اللجنة السعودية للرقابة على المنشطات
Saudi Arabian Anti-Doping Committee

رؤيـــة VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

THE PROHIBITED LIST 2022

WORLD ANTI-DOPING AGENCY

Translated by:

Mr. Mohammad Nabeel Dobain

Translator

Supervised by:

Mr. Abdulaziz Abdulrahman Almasaed

Executive Director
Saudi Arabian Anti-Doping Committee

DESIGNED BY : Omar Ghanem

THE WORLD ANTI-DOPING CODE

INTERNATIONAL STANDARD

PROHIBITED LIST

2022

WORLD ANTI-DOPING AGENCY
play true

This List shall come into effect on 1 January 2022.

The official text of the Prohibited List shall be maintained by WADA and shall be published in English and French. In the event of any conflict between the English and French versions, the English version shall prevail.

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PREFACE

The Saudi Arabian Anti-Doping Committee (SAADC), by preparing and publishing this booklet, helps providing athletes and Athlete Support Personnel, with the required and important information about the prohibited substances and methods in sport. This kind of activity also falls within the program of awareness which represents one of the main pillars of the Saudi Anti-Doping program.

The list of prohibited substances and methods is one of the international standards emanating from the World Anti-Doping Agency WADA.

It is very important for all the staff of sport community to know some facts about the List in order to get the maximum benefits. Such facts can be summarized as follows:

1- The list shall come into effect on 01/01/2022 until 31/12/2022 .

2- All athletes and Athlete Support Personnel must refer to this list prior to using or prescribing any medications..

3- Names mentioned in the List refer to the scientific and chemical properties of pharmaceutical compounds which are different from the brand-names of medications in pharmacies, and stores selling medicine, dietary and food supplements.

4- The official text of the Prohibited List shall be maintained by WADA and shall be published in English and French. In the event of any conflict between the English and French versions, the English version shall prevail.

5- The issuance of the 2022 Prohibited List in Arabic language shall enable the 2022 Prohibited List to be shared across countries in the region, so that the WADA, the Public Authorities, and the Sport Movement can work together to protect clean athletes, and true play.

Our best wishes to all sport teams and clubs with success and for their contribution to a doping-free competition on a level playing field and maintaining the health of all athletes .

World Anti-Doping Agency "WADA"

The World Anti-Doping Agency is an independent international organization responsible for promoting, coordinating and monitoring the fight against doping in sport in all its aspects, pursuing doping-free sport. It was established in 1999, based in Canada.

Saudi Arabian Anti-Doping Committee "SAADC"

SAADC is a consultative, legislative and executive committee, attached to the Board of Directors of the Saudi Arabian National Olympic Committee. It is an independent distinct body with its own legal personality, in all anti-doping matters in the Kingdom of Saudi Arabia. It is the sole authority to represent Saudi Arabia at international anti-doping events. SAADC operates within the policies of Saudi Arabian National Olympic Committee under the supervision of the Ministry of Sport in Saudi Arabia. It was established in 2004.

WADA CODE

The World Anti-Doping Code (Code) is the core document that harmonizes anti-doping policies, rules and regulations within sport organizations and among public authorities around the world. It works in conjunction with the other seven International Standards which aim to foster consistency among anti-doping organizations in various areas: Prohibited List, Testing and Investigation, Laboratories, Therapeutic Use Exemptions (TUEs), Protection of Privacy and Personal Information, Code Compliance by Signatories, Results Management, and Education.

To date, more than 700 sport organizations have accepted the World Anti-Doping Code. Code acceptance means that a sport organization agrees to the principles of the Code and agrees to implement and comply with the Code. The implementation of the Code is the process that an anti-doping organization goes through to amend its rules and policies so that all mandatory articles and principles of the Code are included. WADA monitors implementation of and compliance with the Code.

The process of reviewing the 2015 WADA Code began at the end of 2011. After having three phases of consultations over two years, reviewing more than two thousand suggestions to amend and modify the Code, a unanimous approval on the Code was taken on November 15, 2013 at the World Conference on Doping in Johannesburg, South Africa. The review of the revised WADA Code had given it the impetus and the strength that enabled it to protect the rights of clean athletes over the whole world. The 2015 WADA Code entered into force on January 1, 2015. The 2015 WADA Code was also subject to amendments and which went into effect by 1 January 2021.

"Prohibited List" International Standard

List of prohibited substances and methods (the Prohibited List) is one of the eight international standards that determines what are the materials and methods prohibited in both IN and OUT of competition. It also refers to the list of prohibited substances in particular sports. The prohibited substances and methods on the List are classified by different classes (e.g., steroids, stimulants, gene doping). The list is updated annually.

How is the list updating?

The List is developed through a consultative and intensive process where it starts by circulating and sending a draft to more than 1,700 persons who are related in particular to the anti-doping and substances matters to get their comments and notes . All received comments are processed by the List Expert Group and Health, Medical and Research Committee of the World Anti-Doping Agency that is composed of international anti-doping scientists and experts. The List Committee analyzes all these comments and consultations and reports last findings to the on WADA Medical and Research Committee, which in turn sends its final recommendations to the Executive Committee, to confirm the final draft in their annual meeting which is held in September every year. (Executive Committee , is the final decision-making body to approve all policies related to international standards).

