

## ***TD2013DL v1.0***

### ***Summary of Major Modifications***

#### **1. Maximum Levels of Measurement Uncertainty**

It is clarified that the values of the maximum acceptable combined standard uncertainty ( $u_{c \text{ Max}}$ ) are estimated at levels close to the threshold (and not necessarily at the threshold level itself) using in most cases data obtained from relevant rounds of the External Quality Assessment Scheme (EQAS). However, other approaches may be applied for the estimation of  $u_{c \text{ Max}}$  when EQAS performance data is not available, and the assigned values must be reviewed and approved by the WADA Laboratory Expert Group and subsequently checked for consistency with data generated by future EQAS studies.

**Table 1**

- Epitestosterone has been removed from the table since it constitutes a variable of the Steroid Profile for which determinations of an *Adverse Analytical Finding* will be based on the analysis of longitudinal individual values and/or the application of GC/C/IRMS analysis.
- The  $u_{c \text{ Max}}$  associated with the determination of Carboxy-THC has been increased from 1.5 ng/mL (10%) to 2.3 ng/mL (15%), resulting in a revised Decision Limit (DL) of 19 ng/mL.
- The  $u_{c \text{ Max}}$  associated with the determination of Morphine has been increased from 0.1 µg/mL (10%) to 0.15 µg/mL (15%), resulting in a revised DL of 1.3 µg/mL.
- Two new Threshold Substances have been included: Formoterol (T = 40 ng/mL,  $u_{c \text{ Max}} = 6.0$  ng/mL (15%), DL = 50 ng/mL), and Glycerol (T = 1 mg/mL,  $u_{c \text{ Max}} = 0.15$  mg/mL (15%), DL = 1.3 mg/mL).
- Footnotes
  - a. It has been clarified that the guard band that represents the expanded uncertainty applied to a result at the T corresponds to a 1-sided normal distribution (which ensures a sufficiently high number of degrees of freedom to apply a coverage factor  $k$  of 1.645).

- b. 19-NA and glycerol have been specified as the only endogenous Threshold Substances listed in the table, for which the T value shall be adjusted when the specific gravity of the urine *Sample* is greater than 1.020. The formula for the adjustment of T is now provided.
- c. It has been specified that this requirement also applies to the detection of Carboxy-THC.
- e. It has been corrected that the determined concentrations of cathine would constitute an *Adverse Analytical Finding* if greater than the Decision Limit.
- h. This footnote has been removed, since it is redundant and applies to the determination of all threshold substances.

*Note:* A reference is incorporated to the newly implemented markers method for determination of doping with hGH.

## **2. Setting decision limits for Threshold substances**

It has been clarified that the 1-sided distribution considered for definition of the guard band is a normal distribution.

*Note:* A reference is incorporated to the newly implemented markers method for determination of doping with hGH.

## **3. Reporting**

A clarification is provided on the number of (significant) figures to be used when reporting quantitative findings for Threshold Substances.

## **4. References**

Some of the website links provided have been updated.