OF SUBSTANCES	FIRST OFFENCE	SECOND OFFENCE	THIRD OFFENCE	FOURTH OFFENCE
<b>Illicit/ Illegal/ Unapproved</b>	Disqualification or Suspension of license for 01 year/ fine of Rs.500,000 & upwards/ Suspension of horse	Disqualification or Suspension of license for 03 year/ Suspension of horse	Warning off/ refer to HRC / suspension of horse	-
<b>1</b>	Fine of Rs. 250,000 to Rs. 350,000	<b>Suspension</b> of License for 90 days and/ or fine of Rs. 350,000 to Rs. 450,000	<b>Suspension</b> of License for 180 days and/ or fine of Rs. 450,000 to Warning off / Refer to HRC	Warning off or Refer to HRC
<b>2</b>	Fine of Rs. 150,000 to Rs. 200,000	Fine of Rs. 200,000 to Rs. 250,000	<b>Suspension</b> of License for 60 days and/ or fine of Rs. 250,000 to 300,000	<b>Suspension</b> of License for 75 days and/ or fine of Rs. 300,000 & upwards
<b>3</b>	Fine of	Fine of	<b>Suspension</b> of License for 45	<b>Suspension</b> of License for 60 days



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	Rs. 80,000 to Rs. 110,000	Rs. 110,000 to Rs. 150,000	days and/ or fine of Rs. 150,000 to Rs. 180,000	and/ or fine of Rs. 180,000 & upwards
<b>4</b>	Fine of Rs. 40,000 to Rs. 60,000	Fine of Rs. 60,000 to Rs. 85,000	Fine of Rs. 85,000 to Rs. 125,000	Fine of Rs. 125,000 & upwards
<b>5</b>	Fine of Rs. 20,000 to Rs. 40,000	Fine of Rs. 40,000 to Rs. 75,000	Fine of Rs. 75,000 to Rs. 100,000	Fine of Rs. 100,000 & upwards

**NOTES:**

- a) The above range of penalties are a guide and not an absolute requirement. The HRD will follow the current RCI Classification of Prohibited Substances while determining the Class of a certain substance.
- b) The quality of the race, the stake money and other factors may be taken into account while determining a suitable penalty.
- c) It is accepted that a prior offence, which occurred more than 10 years prior to the contravention being inquired into, will be disregarded for the purpose of applying the guidelines.

**PROHIBITED SUBSTANCE LIST**

This list is inclusive of the local veterinary and human substances considered most important in treatment or of particular concern within horseracing. This is not an exhaustive list but only indicative. This list may be amended by the HRD at any time as also the classification of substances may be changed.

<b>Prohibited Substance</b> (or metabolite or pro-drug)	<b>Class</b>
<b>A</b>	
Acebutolol	3
Acepromazine	3
Acetazolamide	4
Acetaminophen (Paracetamol)	4
Acetylsalicylic acid (Aspirin)	4
ACTH human synthetic (Adrenocorticotropic hormone)	2
Adrenaline	2
Adrenocorticotropic hormone (ACTH human synthetic)	2
Albuterol (Salbutamol)	1
Albuterol (Salbutamol) (Valid veterinary prescription)	4
Alcohol (Ethanol)	1

Brotizolam	3
Budesonide	4
Buflomedil	3
Bupivacaine	2
Buprenorphine	2
Buspirone	2
Butorphanol	2
<b>C</b>	
Caffeine	3
Cannabidiol (CBD)	4
Cannabidiolic acid (CBDA)	4
Capsaicin	4
Captopril	3
Carbocysteine	5
Carboxy THC (THC-COOH)	4
Carbon dioxide (total)	2
Carprofen	4
Carvedilol	3
Cathine (Norpseudoephedrine)	2

Alfaxalone	2
Alfentanil	2
Allopurinol	3
Alprazolam	3
Altrenogest (in the male horse)	2
Ambroxol	5
Amiloride	4
Aminophylline	4
Amitriptylline	2
Arsenic	3
Aspirin (Acetylsalicylic acid)	4
Atenolol	3
Atropine	5
Azaperone (Azapropazone)	3
<b>B</b>	
Baclofen	4
Beclomethasone	4
Benazepril	3
Betamethasone	4
Bisoprolol	3