The Saudi Anti-Doping Program:

The Saudi Anti-doping program seeks to preserve what is intrinsically valuable about sport. This intrinsic value is often referred to as “the spirit of sport”; it is the essence of Olympism; it is how we play true. The spirit of sport is the celebration of the human spirit, body and mind, and is characterized by the following values:

- Ethics, fair play and honesty
- Health
- Excellence in performance
- Character and education
- Fun and joy
- Teamwork
- Dedication and commitment
- Respect for rules and laws
- Respect for self and other Participants
- Courage
- Community and solidarity

Doping is fundamentally contrary to the spirit of sport.

The Saudi Arabian National anti-doping Program is conducted according to the following main items:

- Education, Training and Research.
- Therapeutic Use Exemption.
- Testing.
- Result Management.
- Sanctions.
- Appeals.

Scope

These Anti-Doping Rules shall apply to the following:

- Saudi Arabian Olympics Committee
- Saudi Arabian Anti-Doping Committee (SAADC)
- Saudi Arabian Sports Federations and Organizations
- All participants in programs and activities supervised by Saudi Sports Federations and Organizations.

Any Person who is not a member of a Saudi Arabian National Federation and who fulfills the requirements to be part of SAADC Registered Testing Pool, must become a member of the Person's National Federation, and shall make himself or herself available for Testing, at least twelve months before participating in International Events or Events of his or her National Federation.

Athletes and Athlete Support Personnel are also bound by SAADC anti-doping rules. Each Saudi Sports Federation shall take the necessary steps to ensure that all Athletes and Athlete Support Personnel within its authority and all affiliated associations are informed and bound by these rules.

These Anti-Doping Rules shall apply to all Doping Controls over which SAADC has jurisdiction.

ANTI-DOPING RULE VIOLATIONS

Doping is defined as the occurrence of one or more of the anti-doping rule violations shown below (athlete and other persons should be responsible for knowing what constitutes a violation of anti-doping rules, and the prohibited substances and methods):

1. Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete's sample.
2. Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method.
3. Evading, refusing or failing to submit to Sample collection after notification as authorized in the Saudi Arabian Anti-Doping Rules.
4. Whereabouts Failures by an Athlete.
5. Tampering or Attempted Tampering with any part of Doping Control by an Athlete or Other Person.
6. Possession of a Prohibited Substance or a Prohibited Method by an Athlete or Athlete Support Person.
7. Trafficking or Attempted Trafficking in any Prohibited Substance or Prohibited Method by an Athlete or Other Person
8. Administration or Attempted Administration by an Athlete or Other Person to any Athlete In-Competition of any Prohibited Substance or Prohibited Method, or Administration or Attempted Administration to any Athlete Out-of-Competition of any Prohibited Substance or any Prohibited Method that is Prohibited Out-of-Competition.
9. Complicity or Attempted Complicity by an Athlete or Other Person.
10. Prohibited Association by an Athlete or Other Person.
11. Acts by an Athlete or Other Person to Discourage or Retaliate Against Reporting to Authorities.

It is the Athletes' personal duty to ensure that no Prohibited Substance enters their bodies

Therapeutic Use exemption "TUE":

Many athletes suffer from medical issues, taking different types of drugs they need. Such drugs may contain prohibited substances which ,upon using prior or during the In and Out-of-competition, may lead to one of the anti-doping violations. For this purpose, a Therapeutic Use Exemption Committee "TUEC" had been established. It is a Sub-Committee of the Saudi Arabian Anti-Doping Committee, the role of which is to review applications from athletes in various sports and to allow or deny the athlete's use of such therapeutic material In and Out-of-Competitions.

Objective of TUE Committee: to reach a doping-free sport community allowing equal opportunities for everyone in all sports competitions.

Applications shall be submitted to:

The Therapeutic Use Exemption Committee **"TUEC"** , after filling up the required forms, along with an explanation of the pathological condition, indications and justifications for the request of the exemption. Forms are available on the SAADC's website: **WWW.SAADC.COM**

Applications shall be submitted either:

1 - By hand to SAADC's headquarters –3rd Floor, Prince Faisal bin Fahd Olympic Complex - Riyadh, or
2 - Email to: **tuec@saadc.org**, or
3 - Fax to: 011- 4831279

THE 2022 PROHIBITED LIST
WORLD ANTI-DOPING CODE
VALID 1 JANUARY 2022

Introduction

The Prohibited List is a mandatory International Standard as part of the World Anti-Doping Program.

The List is updated annually following an extensive consultation process facilitated by WADA. The effective date of the List is 01 January 2022.

The official text of the Prohibited List shall be maintained by WADA and shall be published in English and French. In the event of any conflict between the English and French versions, the English version shall prevail.

Below are some terms used in this List of Prohibited Substances and Prohibited Methods.

Prohibited In-Competition

Subject to a different period having been approved by WADA for a given sport, the In-Competition period shall in principle be the period commencing just before midnight (at 11:59 p.m.) on the day before a Competition in which the Athlete is scheduled to participate until the end of the Competition and the Sample collection process.

Prohibited at all times

This means that the substance or method is prohibited In- and Out-of-Competition as defined in the Code.

