

Overview of Results

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	139,836	2,958	2.12%
Non-Olympic Sports	43,501	951	2.19%
TOTAL	183,337	3,909	2.13%

^{* &}quot;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 correspond to multiple measurements performed on the same athlete, such as in cases of longitudinal studies on testosterone.



Adverse Analytical Findings

Comparison of 2003, 2004 and 2005

 Table A1
 Olympic and Non-Olympic: Adverse Analytical Findings

Differentiation between Olympic and Non- Olympic Sports	2003 A Samples Analyzed	2004 A Samples Analyzed	2005 A Samples Analyzed	% increase 2004 vs 2005
Olympic Sports	113,559	128,591	139,836	8.7%
Non-Olympic Sports	37,651	40,596	43,501	7.2%
TOTAL	151,210	169,187	183,337	8.4%

Differentiation between Olympic and Non- Olympic Sports	2003 A Samples Adverse Analytical Findings	2004 A Samples Adverse Analytical Findings	2005 A Samples Adverse Analytical Findings	% increase 2004 vs 2005
Olympic Sports	1,707	2,145	2,958	37.9%
Non-Olympic Sports	740	764	951	24.5%
TOTAL	2,447	2,909	3,909	34.4%

Differentiation between Olympic and Non- Olympic Sports		2004 % Adverse	2005	% increase 2004 vs 2005
Olympic Sports	1.50	1.67	2.12	26.9%
Non-Olympic Sports	1.97	1.88	2.19	16.5%
Overall	1.62	1.72	2.13	23.8%



Olympic and Non-Olympic Sport Adverse Analytical Findings per Laboratory

		N	N	
	Laboratory	Total	Adverse Analytical Findings*	% Adverse
1	Sydney, Australia	8,743	149	1.70
2	Seibersdorf, Austria	3,765	75	1.99
3	Ghent, Belgium	5,378	223	4.15
4	Rio de Janeiro, Brazil	3,288	18	0.55
5	Montreal, Canada	7,000	140	2.00
6	Beijing, China	8,347	33	0.40
7	Bogota, Colombia	2,628	40	1.52
8	Havana, Cuba	1,808	29	1.60
9	Prague, Czech Republic	1,513	56	3.70
10	Helsinki, Finland	2,830	27	0.95
11	Paris, France	9,257	491	5.30
12	Cologne, Germany	11,578	237	2.05
13	Kreischa, Germany	5,437	172	3.16
14	Cambridge, UK	2,630	26	0.99
15	London, UK	5,948	65	1.09
16	Athens, Greece	4,664	92	1.97
17	Rome, Italy	8,543	302	3.54
18	Tokyo, Japan	2,959	10	0.34
19	Seoul, Korea	2,527	46	1.82
20	Penang, Malaysia	1,807	36	1.99
21	Oslo, Norway	4,857	112	2.31
22	Warsaw, Poland	1,698	112	6.60
23	Lisbon , Portugal	3,302	162	4.91
24	Bloemfontein, South Africa	2,709	45	1.66
25	Moscow, Russia	4,884	56	1.15
26	Barcelona, Spain	3,365	72	2.14
27	Madrid, Spain	6,959	163	2.34
28	Stockholm, Sweden	4,716	187	3.97
29	Lausanne, Switzerland	3,607	103	2.86
30	Bangkok, Thailand	2,416	24	0.99
31	Tunis, Tunisia	1,983	28	1.41
32	Ankara, Turkey	2,416	40	1.66
33	Los Angeles, ÚSA	39,775	538	1.35
	TOTAL	183,337	3,909	2.13%

^{*} 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.



