

WADA Statistics 2003

Overview of results reported by the 31 IOC/WADA-accredited Laboratories

Table A Olympic and non-Olympic: Adverse Analytical Findings Rate

Differentiation between Olympic and Non-Olympic Sports	A Samples Analyzed	A Samples Adverse Analytical Findings*	% Adverse
Olympic Sports	113,562	1,710	1.51%
Non-Olympic Sports	37,648	737	1.96%
TOTAL	151,210	2,447	1.62%

* "Adverse Analytical Finding" is defined in the World Anti-Doping Code as "a report from a laboratory or approved Testing entity that identifies in a Specimen the presence of a Prohibited Substance or its Metabolites or Markers (including elevated quantities of endogenous substances) or evidence of the Use of a Prohibited Method". These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process. In addition, some Adverse Analytical Findings may also correspond to multiple measurements performed on the same athlete, such as in cases of longitudinal studies on testosterone.

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Table B

Olympic and non-Olympic Adverse Analytical Findings per Laboratory

Laboratory		N Total	N Adverse Analytical Findings*	% Adverse
1	Sydney , Australia	8,265	59	0.71
2	Seibersdorf , Austria	2,555	27	1.06
3	Ghent , Belgium	5,325	224	4.21
4	Rio de Janeiro , Brazil	4,027	21	0.52
5	Montreal , Canada	5,956	122	2.05
6	Beijing , China	6,220	27	0.43
7	Bogota , Colombia	2,173	30	1.38
8	Havana , Cuba	197	5	2.54
9	Prague , Czech Republic	1,769	23	1.30
10	Helsinki , Finland	2,459	39	1.59
11	Paris , France	8,587	515	6.00
12	Cologne , Germany	9,502	119	1.25
13	Kreischa , Germany	6,020	40	0.66
14	London , UK	7,618	72	0.95
15	Athens , Greece	2,409	39	1.62
16	Rome , Italy	7,641	114	1.49
17	Tokyo , Japan	3,017	11	0.36
18	Seoul , Korea	1,424	27	1.90
19	Penang , Malaysia	717	47	6.56
20	Oslo , Norway	5,149	43	0.84
21	Lisbon , Portugal	2,644	32	1.21
22	Bloemfontein , South Africa	2,566	27	1.05
23	Moscow , Russia	2,574	33	1.28
24	Barcelona , Spain	4,708	56	1.19
25	Madrid , Spain	6,781	161	2.37
26	Stockholm , Sweden	4,447	41	0.92
27	Lausanne , Switzerland	3,959	127	3.21
28	Bangkok , Thailand	863	18	2.09
29	Tunis , Tunisia	1,728	35	2.03
30	Ankara , Turkey	678	10	1.47
31	Los Angeles , USA	29,232	303	1.04
TOTAL		151,210	2,447	1.62%

* These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process. In addition, some adverse analytical findings may also correspond to multiple measurements performed on the same athlete, such as in cases of longitudinal studies on testosterone

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Table C

Olympic Sport Sample Analysis

Sport	Discipline	Total per discipline	Total per Sport	A Sample Adverse Analytical Findings*	% Adverse
Aquatics	Aquatics	2,940	9,270	52	0.56%
	Diving	225			
	Swimming	5,549			
	Synchronised swimming	136			
	Water Polo	420			
Archery	Archery	-	685	11	1.61%
Athletics	Athletics	-	18,876	276	1.46%
Badminton	Badminton	-	697	4	0.57%
Baseball	Baseball	-	1,051	26	2.47%
Basketball	Basketball	-	3,872	75	1.94%
Biathlon	Biathlon	-	893	4	0.45%
Bobsleigh	Bobsleigh	627	756	7	0.93%
	Tobogganing	21			
	Skeleton	108			
Boxing	Boxing	-	1,904	70	3.68%
Canoe / Kayak	Canoe / Kayak	-	2,250	15	0.67%
Curling	Curling	-	232	2	0.86%
Cycling	Cycling	12,298	12,352	486	3.93%
	Mountain Bike	54			
Equestrian	Equestrian	-	605	13	2.15%
Fencing	Fencing	-	1,494	19	1.27%
Football	Football	-	20,104	187	0.93%
Gymnastics	Gymnastics	1,477	1,527	8	0.52%
	Artistic gymnastics	3			
	Rhythmic Gymnastics	24			
	Trampoline	23			
Handball	Handball	-	1,980	29	1.46%
Hockey	Hockey	-	1,186	22	1.85%
Ice hockey	Ice hockey	-	2,446	38	1.55%
Judo	Judo	-	2,476	20	0.81%
Luge	Luge	-	144	-	0.00%
Modern pentathlon	Modern pentathlon	-	359	2	0.56%
Rowing	Rowing	-	2,750	11	0.40%
Sailing	Sailing	-	835	8	0.96%
Shooting	Shooting	-	1,391	10	0.72%
Skating	Skating	1,298	2,462	13	0.53%
	Speed Skating	775			
	Figure skating	389			
Skiing	Skiing	2,975	3,701	40	1.08%
	Alpine skiing	205			
	Cross Country Ski	228			
	Ski jumping	17			
	Snowboard	184			
	Combined skiing	50			
	Freestyle skiing	42			
Softball	Softball	-	335	1	0.30%
Table Tennis	Table Tennis	-	649	8	1.23%
Taekwondo	Taekwondo	-	989	10	1.01%
Tennis	Tennis	-	2,624	32	1.22%
Triathlon	Triathlon	-	1,664	23	1.38%
Volleyball	Volleyball	2,706	2,732	35	1.28%
	Beach volleyball	26			
Weightlifting	Weightlifting	-	5,347	110	2.06%
Wrestling	Wrestling	-	2,311	40	1.73%
Ice Sport¹		-	163	1	0.61%
Unknown²		-	450	2	0.44%
Total			113,562	1,710	1.51%