Specified and non-Specified

As per Article 4.2.2 of the World Anti-Doping Code, "for purposes of the application of Article 10, all Prohibited Substances shall be Specified Substances except as identified on the Prohibited List. No Prohibited Method shall be a Specified Method unless it is specifically identified as a Specified

Method on the Prohibited List". As per the comment to the article, "the Specified Substances and Methods identified in Article 4.2.2 should not in any way be considered less important or less dangerous than other doping substances or methods. Rather, they are simply substances and methods which are more likely to have been consumed or used by an Athlete for a purpose other than the enhancement of sport performance."

Substances of Abuse

Pursuant to Article 4.2.3 of the Code, Substances of Abuse are substances that are identified as such because they are frequently abused in society outside of the context of sport. The following are designated Substances of Abuse: cocaine, diamorphine (heroin), methylenedioxymethamphetamine (MDMA/"ecstasy"), tetrahydrocannabinol (THC).

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World Anti-Doping Agency
URL: www.wada-ama.org
Tel: +1 514 904 9232
Fax: +1 514 904 8650
E-mail: code@wada-ama.org

S0 NON-APPROVED SUBSTANCES

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
All prohibited substances in this class are Specified Substances.

Any pharmacological substance which is not addressed by any of the subsequent sections of the List and with no current approval by any governmental regulatory health authority for human therapeutic use (e.g. drugs under pre-clinical or clinical development or discontinued, designer drugs, substances approved only for veterinary use) is prohibited at all times.

This class covers many different substances including but not limited to BPC-157.

S1 ANABOLIC AGENTS

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
All prohibited substances in this class are non-Specified Substances.

Anabolic agents are prohibited.

1. ANABOLIC ANDROGENIC STEROIDS (AAS)

When administered exogenously, including but not limited to:

- 1-Androstenediol (5α-androst-1-ene-3β,17β-diol)
- 1-Androstenedione (5α-androst-1-ene-3,17-dione)
- 1-Androsterone (3α-hydroxy-5α-androst-1-ene-17-one)
- 1-Epiandrosterone (3β-hydroxy-5α-androst-1-ene-17-one)
- 1-Testosterone (17β-hydroxy-5α-androst-1-en-3-one)
- 4-Androstenediol (androst-4-ene-3β,17β-diol)
- 4-Hydroxytestosterone(4,17β-dihydroxyandrost-4-en-3-one)
- 5-Androstenedione (androst-5-ene-3,17-dione)
- 7α-hydroxy-DHEA
- 7β-hydroxy-DHEA
- 7-Keto-DHEA
- 19-Norandrostenediol (estr-4-ene-3,17-diol)
- 19-Norandrostenedione (estr-4-ene-3,17-dione)
- Androstanolone (5α-dihydrotestosterone,17β-hydroxy-5α-androstan-3-one)
- Androstenediol (androst-5-ene-3β,17β-diol)
- Androstenedione (androst-4-ene-3,17-dione)
- Bolasterone

- Boldenone
- Boldione (androsta-1,4-diene-3,17-dione)
- Calusterone
- Clostebol
- Danazol ([1,2]oxazolo[4',5':2,3]pregna-4-en-20-yn-17a-ol)
- Dehydrochlormethyltestosterone (4-chloro-17β-hydroxy-17a-methylandrosta-1,4-dien-3-one)
- Desoxymethyltestosterone (17a-methyl-5a-androst-2-en-17β-ol and 17 a-methyl-5a-androst-3-en-17β-ol)
- Drostanolone
- Epiandrosterone (3β-hydroxy-5a-androstan-17-one)
- Epi-dihydrotestosterone (17β-hydroxy-5β-androstan-3-one)
- Epitestosterone
- Ethylestrenol (19-norpregna-4-en-17a-ol)
- Fluoxymesterone
- Formebolone
- Furazabol (17a-methyl [1,2,5]oxadiazolo[3',4':2,3]-5a-androstan-17β-ol)
- Gestrinone
- Mestanolone
- Mesterolone
- Metandienone (17β-hydroxy-17a-methylandrosta-1,4-dien-3-one)
- Metenolone
- Methandriol
- Methasterone (17β-hydroxy-2a,17a-dimethyl-5a-androstan-3-one)
- Methyl-1-testosterone (17β-hydroxy-17a-methyl-5a-androst-1-en-3-one)
- Methylclostebol
- Methyldienolone (17β-hydroxy-17a-methylestra-4,9-dien-3-one)
- Methylnortestosterone (17β-hydroxy-17a-methylestr-4-en-3-one)
- Methyltestosterone
- Metribolone (methyltrienolone, 17β-hydroxy-17a-methylestra-4,9,11-trien-3-one)
- Mibolerone
- Nandrolone (19-nortestosterone)
- Norboletone
- Norclostebol (4-chloro-17β-ol-estr-4-en-3-one)
- Norethandrolone
- Oxabolone
- Oxandrolone
- Oxymesterone
- Oxymetholone
- Prasterone (dehydroepiandrosterone, DHEA,3β-hydroxyandrost-5-en-17-one)
- Prostanozol (17β-[(tetrahydropyran-2-yl)oxy]-1'H-pyrazolo[3,4:2,3]-5a-androstane)

- Quinbolone
- Stanozolol
- Stenbolone
- Testosterone
- Tetrahydrogestrinone (17-hydroxy-18a-homo-19-nor-17a-pregna-4,9,11-trien-3-one)
- Tibolone
- Trenbolone (17β-hydroxyestr-4,9,11-trien-3-one)

and other substances with smilar chamical structure or smilar biological effect(s).