Olympic Sport Adverse Analytical Findings per Laboratory

		N	N	
	Laboratory		Adverse Analytical Findings*	% Adverse
1	Sydney, Australia	5,249	66	1.26
2	Seibersdorf, Austria	3,308	53	1.60
3	Ghent, Belgium	4,447	169	3.80
4	Rio de Janeiro, Brazil	3,237	5	0.15
5	Montreal, Canada	6,494	124	1.91
6	Beijing, China	7,717	25	0.32
7	Bogota, Colombia	2,369	31	1.31
8	Havana, Cuba	1,745	27	1.55
9	Prague, Czech Republic	1,226	29	2.37
10	Helsinki, Finland	2,385	20	0.84
11	Paris, France	7,446	383	5.14
12	Cologne, Germany	10,337	169	1.63
13	Kreischa, Germany	5,004	152	3.04
14	Cambridge, UK	1,647	11	0.67
15	London, UK	4,571	48	1.05
16	Athens, Greece	4,141	82	1.98
17	Rome, Italy	7,821	272	3.48
18	Tokyo, Japan	2,499	5	0.20
19	Seoul, Korea	1,800	9	0.50
20	Penang, Malaysia	1,113	12	1.08
21	Oslo, Norway	3,923	85	2.17
22	Warsaw, Poland	1,561	100	6.41
23	Lisbon , Portugal	2,672	106	3.97
24	Bloemfontein, South Africa	1,662	32	1.93
25	Moscow, Russia	4,435	51	1.15
26	Barcelona, Spain	2,895	65	2.25
27	Madrid, Spain	5,892	132	2.24
28	Stockholm, Sweden	3,595	132	3.67
29	Lausanne, Switzerland	3,265	92	2.82
30	Bangkok, Thailand	388	13	3.35
31	Tunis, Tunisia	1,755	21	1.20
32	Ankara, Turkey	1,716	23	1.34
33	Los Angeles, ÜSA	21,521	414	1.92
	TOTAL	139,836	2,958	2.12%

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Non-Olympic Sport Adverse Analytical Findings per Laboratory

		N	N	
	Laboratory		Adverse Analytical Findings*	% Adverse
1	Sydney, Australia	3,494	83	2.38
2	Seibersdorf, Austria	457	22	4.81
3	Ghent, Belgium	931	54	5.80
4	Rio de Janeiro, Brazil	51	13	25.49
5	Montreal, Canada	506	16	3.16
6	Beijing, China	630	8	1.27
7	Bogota, Colombia	259	9	3.47
8	Havana, Cuba	63	2	3.17
9	Prague, Czech Republic	287	27	9.41
10	Helsinki, Finland	445	7	1.57
11	Paris, France	1,811	108	5.96
12	Cologne, Germany	1,241	68	5.48
13	Kreischa, Germany	433	20	4.62
14	Cambridge, UK	983	15	1.53
15	London, UK	1,377	17	1.23
16	Athens, Greece	523	10	1.91
17	Rome, Italy	722	30	4.16
18	Tokyo, Japan	460	5	1.09
19	Seoul, Korea	727	37	5.09
20	Penang, Malaysia	694	24	3.46
21	Oslo, Norway	934	27	2.89
22	Warsaw, Poland	137	12	8.76
23	Lisbon , Portugal	630	56	8.89
24	Bloemfontein, South Africa	1,047	13	1.24
25	Moscow, Russia	449	5	1.11
26	Barcelona, Spain	470	7	1.49
27	Madrid, Spain	1,067	31	2.91
28	Stockholm, Sweden	1,121	55	4.91
29	Lausanne, Switzerland	342	11	3.22
30	Bangkok, Thailand	2,028	11	0.54
31	Tunis, Tunisia	228	7	3.07
32	Ankara, Turkey	700	17	2.43
33	Los Angeles, USA	18,254	124	0.68
	TOTAL	43,501	951	2.19%