* These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process. In addition, some adverse analytical findings also correspond to multiple measurements performed on the same athlete, in the case of longitudinal studies on testosterone.

¹ "Ice Sport" was designated on Doping Control Forms. However, this figure may include figures from the other Olympic sport/disciplines.

² "Unknown" due to missing or illegible designation of sport on Doping Control Forms from National Anti-Doping Bodies.

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Table D Sample Analysis in Selected IOC Sports

Sport	Discipline	Total per discipline	Total per Sport	Adverse Analytical Findings*	%
Rollersports	Roller Hockey	38	428	2	0.47%
	Roller Skating	304			
	Roller Sports	86			
Golf	Golf	-	240	7	2.92%
Karate	Karate	-	517	11	2.13%
Rugby	Rugby	-	4,978	71	1.43%
Squash	Squash	-	331	2	0.60%
TOTAL			6,494	93	1.43%

Table E Sample Analysis in Other IOC Recognised Sports

Sport	Total per discipline	Adverse Analytical Findings*	%
Air Sports	188	2	1.06%
Automobile Racing	613	15	2.45%
Bandy	307	3	0.98%
Billiards Sports	220	2	0.91%
Powerboating	64	1	1.56%
Boules	79	2	2.53%
Bowling	212	10	4.72%
Bridge	11	1	9.09%
Chess	40	0	0.00%
Dance Sport	209	3	1.44%
Korfball	61	1	1.64%
Life Saving	246	1	0.41%
Motorcycling	295	7	2.37%
Mountaineering/Climbing	190	5	2.63%
Netball	187	1	0.53%
Orienteering	358	6	1.68%
Pelote Basque	110	0	0.00%
Polo	-	-	n/ap
Racquetball	36	0	0.00%
Sumo	39	0	0.00%
Surfing	55	2	3.64%
Tug of War	81	3	3.70%
Underwater Sports	324	7	2.16%
Water Skiing	220	4	1.82%
Wushu	56	0	0.00%
TOTAL	4201	76	1.81%

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Table F Number of Substances Identified in Each Drug Class
by the 31 IOC/WADA Accredited Laboratories

Substance Group		Number*	% of all adverse analytical findings
S4.	Anabolic Agents	872	32.1%
S1.	Stimulants	516	19.0%
S3.	Cannabinoids	378	13.9%
S6.	Beta-2-Agonists	297	10.9%
S9.	Glucocorticosteroids	286	10.5%
S8.	Masking Agents	142	5.2%
S5.	Peptide hormones	79	2.9%
	Others - Local Anaesthetics	82	3.0%
P2.	Beta-Blockers	30	1.1%
S2.	Narcotics	26	1.0%
S7.	Agents with Anti-oestrogenic activity	6	0.2%
M2.	Manipulation	2	0.1%
TOTAL		2,716	

* some adverse analytical findings correspond to multiple measurements on the same athlete, including cases of longitudinal studies on testosterone.