2. OTHER ANABOLIC AGENTS

Including, but not limited to:

- Clenbuterol
- Osilodrostat
- Selective androgen receptor modulators (SARMs, e.g. andarine, enobosarm (ostarine), LGD-4033 (ligandrol), and RAD140)
- Zeranol
- Zilpaterol

S2 PEPTIDE HORMONES, GROWTH FACTORS, RELATED SUBSTANCES AND MIMETICS

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
All prohibited substances in this class are non-Specified Substances.

The following substances, and other substances with similar chemical structure or similar biological effect(s), are prohibited:

1. ERYTHROPOIETINS (EPO) AND AGENTS AFFECTING ERYTHROPOIESIS

Including, but not limited to:

1.1 Erythropoietin-Receptor Agonists, e.g.
darbepoietins (dEPO);
erythropoietins (EPO);
EPO-based constructs [e.g. EPO-Fc, methoxy polyeth¬ylene glycol-epoetin beta (CERA)];
EPO-mimetic agents and their constructs (e.g. CNTO-530, peginesatide).

1.2 Hypoxia-inducible factor (HIF) activating agents, e.g.
Cobalt;
Daprodustat (GSK1278863);
IOX2;
Molidustat (BAY 85-3934);
Roxadustat (FG-4592);
Vadadustat (AKB-6548);
Xenon.

1.3 GATA inhibitors, e.g.
K-11706.

1.4 Transforming growth factor beta (TGF-β) signalling inhibitors, e.g.
Luspatercept; Sotatercept.

1.5 Innate repair receptor agonists, e.g.
Asialo EPO;
Carbamylated EPO (CEPO).

2. PEPTIDE HORMONES AND THEIR RELEASING FACTORS,

2.1 Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) and their releasing factors in males, e.g. buserelin, deslorelin, gonadorelin, goserelin, leuprorelin, nafarelin and triptorelin;

2.2 Corticotrophins and their releasing factors, e.g. corticorelin;

2.3 Growth hormone (GH), its analogues and fragments including, but not limited to:
- growth hormone analogues, e.g. lonapegsomatropin, somapacitan and somatrogon
- growth hormone fragments, e.g. AOD-9604 and hGH 176-191

2.4 Growth hormone releasing factors, including, but not limited to:
- growth hormone-releasing hormone (GHRH) and its analogues (e.g. CJC-1293, CJC-1295,sermorelin and tesamorelin).
- growth hormone secretagogues (GHS) and its mimetics [e.g. lenomorelin (ghrelin),anamorelin, ipamorelin, macimorelin and tabimorelin]
- GH-releasing peptides (GHRPs) [e.g. alexamorelin, GHRP-1, GHRP-2 (pralmorelin),HRP-3,GHRP-4, GHRP-5, GHRP-6, and examorelin (hexarelin)]

3. GROWTH FACTORS AND GROWTH FACTOR MODULATORS

Including, but not limited to:
- Fibroblast Growth Factors (FGFs);
- Hepatocyte Growth Factor (HGF);
- Insulin-like Growth Factor-1 (IGF-1) and its analogues;

- Mechano Growth Factors (MGFs);
- Platelet-Derived Growth Factor (PDGF);
- Thymosin-β4 and its derivatives e.g. TB-500;
- Vascular-Endothelial Growth Factor (VEGF);

and other growth factors or growth factor modulators affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching.

S3 BETA-2 AGONISTS

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
All prohibited substances in this class are Specified Substances.

All selective and non-selective beta-2 agonists, including all optical isomers, are prohibited, including, but not limited to:

- Arformoterol
- Fenoterol
- Formoterol
- Higenamine
- Indacaterol
- Levosalbutamol
- Olodaterol
- Procaterol
- Reproterol
- Salbutamol
- Salmeterol
- Terbutaline
- Tretoquinol (trimetoquinol)
- Tulobuterol
- Vilanterol

EXCEPTIONS

- Inhaled salbutamol: maximum 1600 micrograms over 24 hours in divided doses not to exceed 600 micrograms over 8 hours starting from any dose;
- Inhaled formoterol: maximum delivered dose 54 micrograms over 24 hours;
- Inhaled salmeterol: maximum 200 micrograms over 24 hours.
- Inhaled vilanterol: maximum 25 micrograms over 24 hours.

NOTE

The presence in urine of salbutamol in excess of 1000 ng/mL or formoterol in excess of 40 ng/mL is not consistent with therapeutic use of the substance and will be considered as an Adverse Analytical Finding (AAF) unless the Athlete proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of a therapeutic dose (by inhalation) up to the maximum dose indicated above..

S4 HORMONE AND METABOLIC MODULATORS

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
Prohibited substances in classes S4.1 and S4.2 are Specified Substances. Those in classes S4.3 and S4.4 are non-Specified Substances.