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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	1,581			
	Diving	412			
Aquatics	Swimming	7,294	10,352	130	1.26%
	-	127			
	Synchronised Swimming Water Polo				
Archery	Archery	938	850	25	2.94%
Athletics	Athletics	-	20,464	342	1.67%
Badminton	Badminton	_	890	13	1.46%
Baseball	Baseball		10,580	390	3.69%
Basketball	Basketball	-	4,785	103	2.15%
Biathlon	Biathlon		998	16	1.60%
Diatilion	Bobsleigh	939	770	10	1.00 /0
Bobsleigh	Tobogganing	20	1,101	21	1.91%
Dobsleigh	Skeleton	142	1,101	21	1.51 /0
Poving		142	2.422	83	3.41%
Boxing	Boxing		2,433		
Canoe / Kayak	Canoe / Kayak	-	2,921	57	1.95%
Curling	Curling		349	9	2.58%
Cycling	Cycling	12,597	12,751	482	3.78%
	Mountain Bike	154		_	4.50
Equestrian -	Equestrian	-	620	9	1.45%
Fencing	Fencing	-	1,781	31	1.74%
Football	Football	-	23,478	343	1.46%
	Gymnastics	1,764		20	
Gymnastics	Artistic Gymnastics	50	1,918		1.04%
	Rhythmic Gymnastics	26	1,710	20	1.0170
	Trampoline	78			
Handball	Handball	-	2,395	53	2.21%
Hockey	Hockey	-	1,339	19	1.42%
Ice Hockey	Ice Hockey	-	2,751	79	2.87%
Judo	Judo	-	3,043	38	1.25%
Luge	Luge	-	178	0	0.00%
Modern Pentathlon	Modern Pentathlon	-	468	9	1.92%
Rowing	Rowing	-	3,096	45	1.45%
Sailing	Sailing	-	1,082	23	2.13%
Shooting	Shooting	-	1,939	23	1.19%
	Skating	1,439			
Skating	Speed Skating	1,237	3,085	57	1.85%
J	Figure Skating	409	·		
	Skiing	3,065			
	Alpine Skiing	295			
	Cross Country Ski	268			
Skiing	Ski Jumping	414	4,467	83	1.86%
Skiirig	Snowboard	58	-	03	1.00 /0
	Combined Skiing	91			
	Freestyle Skiing	276			
Softball	Softball	- 2/6	542	2	0.37%
					1.40%
Table Tennis	Table Tennis	-	787	11	
Taekwondo	Taekwondo		1,318	26	1.97%
Tennis	Tennis	-	2,558	64	2.50%
Triathlon	Triathlon		2,170	74	3.41%
Volleyball	Volleyball	2,516	2,621	54	2.06%
	Beach Volleyball	105	,		
Weightlifting	Weightlifting	-	5,842	146	2.50%
Wrestling	Wrestling	-	3,218	53	1.65%
	/ Softball ¹	-	170	11	6.47%
	/ Skating ²	-	101	3	2.97%
Ice	Sport ³	-	395	11	2.78%
			139,836	2,958	2.12%

^{*} This figure may not to 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 correspond to multiple measurements performed on the same athlete, such as in the case of longitudinal studies on testosterone.

1 "Baseball/Softball" was designated on Doping Control Forms therefore unable to assign by single sport or single federation.

² "Hockey/Skating" was designated on Doping Control Forms therefore unable to assign by single sport or single federation.

³ "Ice Sport" was designated on Doping Control Forms therefore unable to assign by single sport/discipline or single federation.



 Table D
 Sample Analysis in Selected** IOC Recognized Sports

Sport	Discipline	Total per Discipline	Total per Sport	Adverse Analytical Findings*	% adverse (discipline)	% adverse (Sport)
	Roller Hockey	63				
Rollersports	Roller Skating	367	662	662 18	-	2.72%
	Roller Sports	232				
Golf	Golf	-	384	20	-	5.21%
Karate	Karate	-	668	8	-	1.20%
	Rugby	2,476		82	3.31%	
Rugby	Rugby League	548	4,601	9	1.64%	2.46%
	Rugby Union	1,577		22	1.40%	
Squash	Squash	-	388	8	-	2.06%
	TOTAL		6,703	167	-	2.49%