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Table G Substances Identified in Each Drug Class
by the 31 IOC/WADA Accredited Laboratories

S4. Anabolic Agents	Occurrences	% within drug class
Testosterone	304	34.9%
Nandrolone	256	29.4%
Stanozolol	159	18.2%
Methandienone	59	6.8%
Mesterolone	16	1.8%
Boldenone	16	1.8%
Tetrahydrogestrinone	14	1.6%
Methyltestosterone	12	1.4%
Methenolone	11	1.3%
Oxandrolone	5	0.6%
Androstenedione	5	0.6%
Clostebol	3	0.3%
Fluoxymesterone	3	0.3%
Danazol	2	0.2%
Oxymetholone	2	0.2%
DHEA	1	0.1%
Norethandrolone	1	0.1%
Drostanolone	1	0.1%
Oxymesterone	1	0.1%
Trenbolone	1	0.1%
TOTAL*	872	

* some adverse analytical findings correspond to multiple findings on the same athlete, including cases of longitudinal studies on testosterone.

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Table G Substances Identified in Each Drug Class
by the 31 IOC/WADA Accredited Laboratories

S1. Stimulants	Occurrences	% within drug class
Pseudoephedrine	189	36.6%
Ephedrine	100	19.4%
Cocaine	48	9.3%
Amphetamine	43	8.3%
Caffeine	39	7.6%
MDMA	9	1.7%
Methylphenidate	9	1.7%
Heptaminol	8	1.6%
Methamphetamine	7	1.4%
Modafinil	7	1.4%
Nikethamide	7	1.4%
Etilephrine	5	1.0%
Phentermine	5	1.0%
Amphepramone	4	0.8%
Fenethylamine	4	0.8%
Pemoline	4	0.8%
Phenylephrine	4	0.8%
PPA	4	0.8%
Norfenfluramine	3	0.6%
Cathine	2	0.4%
Fenfluramine	2	0.4%
Norephedrine	2	0.4%
Phendimetrazine	2	0.4%
Bromantan	1	0.2%
Clobenzorex	1	0.2%
Dimethamphyletamine	1	0.2%
Doxylamine	1	0.2%
Ethamivane	1	0.2%
Methylephedrine	1	0.2%
Norpropoxyphene	1	0.2%
Pholedrine	1	0.2%
Strychnine	1	0.2%
TOTAL*	516	

* some adverse analytical findings correspond to multiple findings on the same athlete.

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Table G Substances Identified in Each Drug Class
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S2. Narcotics	Occurences	% within drug class
Morphine	22	84.6%
Pethidine	2	7.7%
Hydromorphone	1	3.8%
Methadone	1	3.8%
TOTAL*	26	

S3. Cannabinoids	Occurences	% within drug class
Cannabis	378	100.0%
TOTAL*	378	

Local Anaesthetics	Occurences	% within drug class
Lidocaine	55	67.1%
Mepivacaine	19	23.2%
Benzocaine	2	2.4%
Bupivacaine	2	2.4%
Lignocaine	2	2.4%
Carbocaine	1	1.2%
Tetrazepam	1	1.2%
TOTAL*	82	

S5. Peptide Hormones	Occurences	% within drug class
Erythropoetin	51	64.6%
hCG	14	17.7%
Darbepoetin	7	8.9%
LH	7	8.9%
TOTAL*	79	

* some adverse analytical findings correspond to multiple findings on the same athlete.

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Table G Substances Identified in Each Drug Class
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S6. Beta-2-Agonists	Occurences	% within drug class
Salbutamol	189	63.6%
Terbutaline	76	25.6%
Clenbuterol	31	10.4%
Orciprenaline	1	0.3%
TOTAL**	297	

S7. Agents with Anti-oestrogenic activity	Occurences	% within drug class
Tamoxifen	5	83.3%
Aminoglutethimide	1	16.7%
TOTAL*	6	

S8. Masking Agents	Occurences	% within drug class
Furosemide	48	33.8%
Hydrochlorothiazide	42	29.6%
Canrenone	14	9.9%
Epitestosterone	10	7.0%
Triamterene	10	7.0%
Amiloride	6	4.2%
Acetazolamide	3	2.1%
Chlortalidone	3	2.1%
Clopamide	1	0.7%
Bendrofluazide	1	0.7%
Bumetanide	1	0.7%
Finasteride	1	0.7%
Indapamide	1	0.7%
torasemide	1	0.7%
TOTAL *	142	

* some adverse analytical findings correspond to multiple findings on the same athlete.

** results on salbutamol and terbutaline may correspond to administration by aerosol which is permitted by the Prohibited List with certain restrictions. In addition, some adverse analytical findings may correspond to multiple measurements on the same athlete.

