

# SUMMARY OF MAJOR MODIFICATIONS AND EXPLANATORY NOTES

## 2017 PROHIBITED LIST

### Substances and methods prohibited at all times (In- and Out-of-Competition)

#### Prohibited Substances

##### S1 ANABOLIC AGENTS

- Compounds boldenone, boldione, 19-norandrostenedione, and nandrolone have been transferred and 19-norandrostenediol added to the S1.b section because they can be produced endogenously at low concentrations. This change does not affect the prohibited status of these substances. The interpretation and reporting of findings for these substances is addressed in specific Technical Documents (TD2016IRMS and/or TD2016NA).
- 5 $\alpha$ -androst-2-ene-17-one, commonly known as "Delta-2" or 2-androstenone, was added as an example of metabolite of DHEA, more recently found in dietary supplements.

##### S2 PEPTIDE HORMONES, GROWTH FACTORS, RELATED SUBSTANCES AND MIMETICS

- To extend the scope of Erythropoietic Stimulating Agents, GATA inhibitors (e.g. K-11706) and Transforming Growth Factor- $\beta$  (TGF- $\beta$ ) inhibitors (e.g. sotatercept, luspatercept) were added.
- The International Nonproprietary Name (INN) of FG-4592, roxadustat, was added.
- Molidustat was added as another example of HIF stabilizer.
- Cobalt: It is re-iterated that vitamin B12, which contains cobalt, is not prohibited.

##### S3 BETA-2-AGONISTS

- The reference to isomers was simplified.
- Examples of selective and non-selective beta-2-agonists were added (fenoterol, formoterol, higenamine, indacaterol, olodaterol, procaterol, reproterol, salbutamol, salmeterol, terbutaline, vilanterol).
- Higenamine is documented to be a constituent of the plant *Tinospora crispa*, which can be found in some dietary supplements and is a non-selective beta-2-agonist.
- Dosing parameters of salbutamol were refined to make it clear that the full 24 hour dose should not be administered at one time.
- The maximum dosage for salmeterol was stated according to the manufacturers' recommendations.
- Studies are ongoing to establish an appropriate urinary threshold concentration for inhaled salmeterol. At present, the Technical Document TD2015MRPL recommends not to report salmeterol below 10 ng/mL.

##### S4 HORMONE AND METABOLIC MODULATORS

- Androsta-3,5-diene-7,17-dione (arimistane) was added as a new example of aromatase inhibitor.

#### Prohibited Methods

##### M1 MANIPULATION OF BLOOD AND BLOOD COMPONENTS

- Supplemental oxygen administered by inhalation, but not intravenously, is permitted. To clarify this, M1.2 now reads "excluding supplemental oxygen by inhalation".

## Substances and Methods Prohibited In-Competition

---

### S6 STIMULANTS

- Lisdexamfetamine was added to S6.a; it is an inactive pro-drug of amphetamine.
- In the absence of an INN for methylhexanamine, its International Union of Pure and Applied Chemistry (IUPAC) name, 4-methylhexan-2-amine, was added. A number of other synonyms exist for methylhexanamine including: 1,3-dimethylamylamine, dimethylpentylamine; methylhexamine; methylhexanamine; 1,3-dimethylpentylamine.
- Regular food consumption will not yield sufficient levels of phenylethylamine to result in an *Adverse Analytical Finding*.

---

### S7 NARCOTICS

- Nicomorphine was added. It is an opioid analgesic drug, which is converted to morphine following administration.

---

### S9 GLUCOCORTICOIDS

- After consideration of stakeholders' comments, no changes were made in this section for 2017.

## MONITORING PROGRAM

The following were added to establish patterns of use:

- Codeine;
- Concurrent use of multiple beta-2-agonists.