The following hormone and metabolic modulators are prohibited:

1. Aromatase inhibitors

Including, but not limited to:

- 2-Androstenol (5α-androst-2-en-17-ol)
- 2-Androstenone (5α-androst-2-en-17-ol)
- 3-Androstenol (5α-androst-3-en-17-ol)
- 3-Androstenone (5α-androst-3-en-17-one)
- 4-Androstene-3,6,17 trione (6-oxo)
- Aminoglutethimide
- Anastrozole
- Androsta-1,4,6-triene-3,17-dione (androstatrienedione)
- Androsta-3,5-diene-7,17-dione (arimistane)
- Exemestane
- Formestane
- Letrozole
- Testolactone

2. ANTI-ESTROGENIC SUBSTANCES [ANTI-ESTROGENS AND SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERMS)]

Including, but limited to:

- Bazedoxifene
- Clomifene
- Cyclofenil
- Fulvestrant
- Ospemifene
- Raloxifene
- Tamoxifen
- Toremifene

3. Agents preventing activin receptor IIB activation

Including, but not limited, to:

- Activin A-neutralizing antibodies
- Activin receptor IIB competitors such as:
  - Decoy activin receptors (e.g. ACE-031)
- Anti-activin receptor IIB antibodies (e.g. Bimagrumab)
- Myostatin inhibitors such as:
  - Agents reducing or ablating myostatin expression
  - Myostatin-binding proteins (e.g. follistatin, myostatin propeptide)
  - Myostatin-neutralizing antibodies (e.g. domagrozumab, landogrozumab, stamulumab).

4. Metabolic modulators:

4.1 Activators of the AMP-activated protein kinase (AMPK), e.g. AICAR, SR9009; and peroxisome proliferator- activated receptor delta (PPARδ) agonists, e.g.
2-(2-methyl-4-((4-methyl-2-(4-(trifluoromethyl)phenyl)thiazol-5-yl)methylthio) phenoxy) acetic acid (GW1516, GW501516)
4.2 Insulins and insulin-mimetics
4.3 Meldonium
4.4 Trimetazidine

S5 DIURETICS AND MASKING AGENTS

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
All Prohibited substances in this class are Specified Substances.

The following diuretics and masking agents are prohibited, as are other substances with a similar chemical structure or similar biological effect(s). Including, but not limited to:

- Desmopressin; probenecid; plasma expanders, e.g. intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol.
- Acetazolamide; amiloride; bumetanide; canrenone; chlortalidone; etacrynic acid; furosemide; indapamide; metolazone; spironolactone; thiazides, e.g. bendroflumethiazide, chlorothiazide and hydrochlorothiazide; triamterene and vaptans, e.g. tolvaptan.

EXCEPTIONS

- Drospirenone; pamabrom; and topical ophthalmic administration of carbonic anhydrase inhibitors (e.g. dorzolamide, brinzolamide);
- Local administration of felypressin in dental anesthesia.

NOTE

The detection in an Athlete's Sample at all times or In-Competition, as applicable, of any quantity of the following substances subject to threshold limits: formoterol, salbutamol, cathine, ephedrine, methylephedrine and pseudoephedrine, in conjunction with a diuretic or masking agent, will be considered as an Adverse Analytical Finding (AAF) unless the Athlete has an approved Therapeutic Use Exemption (TUE) for that substance in addition to the one granted for the diuretic or masking agent.

PROHIBITED METHODS

PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)
All prohibited methods in this class are non-Specified except methods in M2.2. which are Specified Methods.

M1. MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:

1- The Administration or reintroduction of any quantity of autologous, allogenic (homologous) or heterologous blood, or red blood cell products of any origin into the circulatory system.
2- Artificially enhancing the uptake, transport or delivery of oxygen. Including, but not limited to:
Perfluorochemicals; efaproxiral (RSR13) and modified haemoglobin products, e.g. haemoglobin-based blood substitutes and microencapsulated haemoglobin products, excluding supplemental oxygen by inhalation.
3- Any form of intravascular manipulation of the blood or blood components by physical or chemical means.

M2. CHEMICAL AND PHYSICAL MANIPULATION

The following are prohibited:

1- Tampering, or Attempting to Tamper, to alter the integrity and validity of Samples collected during Doping Control. Including, but not limited to:
Sample substitution and/or adulteration,
e.g. Addition of proteases to Sample.
2- Intravenous infusions and/or injections of more than a total of 100 mL per 12 hour period except for those legitimately received in the course of hospital treatments, surgical procedures or clinical diagnostic investigations.

M3. GENE AND CELL DOPING

The following, with the potential to enhance sport performance, are prohibited:

1- The use of nucleic acids or nucleic acid analogues that may alter genome sequences and/or alter gene expression by any mechanism. This includes but is not limited to gene editing, gene silencing and gene transfer technologies.
2- The use of normal or genetically modified cells.

S6 STIMULANTS

PROHIBITED IN-COMPETITION
All prohibited substances in this class are Specified Substances except those in S6.A, which are non-Specified Substances.
Substances of Abuse in this section:

cocaine and methylenedioxymethamphetamine (MDMA /"ecstasy")

All stimulants, including all optical isomers, e.g. d- and l- where relevant, are prohibited .

Stimulants include:

A: Non-Specified Stimulants:

- Adrafinil
- Amfepramone
- Amfetamine
- Amfetaminil
- Amiphenazole
- Benfluorex
- Benzylpiperazine
- Bromantan
- Clobenzorex
- Cocaine
- Cropropamide
- Crotetamide
- Fencamine
- Fenetylline
- Fenfluramine
- Fenproporex
- Fonturacetam [4-phenylpiracetam (carphedon)]
- Furfenorex
- Lisdexamfetamine
- Mefenorex
- Mephentermine
- Mesocarb
- Metamfetamine(d-)
- p-methylamphetamine
- Modafinil
- Norfenfluramine
- Phendimetrazine
- Phentermine
- Prenylamine
- Prolintane

A stimulant not expressly listed in this section is a Specified Substance.