Celecoxib	4
Cetirizine	5
Chlorpheniramine	5
Chlorpromazine	3
Chlorthalidone	4
Cinnarizine	5
Citalopram	3
Clanobutin	5
Clenbuterol	1
Clenbuterol (Valid veterinary prescription)	4
Clidinium	5
Clobetasol	4
Clobetasol propionate	4
Clomipramine	2
Clonazepam	3
Clonidine	3
Codeine	2
Cobalt	3
Cortisone	4

Bromazepam	3
Bromhexine	5

<b>D</b>	
Dantrolene	4
Dembrexine	5
Detomidine	3
Dexamethasone	4
Dextromethorphan	5
Dextropropoxyphene	2
Diamorphine (Heroin)	1
Diazepam	3
Diclofenac	4
Digoxin	3
Diethyl amine salicylate	4
Dihydrocodeine	2
Dimethyl Sulphoxide (DMSO)	4
Diphenhydramine	5
Diphenylpyraline	5
Diprenorphine	2
Dipyrone (Metamizole)	4
DMSO (Dimethyl Sulphoxide)	4
Dopamine	3
Doxapram	3

Fluoxetine	2
Fluphenazine	2
Flurazepam	3
Flurbiprofen	4
Fluticasone	4
Formoterol	4
Furosemide	4
<b>G</b>	
Gabapentin	2
Glycopyrrolate	4
Growth Hormone (GH)	1
Guaifenesin	5
<b>H</b>	
Haloperidol	3
Haemoglobin glutamers	1
Haemoglobin oxygen carrier	1
Heroin (Diamorphine)	1
Hydrochlorthiazide (Hydrochlorothiazide)	4



<b>E</b>	
Enalapril (Enalaprilat)	3
Enalaprilat (Enalapril)	3
Ephedrine	4
Epinephrine	2
Erythropoietin (EPO)	1
Ethanol	1
Ethinyl Estradiol (in the male horse)	2
Ethylestrenol (in the male horse)	2
Etofylline	4
Etoricoxib	4
Etorphine	2
<b>F</b>	
Fenoterol	4
Fentanyl	2
Firocoxib	4
Flavoxate	5

Hydrocodone	2
Hydrocortisone	4
Hydrocortisone hemisuccinate	4
Hydroxyprogesterone caproate (in the male horse)	2
Hydroxyprogesterone (in the male horse)	2
Hydroxyzine	3
Hyoscine (Scopolamine)	5
Hyoscine-N-butylscopolamine	5
<b>I</b>	
Ibuprofen	4
Imipramine	2
Indapamide	4
Indomethacin	4
Insulin	1
Ipratropium	4
Irbesartan	3
Isoxsuprine	4

Fludrocortisone	4
Fluticasone propionate	4
Flumethasone (Flumetasone)	4
Flunitrazepam	3
Flunixin	4
Fluocinolone	4

<b>K</b>	
Ketamine	2
Ketoprofen	4
Ketorolac	4

<b>L</b>	
Labetalol	3
Lamotrigine	3
Levodopa	3
Levonorgestrol	2
Lidocaine (Lignocaine)	2
Lisinopril	4
Loperamide	5
Loratidine	5
Lorazepam	3
Lormetazepam	3
Lornoxicam	4
Losartan	3
<b>M</b>	
Medetomidine	3
Medroxyprogesterone (in the male horse)	2
Medroxyprogesterone acetate	2

N-butyl-Scopolamine	5
Neostigmine	5
Nifedipine	3
Nitrazepam	3
Nitroglycerine	2
Norpseudoephedrine (Cathine)	5
Nortestosterone (Nandrolone)	1
<b>O</b>	
Oestradiol	2
Oxazepam	3
Oxybutynin	5
Oxycodone	2
Oxymorphone	2
Oxyphenbutazone	1
<b>P</b>	
Paracetamol (Acetaminophen)	4