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Table G Substances Identified in Each Drug Class
by the 31 IOC/WADA Accredited Laboratories

S9. Glucocorticosteroids**	Occurrences	% within drug class
Triamcinolone Acetonide	131	45.8%
Betamethasone	80	28.0%
Prednisolone	52	18.2%
Methylprednisolone	12	4.2%
Dexamethasone	7	2.4%
Budesonide	4	1.4%
TOTAL*	286	

** Four laboratories reporting

P2. Beta Blockers	Occurrences	% within drug class
Atenolol	9	30.0%
Bisoprolol	7	23.3%
Metoprolol	5	16.7%
Acebutolol	4	13.3%
Propranolol	4	13.3%
Carteolol	1	3.3%
TOTAL*	30	

M2. Pharmacological, Chemical, and Physical Manipulation		
	Occurrences	
Manipulation (M2)	2	100.0%

* some adverse analytical findings may correspond to multiple findings on the same athlete.

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Total Laboratory Adverse Analytical Findings* vs Drug Class

Table H

Laboratory	S1. Stimulants	S2. Narcotics	S3. Cannabinoids	S4. Anabolic Agents	S5. Peptide Hormones	S6. beta-2- Agonists	S7. Agents with Anti- oestrogenic activity	S8. Masking Agents	S9. Glucocortico- steroids	P2. Beta- Blockers	Others	Total per Lab	% of total adverse analytical findings
Sydney, Australia	18	-	5	24	1	2	-	7	-	-	3	60	2.2%
Seibersdorf, Austria	3	-	8	13	2	-	-	-	-	2	-	28	1.0%
Ghent, Belgium	52	5	62	80	4	5	-	14	43	6	-	271	10.0%
Rio de Janeiro, Brazil	6	1	1	12	-	1	-	4	-	-	-	25	0.9%
Montreal, Canada	23	1	5	80	2	32	2	10	-	-	3	158	5.8%
Beijing, China	4	-	-	12	2	1	-	5	-	-	-	24	0.9%
Bogota, Colombia	3	-	3	18	-	4	-	5	-	-	-	33	1.2%
Havana, Cuba	1	1	1	2	-	-	-	-	-	-	-	5	0.2%
Prague, Czech Republic	5	-	2	29	1	4	-	4	-	3	-	48	1.8%
Helsinki, Finland	-	-	4	6	-	26	-	2	-	2	-	40	1.5%
Paris, France	51	11	92	38	12	101	-	23	238	8	10	584	21.5%
Cologne, Germany	25	2	22	79	3	4	1	14	-	2	2	154	5.7%
Kreischa, Germany	5	1	19	15	-	1	1	1	-	-	1	44	1.6%
London, UK	32	-	6	27	-	3	-	5	-	-	1	74	2.7%
Athens, Greece	7	-	17	13	-	1	-	1	-	-	-	39	1.4%
Rome, Italy	28	2	16	20	-	4	-	7	-	2	36	115	4.2%
Tokyo, Japan	3	-	2	5	-	-	-	1	-	-	-	11	0.4%
Seoul, Korea	8	-	-	13	-	2	-	4	-	-	-	27	1.0%
Penang, Malaysia	3	-	1	32	-	10	-	1	-	-	-	47	1.7%
Oslo, Norway	8	-	1	40	1	3	-	5	-	-	-	58	2.1%
Lisbon, Portugal	4	-	13	9	-	4	1	5	-	3	5	44	1.6%
Bloemfontein, S Africa	4	-	6	14	-	1	-	4	-	-	-	29	1.1%
Moscow, Russia	5	1	6	19	-	1	-	1	-	-	-	33	1.2%
Barcelona, Spain	7	-	14	16	1	13	-	1	-	1	3	56	2.1%
Madrid, Spain	18	-	18	38	4	63	-	4	4	-	11	160	5.9%
Stockholm, Sweden	5	-	-	35	-	2	-	-	-	-	-	42	1.5%
Lausanne, Switzerland	14	-	14	53	45	-	1	2	1	-	4	134	4.9%
Bangkok, Thailand	4	-	-	15	-	1	-	2	-	-	-	22	0.8%
Tunis, Tunisia	4	-	9	14	-	2	-	2	-	-	5	36	1.3%
Ankara, Turkey	5	-	3	2	-	-	-	-	-	-	-	10	0.4%
Los Angeles, USA	161	1	28	99	1	6	-	8	-	1	-	305	11.2%
TOTAL PER DRUG CLASS	516	26	378	872	79	297	6	142	286	30	84	2,716	
% of Drug Class	19.0%	1.0%	13.9%	32.1%	2.9%	10.9%	0.2%	5.2%	10.5%	1.1%	3.1%		

* Some adverse analytical findings may correspond to multiple findings from the same athlete, including cases of longitudinal studies on testosterone.