

WADA Technical Document – TD2010MRPL

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MINIMUM REQUIRED PERFORMANCE LEVELS FOR DETECTION OF PROHIBITED SUBSTANCES

In order to ensure that all WADA-accredited Laboratories can report the presence of *Prohibited Substances*, their *Metabolite(s)* or their *Marker(s)* in a uniform way, a minimum routine detection capability for testing methods has been established. It is recognized that some Laboratories will be able to identify a wider range or lower concentrations of *Prohibited Substances* than other Laboratories. While such individual capabilities are encouraged in order to improve the overall system, it is also recognized that there are Minimum Required Performance Levels (MRPL) at which all Laboratories shall operate.

The MRPL is an analytical parameter of technical performance with which the Laboratories shall comply when testing for the presence of a particular *Prohibited Substance*, its *Metabolite(s)* or *Marker(s)*. The MRPL is not a threshold, nor is it a limit of detection (LOD) or a limit of quantification (LOQ). *Adverse Analytical Findings* may result from concentrations below the established MRPL values.

The following table lists general requirements for detection of concentrations of representative substances in the classes of *Prohibited Substances* and, where applicable, specific exceptions. Laboratories shall routinely detect substances at and above the concentrations given in this table.

Minimum Required Performance Levels

Prohibited Class	Specific Examples/ Exceptions	Concentration
S1.a Exogenous Anabolic Androgenic Steroids ^(a)		10 ng/mL
	Clenbuterol	2 ng/mL
	Methandienone ^(b)	2 ng/mL
	Methyltestosterone ^(c)	2 ng/mL
	Stanozolol ^(d)	2 ng/mL
S2. Peptide Hormones, Growth Factors and Related Substances	hCG	5 mIU/mL
S3. Beta-2 Agonists		100 ng/mL
S4. Hormone Antagonists and Modulators ^(e)	Aromatase inhibitors, SERMs, other anti-estrogenic substances	50 ng/mL
S5. Diuretics and other Masking Agents ^(f)	Diuretics	0.25 µg/mL
S6. Stimulants ^(a, g)		0.5 µg/mL
	Strychnine	0.2 µg/mL
S7. Narcotics ^(g)		0.2 µg/mL
	Buprenorphine	10 ng/mL
	Fentanyl (and derivatives)	10 ng/mL
S9. Glucocorticosteroids ^(a, h)		30 ng/mL
P2. Beta-blockers ^(g)		0.5 µg/mL

^a For the parent compound or metabolite(s).

^b 17β-methyl-5β-androst-1-ene-3α,17α-diol.

^c 17α-methyl-5β-androstane-3α,17β-diol.

^d 3'-hydroxystanozolol.

^e Formestane findings less than 100 ng/mL shall be supported by an IRMS analysis.

^f For thiazides: metabolites and/or degradation compounds.

^g For a Non-Threshold Substance prohibited in-competition only, it is not recommended that Laboratories report below 10% (1/10th) of the MRPL.

^h For glucocorticosteroids and their metabolites, Laboratories are not to report below the MRPL.