(in the male horse)	
Mefenamic acid	4
Meloxicam	4
Meperidine (Pethidine)	2
Mepyramine maleate	5
Mephenesin	4
Mepivacaine	2
Meprobromate (Meproamate)	3
Methocarbamol	4
Methyl salicylate	4
Methyldopa	3
Methylphenidate	2
Methylprednisolone	4
Metoclopramide	5
Metoprolol	3
Midazolam	3
Minoxidil	3
Mometasone furoate	4
Morphine	2
<b>N</b>	

Parecoxib	4
Paroxetine	2
Pemoline	2
Pentobarbital	2
Pergolide	3
Pethidine (Meperidine)	2
Phenazone	4
Pheniramine	5
Phenobarbital (Phenobarbitone)	2
Phenylbutazone	1
Phenylpropanolamine	3
Piretanide	4
Piroxicam	4
Prazepam	3
Prednisolone	4
Prednisolone hemisuccinate	4
Prednisone	4
Prilocaine	2
Probenecid	5
Procaine	4
Prochlorperazine	3
Progesterone	2

N-Acetylcysteine	5
Nalbuphine	2
Naloxone	2
Naltrexone	2
Nandrolone (Nortestosterone)	1
Naproxen	4
N-butylscopolamine	5

Propafenone	3
Propantheline (Propanthelline)	5
Propofol	2
Propranolol	3
Pseudoephedrine	3
Pyrilamine maleate	5

<b>R</b>	
Ractopamine	1
Ramifenazone (Isopyrin)	4
Reserpine	3
Risperidone	2
Robenacoxib	4
Rofecoxib	4
Romifidine	3
Ropivacaine	2
<b>S</b>	
Salbutamol (Albuterol)	1
Salbutamol (Valid veterinary prescription)	4
Salicylic acid	4
Salmeterol	4
Scopolamine (Hyoscine)	4
Scopolamine N-Butyl	5

Tetracaine	2
Tetramisole	5
Theobromine	4
Theophylline	4
Thiafentanyl	2
Tiletamine	2
Tilidine	2
Timolol	3
Torseamide	4
Total carbon dioxide (TCO2)	2
Tramadol	2
Tranexamic acid	5
Trenbolone	1
Trenbolone acetate	1
Triamcinolone	4
Triamcinolone acetonide	4
Triazolam	3
Trimipramine	2
Tiludronic acid	3
<b>UVWXY</b>	

Sertraline	3
Sibutramine	3
Sildenafil	3
Somatropin	1
Sotalol	3
Spirinolactone	3
Succinyl choline	3
Sufentanil	2
Sumatriptan	4
Synephrine	3
<b>T</b>	
Temazepam	3
Terbutaline	4
Testosterone	1
Testosterone cypionate	1
Testosterone undecanoate	1
THC & THC-COOH	4
Tetrahydrocannabidiol	4

Valerenic acid	4
Valsartan	3
Vedaprofen	4
Venlafaxine	2
Verapamil	3
Vitamin B12 (Cobalt containing)	3
Warfarin	5
Xylazine	3
Yohimbine	5
<b>Z</b>	
Zeranol	1
Zilpaterol	1
Zolmitriptan	4
Zolpidem	2
Zopiclone	3
Zolazepam	3

Note that the above list is not comprehensive of all the substances being screened (or the substance which are prohibited) at an approved Laboratory.

THRESHOLD LIMITS OF ENDOGENOUS SUBSTANCES:

<b>Threshold Name</b>	<b>Threshold</b>
Arsenic	• 0.3 microgram total arsenic per millilitre in urine
Boldenone	• 0.015 microgram free and conjugated boldenone per millilitre in urine from male horses (other than geldings)
Carbon dioxide	• 36 millimoles available carbon dioxide per litre in plasma
Cobalt	<ul style="list-style-type: none"> <li>• 0.1 microgram total Cobalt per millilitre in urine</li> <li>• 0.025 microgram total Cobalt (free and protein bound) per millilitre in plasma.</li> </ul>
Estradiol in male horses (other than geldings)	• 0.045 microgram free and glucuroconjugated 5A -estrane-3B,17A-diol per millilitre in urine
Hydrocortisone	• 1 microgram hydrocortisone per millilitre in urine
Methoxytyramine	• 4 micrograms free and conjugated 3-methoxytyramine per millilitre in urine
Prednisolone	0.01 microgram free prednisolone per millilitre in urine.
Salicylic acid	<ul style="list-style-type: none"> <li>• 750 micrograms salicylic acid per millilitre in urine, or</li> <li>• 6.5 micrograms salicylic acid per millilitre in plasma</li> </ul>
Testosterone	<ul style="list-style-type: none"> <li>• 0.02 microgram free and conjugated testosterone per millilitre in urine from geldings, or</li> <li>• 0.055 microgram free and conjugated testosterone per millilitre in urine from fillies and mares (unless in foal)</li> <li>• 100 picogram free testosterone per millilitre in plasma from geldings.</li> </ul>