B: Specified Stimulants

Including, but not limited to:

- 3-Methylhexan-2-amine (1,2-dimethylpentylamine)
- 4-fluoromethylphenidate
- 4-Methylhexan-2-amine (methylhexaneamine)
- 4-Methylpentan-2-amine (1,3-dimethylbutylamine)
- 5-Methylhexan-2-amine (1,4-dimethylpentylamine)
- Benzfetamine
- Cathine**
- Cathinone and its analogues, e.g. mephedrone, methedrone, and a -pyrrolidinovalerophenone
- Dimetamfetamine (dimethylamphetamine)
- Ephedrine***
- Epinephrine**** (adrenaline)
- Etamivan
- Ethylphenidate
- Etilamfetamine
- Etilefrine
- Famprofazone
- Fenbutrazate
- Fencamfamin
- Heptaminol
- Hydrafinil (fluorenol)
- Hydroxyamfetamine (parahydroxyamphetamine)
- Isometheptene
- Levmetamfetamine
- Meclofenoxate
- Methylenedioxymethamphetamine
- Methylephedrine***
- Methylnaphthidate[((±)-methyl-2-(naphthalen-2-yl)-2-(piperidin-2-yl)acetate]
- Methylphenidate
- Nikethamide
- Norfenefrine
- Octodrine (1,5-dimethylhexylamine)
- Octopamine
- Oxilofrine (methylsynephrine)
- Pemoline
- Pentetrazol
- Phenethylamine and its derivatives
- Phenmetrazine
- Phenpromethamine
- Propylhexedrine
- Pseudoephedrine*****
- Selegiline
- Sibutramine
- Strychnine
- Tenamfetamine (methylenedioxyamphetamine)
- Tuaminoheptane

and other substances with a similar chemical structure or similar biological effect(s).

EXCEPTIONS

- Clonidine
- Imidazole derivatives for dermatological, nasal or ophthalmic use (e.g. brimonidine, clonazoline, fenoxazoline, indanazoline, naphazoline, oxymetazoline, xylometazoline) and those stimulants included in the 2022 Monitoring Program*.

* Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine: These substances are included in the 2022 Monitoring Program, and are not considered Prohibited Substances.

** Cathine (d-norpseudoephedrine) and its l-isomer: Prohibited when its concentration in urine is greater than 5 micrograms per milliliter.

*** Ephedrine and methylephedrine: Prohibited when the concentration of either in urine is greater than 10 micrograms per milliliter.

**** Epinephrine (adrenaline): Not prohibited in local administration, e.g. nasal, ophthalmologic, or co-administration with local anaesthetic agents.

***** Pseudoephedrine: Prohibited when its concentration in urine is greater than 150 micrograms per milliliter.

S7 NARCOTICS

PROHIBITED IN-COMPETITION
All prohibited substances in this class are Specified Substances.
Substances of Abuse in this section: diamorphine (heroin)

The following narcotics, including all optical isomers, e.g. d- and l- where relevant, are prohibited:

- Buprenorphine
- Dextromoramide
- Diamorphine (heroin)
- Fentanyl and its derivatives
- Hydromorphone
- Methadone
- Morphine
- Nicomorphine
- Oxycodone
- Oxymorphone
- Pentazocine
- Pethidine

S8 CANNABINOIDS

PROHIBITED IN-COMPETITION
All prohibited substances in this class are Specified Substances.
Substances of Abuse in this section: tetrahydrocannabinol (THC)

All natural and synthetic cannabinoids are prohibited, e.g.

- In cannabis (hashish, marijuana) and cannabis products
- Natural and synthetic tetrahydrocannabinols (THCs)
- Synthetic cannabinoids that mimic the effects of THC

EXCEPTIONS

- Cannabidiol

S9 GLUCOCORTICOIDS

PROHIBITED IN-COMPETITION
All prohibited substances in this class are Specified Substances.

All glucocorticoids are prohibited when administered by any injectable, oral [including oromucosal (e.g. buccal, gingival, sublingual)] or rectal route. Including but not limited to:

- Beclometasone
- Betamethasone
- Budesonide
- Ciclesonide
- Cortisone
- Deflazacort
- Dexamethasone
- Flucortolone
- Flunisolide
- Fluticasone
- Hydrocortisone
- Methylprednisolone
- Mometasone
- Prednisolone
- Prednisone
- Triamcinolone acetonide

NOTE

Other routes of administration (including inhaled, and topical dental-intracanal, dermal, intra-nasal, ophthalmological and perianal) are not prohibited when used within the manufacturer's licensed doses and therapeutic indications.

P1 BETA-BLOCKERS

PROHIBITED IN PARTICULAR SPORTS
All prohibited substances in this class are Specified Substances.

