# *TD2013MRPL v1.0*

## *Summary of Major Modifications*

The document has been divided into five sections to highlight the topics covered and facilitate its understanding: i) Minimum Required Performance Levels (MRPL), ii) Limit of Detection (LOD) of the Initial Testing procedure, iii) Confirmation Procedure, iv) Reporting of Non-Threshold Substances, prohibited *In-Competition* only (S6, S7, S9, P2) and v) References.

### 1. Minimum Required Performance Levels (MRPL)

- It is clarified that MRPL values are relevant only for Non-Threshold Substances and they shall not be applied to the analysis of Threshold Substances;
- Criteria are provided for the establishment of MRPLs for different categories of *Prohibited Substances*;
- It is clarified that MRPLs are generally applied to the detection of parent compound and/or *Metabolite(s)*, *Marker(s)* or degradation product(s) of prohibited Non-Threshold Substances.

### Table 1. MRPLs for detection of Non-Threshold *Prohibited Substances* in human urine

- All MRPL values have been expressed in the same concentration units (ng/mL);
- The MRPLs for the following classes of *Prohibited Substances* have been modified:
  - Exogenous AAS (MRPL has been decreased from 10 to 5 ng/mL). Metabolites of methandienone, methyltestosterone and stanozolol are no longer specified because other new, more sensitive metabolites of these compounds have been identified. Dehydrochlormethyltestosterone has been added as an exception in this class at an MRPL of 2 ng/mL;
  - Clenbuterol (MRPL has been reduced from 2 to 0.2 ng/mL);

- hCG has been removed from the table, since it does not constitute a Non-Threshold Substance and a specific *WADA* Guideline for the reporting and management of hCG findings has been published and is now in force;

- A footnote b) has been introduced clarifying that the detection and reporting of Salbutamol and Formoterol are covered in a different Technical Document (TD DL), since these two β2-agonists are considered Threshold Substances;

- Formestane has been included as an exception in the Hormone Antagonists and Modulators category, with an MRPL at 150 ng/mL (IRMS is required before reporting an *Adverse Analytical Finding* for *Samples* with Formestane values below 150 ng/mL – footnote c);

- Diuretics and Other Masking Agents (MRPL reduced from 250 to 200 ng/mL). The MRPL established for diuretics applies to all substances in this category, not only to thiazides;

- Stimulants (MRPL has been lowered from 500 to 100 ng/mL). Strychnine has been removed as an exception whereas Octopamine has been added at 1000 ng/mL to avoid reporting positive findings that may have been caused by the ingestion of certain foodstuff (citrics, chocolates, etc);

- Narcotics (MRPL reduced from 200 to 50 ng/mL), including buprenorphine (from 10 to 5 ng/mL) and Fentanyl and derivatives (from 10 to 2 ng/mL);

- Synthetic Cannabinoids (cannabimimetics) have been included as a new class of substances with an MRPL at 1 ng/mL;

- β2-blockers (MRPL lowered from 500 to 100 ng/mL).

- The reporting requirements for Non-Threshold Substances prohibited *In-Competition* only, including stimulants, narcotics, synthetic cannabinoids glucocorticosteroids and β-blockers, are specified in the section 4. of the document.

## 2. Limit of Detection (LOD) of the Initial Testing Procedure

- It is specified that the LOD for each Non-Threshold Substance or its representative *Metabolite(s)* or *Marker(s)* shall be estimated during the Laboratory's method validation of the Initial Testing Procedure. The values of the estimated LODs shall be not more than 50% of the MRPL;
- A definition of LOD is provided, as well as a generally accepted approach for its estimation.

### 3. Confirmation Procedure

A paragraph has been included specifying that Confirmation Procedures for Non-Threshold Substances shall allow identification at the MRPL.

### 4. Reporting of Non-Threshold Substances, prohibited *In-Competition* only (S6, S7, S8, S9, P2)

- It is specified that Non-Threshold Substances, prohibited *In-Competition* only, shall not be reported below 50% of the MRPL. Since the MRPLs for most of these classes of substances have been reduced to 10 - 50% of their former values (except for Glucocorticosteroids, which has been maintained at 30 ng/mL) this rule, in fact, does not change the minimum reporting concentrations that were established in the previous versions of the TD MRPL for these categories of substances.
- Clarifications are provided on the reporting of hydromorphone findings in the presence of non-prohibited hydrocodone or of high concentrations of morphine.

### 5. References

A link is provided to the *WADA* website page listing the Technical Documents currently in force and referring, in particular, to the three Technical Documents cited in the text (TD DL, TD19NA and TD IDCR).