



## INTERNATIONAL RESIDUE LIMITS

### *(PROHIBITED SUBSTANCES WHICH ARE NATURALLY FOUND OR WHICH ARE RESIDUES)*

The National Horseracing Authority wishes to advise that the International Federation of Horseracing Authorities (IFHA) has approved International Screening Limits (ISLs) to be applied in the control of therapeutic substances and also International Residue Limits (IRLs) to control certain contaminants and environmental substances. This guidance forms part of the International Agreement on Breeding, Racing and Wagering (Article 6). The NHA, as the South African member of the IFHA, has adopted selected ISLs and IRLs. In accordance with this, the NHA is currently applying these in its prohibited substance screening program within the IFHA's definition, shown below:

*“The International Residues Limit (IRL) is the urine or plasma concentration adopted for the screening of a specified natural occurring or residue therapeutic prohibited substance. These are often derived from administration studies followed by a risk analysis consisting of two components: a risk assessment (evaluation of the effect of the substance and factors related to its control) and a risk management (decision step for harmonisation). IRLs are harmonised detection limits agreed following input by international consensus and are conveyed by instruction from racing authorities to their laboratories. These IRLs are simply the detection limits to be used by the laboratories when screening for certain therapeutic substances as instructed by the authorities; they are not international thresholds.*

*When the screening procedure indicates the IRL, in either urine or plasma, has been exceeded, all that is required is qualitative confirmatory analysis (usually by mass spectrometry) to confirm the presence or absence of the prohibited substance. Quantification is not required.”*

<b>Residue / Natural Substance</b>	<b>International Residue Limits</b>	
	<b>Urine</b>	<b>Plasma</b>
<b>Bufotenine</b>	10 µg/ml	–
<b>Caffeine</b>	50 ng/ml	20 ng/ml
<b>Dimethyl sulfoxide (DMSO)</b>	15 µg/ml	1000 ng/ml
<b>DMT (N,N-Dimethoxytyramine)</b>	10 µg/ml	–
<b>Hordenine</b>	80 µg/ml	–

<b>Methylsulfonylmethane (MSM)</b>	1200 µg/ml	–
<b>Morphine *</b>	30 ng/ml	–
<b>Theobromine</b>	2000 ng/ml	300 ng/ml
<b>Theophylline</b>	250 ng/ml	–

**\*Total Morphine**, in both free and conjugated forms.

ng/ml = nanograms per millilitre

µg/ml = micrograms per millilitre