Beta-blockers are prohibited In-Competition only, in the following sports, and also prohibited Out-of-Competition where indicated.(*)

• Archery (WA)*
• Automobile (FIA)
• Billiards (all disciplines) (WCBS)
• Darts (WDF)
• Golf (IGF)
• Shooting (ISSF, IPC)*
• Skiing/Snowboarding (FIS) in ski jumping, freestyle aerials/halfpipe and snowboard halfpipe/big air
• Underwater sports (CMAS) in all subdisciplines of freediving, spearfishing and target shooting

***Also prohibited Out-of-Competition**

Including, but not limited to:

- Acebutolol
- Alprenolol
- Atenolol
- Betaxolol
- Bisoprolol
- Bunolol
- Carteolol
- Carvedilol
- Celiprolol
- Esmolol
- Labetalol
- Metipranolol
- Metoprolol
- Nadolol
- Nebivolol
- Oxprenolol
- Pindolol
- Propranolol
- Sotalol
- Timolol

SUMMARY OF MAJOR MODIFICATIONS AND EXPLANATORY NOTES

WORLD ANTI-DOPING AGENCY
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2022 PROHIBITED LIST

SUBSTANCES AND METHODS PROHIBITED AT ALL TIMES
(IN- AND OUT-OF-COMPETITION)

PROHIBITED SUBSTANCES

S0. Non-approved Substances

- BPC-157 is now prohibited under S0 following a recent re-evaluation and added as an example.

S1. Anabolic Agents

- Tibolone is transferred from S1.2 to S1.1 because it has clinical effects as a synthetic oral androgen mediated by effects on the androgen receptor, largely due to its conversion to the delta-4 tibolone metabolite, which is a potent androgen.
- Osilodrostat, a CYP11B1 inhibitor, is added to S1.2 due to its off-target increase in circulating testosterone.

S2. Peptide Hormones, Growth Factors, Related Substances and Mimetics

- Lonapegsomatropin, somapacitan and somatrogon are added as examples of growth hormone analogues, which led to the reorganization and splitting of S2.2.3.

S3. Beta- 2 Agonists

- The daily dosing time intervals for salbutamol are modified to 600 micrograms over 8 hours starting from the time any dose is taken (previously 800 micrograms over 12 hours). This is to reduce the risk of any potential Adverse Analytical Finding arising after high doses are taken at once.
- The total permitted daily dose remains at 1600 micrograms over 24 hours. A Therapeutic Use Exemption (TUE) should be sought for doses in excess of these limits.
- For example, an athlete could take 600 micrograms in the first 8 hours, 600 micrograms in the following 8 hours, and 400 micrograms in the remaining 8 hours of the day, without the need for a TUE.

SUMMARY OF MAJOR MODIFICATIONS AND EXPLANATORY NOTES

WORLD ANTI-DOPING AGENCY
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SUBSTANCES AND METHODS PROHIBITED (IN-COMPETITION)

PROHIBITED SUBSTANCES

S6. Stimulants

- S.6 Exceptions: Imidazole derivatives was changed to imidazoline derivatives to distinguish between generic imidazole derivatives and sympathomimetic imidazolines.
  Cathine footnote: It was clarified that the urinary threshold of 5 µg/mL cathine refers to both isomers of norpseudoephedrine, i.e. the d-and the l-isomer (also referred to as 1S,2S- and 1R,2R-norpseudoephedrine, respectively).
- Ethylphenidate, methylnaphthidate ((±)-methyl-2-(naphthalen-2-yl)-2-(piperidin-2-yl)acetate) and 4-fluoromethylphenidate are added to S6.b as examples of methylphenidate analogues. These substances have been prevalent in a number of countries over the past decade as they are often presented as alternatives to methylphenidate.
- Hydrafinil (fluorenol) is added to S6.b as an example of modafinil and adrafinil analogue.

S9. Glucocorticoids

- Flucortolone is updated to its International Non-proprietary Name (INN), fluocortolone.
- All injectable routes of administration are now prohibited for glucocorticoids during the In- Competition period. As proposed in the draft 2021 Prohibited List circulated for consultation to stakeholders in May 2020, WADA's Executive Committee approved at its 14-15 September 2020 meeting prohibition of all injectable routes of administration of glucocorticoids during the In-Competition period. Examples of injectable routes of administration include: intravenous, intramuscular, periarticular, intra-articular, peritendinous, intratendinous, epidural, intrathecal, intrabursal, intralesional (e.g. intrakeloid), intradermal, and subcutaneous. However, in order to thoroughly and widely communicate the rule changes and to allow sufficient time for information and education, the Executive Committee decided to introduce the prohibition of all injectable glucocorticoid routes and the implementation of the new rules on 1 January 2022. This allows, for example, Athletes and medical personnel to get a better understanding of the practical implementation of the washout periods, Laboratories to update their procedures to incorporate the revised and substance-specific new minimum reporting levels (MRL), and sports authorities to develop educational tools for Athletes, medical and support personnel to address the safe use of glucocorticoids

for clinical purposes and prevent doping.

- For clarification, oral administration of glucocorticoids also includes oromucosal, buccal, gingival and sublingual routes. Dental-intracanal application is not prohibited.

Addition of local injections as prohibited routes

- Oral, intramuscular, rectal and intravenous routes were prohibited because there is clear evidence of systemic effects which could potentially enhance performance and be harmful to health. There are now also sufficient data available to show that the same systemic concentrations as existing prohibited routes can be achieved after administration by local injection (including periarticular, intra-articular, peritendinous and intratendinous) at licensed therapeutic doses.
- The systemic plasma and hence urinary concentrations of glucocorticoids that are reached after administration by local injection using normal licensed therapeutic doses were demonstrated to reach levels consistent with doses that were shown to have the potential to improve performance in clinical studies. These levels are similar to, and even higher than, those obtained after other existing prohibited routes of administration of the same drug. The systemic effect of glucocorticoids following local injectable routes of administration may therefore present a significant potential to both improve performance and cause harm to health.

