



## Legal Consequence of Salt Lake 2002

- Addition of an Anti-Doping Paragraph to the Pharmaceutical Drug Law
- §5a: „Trafficking or application of pharmaceutical products according to the Anti-Doping Convention of the European Council for the purpose of Doping in Sports is prohibited.“
- No separate Anti-Doping Law at that time
- Consequences for Athletes are still at the Federation level
- Focus of the Law are the doping dealers

## Key Moment II

- Olympic Winter Games in Torino 2006
- Anti-Doping Razzia in the camps of Austrian Cross Country Skiers and Biathletes
- Again equipment for blood doping was found
- As a consequence:  
Financial Sanction of the IOC against the Austrian OC

## Legal Consequence of Torino 2006

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- Political Level: Federal Law of Anti-Doping

# BUNDESGESETZBLATT

## FÜR DIE REPUBLIK ÖSTERREICH

Jahrgang 2006                      Ausgegeben am 19. Mai 2006                      Teil I

64. Bundesgesetz:      Anti-Doping-Bundesgesetz  
(NR: GP XXII AB 1416 S. 146. BR: 7521 AB 7530 S. 734.)

64. Bundesgesetz, mit dem das Bundes-Sportförderungsgesetz 2005 geändert wird (Anti-Doping-Bundesgesetz)

Der Nationalrat hat beschlossen:

**Bundesgesetz, mit dem das Bundes-Sportförderungsgesetz 2005 geändert wird**

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## Key Points

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- Separate Law, dealing with Anti-Doping matters in Austria
- Consequent implementation of the WADA Code into National Law
- **Appointment of „Special Anti-Doping Task Forces“ by the Ministry of Internal Affairs**
- Police Personnel, recruited from Narcotic Drug Enforcement Groups
- Up to 12 Police Officers from all over the land
- Now called: Integrity in Sports Unit  
“Doping, Pharmaceutical Crime and Match Fixing”

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## Content

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- Prevention, Information and Clarification
- Actions of the Government to Control Anti-Doping Measures
- The Independent Doping Control Authority (NADA Austria)
- National Testing Pool
- TUEs
- The Doping Control Procedure: Sampling, Analysis, Reporting
- Disciplinary Actions: Legal Commission, Arbitration Commission
- Duties of National Federations and Athletes
- **Regulations for Animal Doping**
- Regulations for Monitoring / Seizure / Safeguard Provisions
- **Legal Sanctions / Penalties**
- **Duties of Custom Authorities**
- **Close Cooperation and data exchange between Prosecutors and the Independent Doping Control Authority**

## Safeguard Provisions

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- Besides the „Integrity in Sports“ Unit of the Police: Sports Minister may appoint additional trained Experts or NADA personnel to inspect Sports entities
- In cases of reasonable suspicion, every entity may be inspected for the presence of prohibited substances
- In cases of imminent danger at all times
- If the experts are hindered to do their job, the penalty is up to 40.000 EUR / 6 weeks jail

## Legal Sactions / Penalties



### Purpose: Doping in Sports

- Trafficking or administration to others:
  - ⇒ up to six months arrest
- Possession of quantities of Anabolics, Hormones or Homone Modulators **above the threshold quantity**:
  - ⇒ up to one year arrest
- If children are involved:
  - ⇒ up to three years arrest

## Threshold Quantities



- Only for the substance groups:
  - S1: Anabolic Agents
  - S2: Peptide Hormones, Growth Factors and Related Substances
  - S4: Hormone and Metabolic Modulators
- Regarded as more health detrimental then the other groups by the legislator
- Mostly found in seized products
- Adopted from the German Doping Substance Threshold Act

## Threshold Quantities

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### 1. Grenzmengen für Anabolika:

#### 1.1 Anabol-androgene Steroide:

##### 1.1.a Exogene anabol-androgene Steroide:

Bei Stoffen, die als: **2. Grenzmengen für Hormone und verwandte Verbindungen:**

1-Androstendiol	2.1 Erythropoietin und Analoga:		
1-Androstendion	Epoetin alfa		24.000 IE
Bolandiol	Epoetin beta		24.000 IE
Bolasteron	Epoetin delta		24.000 IE
Boldenon	Epoetin zeta		24.000 IE
Boldion	Darbepoetin alfa		120 µg
Calusteron	Methoxy-Polyethylenglycol-Epoetin beta		90 µg
Clostebol	2.2 Wachstumshormon und Insulin-ähnliche Wachstumsfaktoren, synonym Insulin-like Growth Factors, IGF-1:		
	Somatropin		16 mg
	Mecasermin		216 mg
	2.3 Gonadotropine:		
Danazol	Choriongonadotropin (HCG)		24.000 IE
Dehydrochloromet	Choriongonadotropin alfa		6.500 IE
Desoxymethyltes	Lutropin alfa		2.250 IE
Drostanolon	2.4 Insuline:		
Ethylestrenol	Insuline		400 IE
Fluoxymesteron	2.5 Corticotropine:		
Formebolon	Corticotropin		1.200 IE
Furazabol	Tetracosactid		
		- Depot-Zubereitungen	12 mg
		- andere Zubereitungen	0,25 mg