 Table E
 Sample Analysis in Other IOC Recognized Sports

Sport	Total per Sport	Adverse Analytical Findings*	%
Air Sports	155	1	0.65%
Bandy	203	8	3.94%
Billiards Sports	281	28	9.96%
Boules	105	4	3.81%
Bowling	328	6	1.83%
Bridge	25	1	4.00%
Chess	51	0	0.00%
Dance Sport	247	5	2.02%
Korfball	69	2	2.90%
Life Saving	305	4	1.31%
Motorcycle Racing	372	12	3.23%
Mountaineering and Climbing	320	4	1.25%
Netball	421	5	1.19%
Orienteering	479	10	2.09%
Pelote Basque	137	2	1.46%
Polo	5	0	0.00%
Powerboating	348	3	0.86%
Racquetball	53	0	0.00%
Sumo	51	3	5.88%
Surfing	79	2	2.53%
Tug of War	79	0	0.00%
Underwater Sports	373	12	3.22%
Water Skiing	199	1	0.50%
Wushu	190	2	1.05%
TOTAL	4,875	115	2.36%

^{*} 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 correspond to multiple measurements performed on the same athlete, in the case of longitudinal studies on testosterone.

^{**} as requested by the IOC.



Table FNumber of Substances Identified in Each Drug Class

	Substance Group	Number*	% of all adverse analytical findings
C1	Anabalia Aganta	1.064	42.40/
S1.	Anabolic Agents	1,864	43.4%
S3.	Beta-2 Agonists	609	14.2%
S6.	Stimulants	509	11.8%
S8.	Cannabinoids	503	11.7%
S9.	Glucocorticosteroids	325	7.6%
S5.	Diuretics and other masking agents	246	5.7%
S2.	Hormones and related substances	162	3.8%
P2.	Beta-blockers	42	1.0%
S7.	Narcotics	17	0.4%
S4.	Agents with Anti-estrogenic Activity	21	0.5%
	TOTAL	4,298	

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



S1.1.a. Anabolic Agents - Exogenous AAS	Occurences	% within drug class
Nandrolone	298	16.0%
Stanozolol	233	12.5%
Methandienone	56	3.0%
Methenolone	28	1.5%
Boldenone	28	1.5%
Mesterolone	11	0.6%
1-testosterone	7	0.4%
Methyltestosterone	7	0.4%
1-androstendione	7	0.4%
Drostanolone	6	0.3%
Oxandrolone	6	0.3%
Oxymetholone	5	0.3%
Trenbolone	5	0.3%
Mestanolone	4	0.2%
Dehydrochlormethyltestosterone	4	0.2%
Clostebol	2	0.1%
Danazol	2	0.1%
Methandriol	2	0.1%
delta-1-DHT	1	0.1%
subtotal*	712	

S1.1.b. Anabolic Agents - Endogenous AAS ¹	Occurences	% within drug class
Testosterone	1,132	60.7%
Prasterone (DHEA)	6	0.3%
Androsterone	5	0.3%
Androstenedione	4	0.2%
Etiocholanolone	4	0.2%
5ß-androstanediol	1	0.1%
subtotal*	1,152	

S.1. All Anabolic Agents	Occurences			
TOTAL*	1,864			

¹ Reporting of an Endogenous AAS may be due to detection of a concentration outside normal reference ranges and/or establishment of an exogenous source by GC/C/IRMS.

S2. Hormones and Related Substances	Occurences	% within drug class
hCG	143	88.3%
Erythropoetin	15	9.3%
LH	3	1.9%
Darbepoetin	1	0.6%
TOTAL*	162	

 $^{^{}st}$ Some adverse analytical findings correspond to multiple findings on the same athlete, including cases of longitudinal studies on testosterone.