Explanation of the approach taken

- Glucocorticoids include naturally occurring hormones and synthetic analogues and possess a wide range of potencies and pharmacokinetic properties. The body naturally produces a daily output of the endogenous glucocorticoid (cortisol). However, administering glucocorticoid drugs can result in a total glucocorticoid exposure to the body that is much greater than the highest levels of normal physiological cortisol production, which could potentially be performance enhancing.
- The administration of glucocorticoid medications by inhaled, or topical routes (including dental-intracanal, dermal, intranasal, ophthalmological and perianal), in accordance with the manufacturer's approved dosing regimen, are unlikely to reach systemic concentrations which may be performance enhancing.
- However, for other routes of administration (for example, oral), studies involving commonly used glucocorticoids at the normal therapeutic dose range indicated a performance-enhancing effect. These doses can be expressed in terms of cortisol-equivalents and thereby the dose which may be potentially performance enhancing for any glucocorticoid and route of administration can be determined using this approach.

- This systematic approach was applied to determine the glucocorticoid routes of administration that are either prohibited or not prohibited in sport. Consequently, revised and substance-specific laboratory MRL based on excretion studies are introduced to better reflect the proposed approach. To note, the revised MRL are increased or remain unchanged for all glucocorticoids except triamcinolone acetonide, which was revised to a lower MRL. Overall, these changes should reduce the number of Adverse Analytical Findings reported by laboratories.

Washout periods following administration of glucocorticoids

- Any injection of glucocorticoids is prohibited In-Competition. Given the widespread availability and the common use of glucocorticoids in sports medicine, Athletes and their Support Personnel are advised of the following:

1. Use of a glucocorticoid by injection during the In-Competition period requires a Therapeutic Use Exemption; otherwise, an alternative permitted medication in consultation with a physician shall be used.
2. After administration of glucocorticoids, urinary MRL which would result in an Adverse Analytical Finding can be reached for different periods of time after administration (ranging from days to weeks), depending on the glucocorticoid administered and the dose. To reduce the risk of an Adverse Analytical Finding, Athletes should follow the minimum washout periods*, expressed from the time of administration to the start of the In-Competition period (i.e. beginning at 11:59 p.m. on the day before a Competition in which the Athlete is scheduled to participate, unless a different period was approved by WADA for a given sport). These washout periods are based on the use of these medications according to the maximum manufacturer's licensed doses:

Route	Glucocorticoid	Washout period*
Oral**	All glucocorticoids;	3 days
	Except: triamcinolone acetonide	30 days
Intramuscular	Betamethasone; dexamethasone; methylprednisolone	5 days
	Prednisolone; prednisone	10 days
	Triamcinolone acetonide	60 days
Local injections (including periarticular, intra-articular, peritendinous and intraten-dinous)	All glucocorticoids;	3 days
	Except: triamcinolone acetonide; rednisolone; prednisone	10 days

* **Washout period** refers to the time from the last administered dose to the time of the start of the In- Competition period (i.e. beginning at 11:59 p.m. on the day before a Competition in which the Athlete is scheduled to participate, unless a different period was approved by WADA for a given sport). This is to allow elimination of the glucocorticoid to below the reporting level.

** Oral routes also include e.g. oromucosal, buccal, gingival and sublingual.

3. If the glucocorticoid needs to be administered via a prohibited route within these washout time periods, a Therapeutic Use Exemption (TUE) may be required. Physicians administering local injections of glucocorticoids should be aware that periarticular or intra-articular injection may sometimes inadvertently result in intramuscular administration. If intramuscular administration is suspected, the washout periods for the intramuscular route should be observed, or a TUE application sought.

4. Please note that as per Article 4.1e of the International Standard for TUEs, an Athlete may apply retroactively for a TUE if the Athlete Used Out-of-Competition, for therapeutic reasons, a Prohibited Substance that is only prohibited In-Competition. Athletes are strongly advised to have a medical file prepared and ready to demonstrate their satisfaction of the TUE conditions set out at Article 4.2, in case an application for a retroactive TUE is necessary following Sample collection.

- For additional information including the revised MRL, please consult the recently published article with details of the process that lead to these changes:https://bjsm.bmj.com/content/early/2021/04/19/bjsports-2020-103512.full?ijkey=APWRPYVYjy69LOH&keytype=ref

P1. Beta-blockers

- Underwater Sports (CMAS) subdisciplines were regrouped. This change does not affect the current subdisciplines where beta-blockers are prohibited.

MONITORING PROGRAM

- The monitoring of bemitil, and glucocorticoids is discontinued as the required prevalence data were obtained.

* For further information on previous modifications and clarifications, please consult the Prohibited List Q & A at www.wada-ama.org/en/questions-answers/prohibited-list-qa.

THE 2022 MONITORING PROGRAM*

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The following substances are placed on the 2022 Monitoring Program:

1. Anabolic Agents:

In and Out-of-Competition: Ecdysterone

2. Beta-2 Agonists:

In and Out-of-Competition: Salmeterol and vilanterol below the Minimum Reporting Level.

3. Stimulants:

In-Competition only: Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol and synephrine.

4. Narcotics:

In-Competition only: Codeine, hydrocodone and tramadol.