N.B.: The conjugated substance is the substance that can be liberated from conjugates.

Each threshold, including those for the same substance in urine and plasma can be independently.



no determination and consideration of the specific gravity of a horse urine sample is required when comparing its concentration with a urinary threshold.

Thresholds are regulatory limits and the numerical values expressed above do not carry any implied precision (e.g. 0.3 is the same as 0.300). Whether a threshold has been exceeded or not in a sample is established solely from the concentration determined and the uncertainty or measurement associated with such determination.

### INTERNATIONAL SCREENING LIMITS IN URINE

<b>Substance</b>	<b>International Screening Limit (nanograms per millilitre in hydrolysed urine unless otherwise specified)</b>
Acepromazine	10 *e
Betamethasone	0.2
Bromhexine	200 *d
Butorphanol	1
Carprofen	100
Clenbuterol	0.1
Dantrolene	3 in unhydrolysed urine *g
Dembrexine	100
Detomidine	2 *f
Dexamethasone	0.2
Diclofenac	50
Dipyrrone	1000 *a
Eltenac	50
Flunixin	100
Furosemide	50
Ipratropium	0.25
Ketoprofen	100
Lidocaine	10 *b
Meclofenamic Acid	250
Medetomidine	5 *h

Meloxicam	10
Mepivacaine	10 *c
Naproxen	250
N-Butylscopolammonium	25
Omeprazole	1 in unhydrolysed urine
Phenylbutazone	100
Romifidine	1
Salbutamol	0.5
Triamcinolone Acetonide	0.5
Vedaprofen	50
Xylazine	10*i

### INTERNATIONAL SCREENING LIMITS IN PLASMA

<b>International Screening Limit (nanograms per millilitre in plasma)</b>	
Acepromazine	0.02
Butorphanol	0.01
Carprofen	100
Dantrolene	0.1*c
Dembrexine	5
Detomidine	0.02 *a
Flunixin	1
Furosemide	0.1
Lidocaine	0.05
Meclofenamic Acid	5
Medetomidine	0.02 *b
Meloxicam	1
Mepivacaine	0.05
N-Butylscopolammonium	0.05
Omeprazole	1
Phenylbutazone	100

Procaine	0.02
Vedaprofen	5
Xylazine	0.05
* <sup>a</sup> Controlled by 3'-hydroxydetomidine	
* <sup>b</sup> Controlled by 3'-hydroxymedetomidine	
* <sup>c</sup> Controlled by 5-hydroxydantrolene	

INTERNATIONAL RESIDUE LIMITS:

<b>Feed Contaminant</b>	<b>International Residue Limit (in urine) #</b>
Caffeine	50 ng/mL
Theophylline	250 ng/mL
Atropine	60 ng/mL
Scopolamine	60 ng/mL
Morphine (Total)	30 ng/mL
Bufotenine	10 ug/mL
DMT	10 ug/mL
Hordenine	80 ug/mL
Theobromine	2000 ng/mL
Methylsulfonylmethane (MSM)	1200 ug/mL
Dimethyl sulfoxide (DMSO)	15 ug/mL
<b>Feed Contaminant</b>	<b>International Residue Limit (in plasma)</b>
Theobromine	300 ng/mL
Caffeine	20 ng/mL
Dimethyl sulfoxide (DMSO)	1000 ng/mL

# These refer to the free and conjugated concentrations unless indicated otherwise.

\* Conjugated substances like morphine glucuronides can be difficult to hydrolyse.