S3. Beta-2 Agonists	Occurences	% within drug class				
Salbutamol	357					
Terbutaline	171	28.1%				
Clenbuterol	52	8.5%				
Formoterol	18	3.0%				
Salmeterol	4	0.7%				
Reproterol	4	0.7%				
Fenoterol	3	0.5%				
TOTAL**	609					

^{**} Results for formoterol, salbutamol, salmeterol, and terbutaline may correspond to administration by aerosol which is permitted with certain restrictions as described in the Prohibited List. In addition, some adverse analytical findings may correspond to multiple measurements on the same athlete.

S4. Agents with anti-estrogenic activity	Occurences	% within drug class		
Tamoxifen	11	52.4%		
Clomiphene	7	33.3%		
Aminoglutethimide	2	9.5%		
Anastrozole	1	4.8%		
TOTAL*	21			

S5. Diuretics and other masking agents	Occurences	% within drug class		
Furosemide	91	37.0%		
Hydrochlorothiazide	67	27.2%		
Finasteride	28	11.4%		
Canrenone	14	5.7%		
Amiloride	10	4.1%		
Triamterene	9	3.7%		
Acetazolamide	6	2.4%		
Epitestosterone	5	2.0%		
Bendroflumethazide	5	2.0%		
Indapamide	4	1.6%		
Chlorothiazide	3	1.2%		
Spironolactone	1	0.4%		
Piretanide	1	0.4%		
Chlortalidone	1	0.4%		
Bumetanide	1	0.4%		
TOTAL *	246			

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



S6. Stimulants	Occurences ¹	% within drug class		
Amphetamine	194	38.1%		
Ephedrine	93	18.3%		
Cocaine metabolites	85	16.7%		
Methylphenidate	17	3.3%		
Cathine	14	2.8%		
Phentermine	14	2.8%		
MDMA	13	2.6%		
Methamphetamine	12	2.4%		
Heptaminol	11	2.2%		
MDA	8	1.6%		
Nikethamide	8	1.6%		
Benzylpiperazine	6	1.2%		
Carphedon	6	1.2%		
Etilefrine	4	0.8%		
Mephentermine	4	0.8%		
Norfenfluramine	3	0.6%		
Pemoline	3	0.6%		
Fenetylline	2	0.4%		
MDEA	2	0.4%		
Methylephedrine	2	0.4%		
Amfepramone	1	0.2%		
Clobenzorex	1	0.2%		
Etamivan	1	0.2%		
Methylamphetamine	1	0.2%		
Mesocarb	1	0.2%		
Modafinil	1	0.2%		
Parahydroxyamphetamine	1	0.2%		
Strychnine	1	0.2%		
TOTAL*	509			

 $^{^{}st}$ Some adverse analytical findings correspond to multiple findings on the same athlete, including cases of longitudinal studies on testosterone.



S7. Narcotics	Occurences	% within drug class			
Morphine	15	88.2%			
Methadone	1	5.9%			
Hydromorphone	1	5.9%			
TOTAL*	17				

S8. Cannabinoids	Occurences	% within drug class		
Cannabis	503	100.0%		
TOTAL*	503			

S9. Glucocorticosteroids	Occurences	% within drug class
Budesonide	116	35.7%
Betamethasone	47	14.5%
16a-hydroxyprednisolone	42	12.9%
Prednisolone	35	10.8%
Triamcinolone Acetonide	25	7.7%
Prednisone	23	7.1%
Methylprednisolone	22	6.8%
Dexamethasone	13	4.0%
Flunisolone	1	0.3%
Fluticasone-17-propionate	1	0.3%
TOTAL*	325	

P2. Beta Blockers	Occurences	% within drug class		
Propranolol	16	38.1%		
Bisoprolol	10	23.8%		
Atenolol	6	14.3%		
Metoprolol	5	11.9%		
Carvedilol	4	9.5%		
Acebutolol	1	2.4%		
TOTAL*	42	-		

 $^{^{}st}$ Some adverse analytical findings correspond to multiple findings on the same athlete, including cases of longitudinal studies on testosterone.



Table H

Total Laboratory Adverse Analytical Findings* vs Drug Class

Laboratory	S1. Anabolic Agents	S2. Hormones and related substances	S3. Beta-2 Agonists	S4. Agents with Anti- estrogenic activity	S5. Diuretics and other masking agents	S6. Stimulants	S7.	S8. Cannabinoids	S9. Glucocorticosteroids	P2. Beta-Blockers	Total per Lab	% of total adverse analytical findings
Sydney, Australia	86	10	8	0	5	51	0	27	0	0	187	4.4%
Seibersdorf, Austria	53	0	14	1	17	2	0	10	4	0	101	2.3%
Ghent, Belgium	72	10	22	0	4	37	7	51	47	3	253	5.9%
Rio de Janeiro, Brazil	2	0	1	0	8	6	0	1	0	0	18	0.4%
Montreal, Canada	28	13	56	1	11	10	0	17	15	0	151	3.5%
Beijing, China	16	12	0	0	4	3	1	1	0	0	37	0.9%
Bogota, Colombia	28	3	4	0	5	3	0	0	1	0	44	1.0%
Havana, Cuba	20	0	2	0	5	3	0	0	1	0	31	0.7%
Prague, Czech Republic	47	3	11	0	6	8	0	7	0	0	82	1.9%
Helsinki, Finland	7	5	11	1	1	1	0	3	0	0	29	0.7%
Paris, France	169	12	100	0	24	37	0	117	58	8	525	12.2%
Cologne, Germany	118	7	37	2	25	30	0	26	46	7	298	6.9%
Kreischa, Germany	78	3	64	2	11	4	1	2	16	4	185	4.3%
Cambridge, UK	12	1	4	0	1	6	0	2	0	0	26	0.6%
London, UK	22	7	0	0	4	14	2	16	0	1	66	1.5%
Athens, Greece	38	3	16	1	6	11	0	17	5	0	97	2.3%
Rome, Italy	207	6	34	0	18	12	2	29	15	3	326	7.6%
Tokyo, Japan	2	3	2	0	1	1	1	1	0	0	11	0.3%
Seoul, Korea	36	0	10	5	7	4	0	0	1	1	64	1.5%
Penang, Malaysia	16	0	6	0	2	7	0	3	5	0	39	0.9%
Oslo, Norway	31	5	44	3	12	5	0	4	22	0	126	2.9%
Warsaw, Poland	86	3	1	0	2	9	1	13	5	1	121	2.8%
Lisbon, Portugal	97	5	8	1	11	7	0	15	15	6	165	3.8%
Bloemfontein, S Africa	23	0	3	0	5	7	0	5	3	0	46	1.1%
Moscow, Russia	34	4	2	0	5	7	0	5	0	2	59	1.4%
Barcelona, Spain	29	19	14	4	2	0	0	3	2	0	73	1.7%
Madrid, Spain	37	14	52	0	10	13	0	28	10	3	167	3.9%
Stockholm, Sweden	101	8	51	0	0	3	0	2	38	0	203	4.7%
Lausanne, Switzerland	60	2	26	0	0	2	0	10	7	1	108	2.5%
Bangkok, Thailand	10	1	1	0	5	2	0	2	7	1	29	0.7%
Tunis, Tunisia	12	1	2	0	3	1	0	9	0	0	28	0.7%
Ankara, Turkey	44	0	1	0	18	4	0	5	0	0	72	1.7%
Los Angeles, USA	243	2	2	0	8	199	2	72	2	1	531	12.4%
TOTAL PER DRUG CLASS	1,864	162	609	21	246	509	17	503	325	42	4,298	
% of Drug Class	43.4%	3.8%	14.2%	0.5%	5.7%	11.8%	0.4%	11.7%	7.6%	1.0%		

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