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## Figures of Merit of the Austrian Anti-Doping Legislation

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- Police Actions against Doping Crime started **2008**
- The State Prosecutor has passed **about 400 cases to Court** according to the Federal Law of Anti-Doping
- All Police Investigation resulted in Court Trials
- About **40 Athletes** of the international or national testing pool were involved
- **3 Coaches** or Sports managers were involved
- More than **2 tons of doping substances** were seized
- Most abundant Substance groups were Anabolics and Growth Hormone / IGF, then: Stimulants, Lifestyle Products, Diuretics, etc
- Most of the cases relate to the Fitness and Body Building Community

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## The Role of the Laboratory

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- Providing Experience to the Police Forces
- Explaining Analytical Results
- Analysis of seized material
- Quantification of the total amount of threshold substances
- Identification of new substances / trends  
e.g. New Psychoactive Substances (NPAS)
- Link to the Criminal Law:  
Certified Court Expert in Anti-Doping Matters



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## Example 1: Threshold Substances


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Anhang 3: Übersicht über Gesamtmengen der nachgewiesenen verbotenen Substanzen mit Grenzmenge


Substanzname laut UNESCO Konvention	Gruppe	ADGMV 2010	Gesamtmenge	Einheit	Überschreitungsfaktor
1 Boldenonundecylenat	1. Anabolika	1500	10883	mg	7.3
2 Clenbuterol	1. Anabolika	2.1	8	mg	3.7
3 Drostanolonanlat	1. Anabolika	1015	4385	mg	4.3
4 Drostanolonpropionat	1. Anabolika	1015	12739	mg	12.6
5 Metandienon	1. Anabolika	150	5800	mg	38.7
6 Nandrolondecanoat	1. Anabolika	45	3521	mg	78.2
7 Oxandrolon	1. Anabolika	150	2860	mg	19.1
8 Oxymetholon	1. Anabolika	150	5000	mg	33.3
9 Testosteronpionat	1. Anabolika	632	32015	mg	50.7
10 Testosteronenant	1. Anabolika	632	50040	mg	79.2
11 Testosteronphenylpropionat	1. Anabolika	632	1518	mg	2.4
12 Testosteronpropionat	1. Anabolika	632	9828	mg	15.6
13 Testosteronundecanoat	1. Anabolika	3000	1260	mg	0.4
14 Trenbolonacetat	1. Anabolika	150	4544	mg	30.3
15 Trenbolonenant	1. Anabolika	150	12227	mg	81.5
16 Trenbolonhexahydrobenzoat	1. Anabolika	150	1489	mg	9.9
17 Choriogonadotropin (HCG)	2. Hormone	24000	19000	IU	0.8
18 Somatotropin	2. Hormone	16	181	mg	11.3
Clomifen	3. Hormon-Antagonisten und -Modulatoren	509	7500	mg	14.7
20 Tamoxifen	3. Hormon-Antagonisten und -Modulatoren	1200	2320	mg	1.9
<b>Summe der Überschreitungsfaktoren:</b>					<b>495.8</b>

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## Example 2: NPAS



### The World Anti-Doping Code

b: Specified Stimulants (examples):

**THE 20 PROHIBITED** Benzfetamine; cathine; **cathinone and its analogues** (e.g. mephedrone, methedrone,  $\alpha$ -pyrrolidinovaleerphenone); dimethylamphetamine; ephedrine<sup>\*\*\*</sup>; epinephrine<sup>\*\*\*\*</sup> (adrenaline); etamivan; etilamfetamine; etilefrine; famprofazone; fenbutrazate; fencamfamin; heptaminol; hydroxyamfetamine (parahydroxyamfetamine); isometheptene; levmetamfetamine; meclofenoxate; methylenedioxyamfetamine; methylephedrine<sup>\*\*\*</sup>; methylhexanamine (dimethylpentylamine); methylphenidate; nikethamide; norfenefrine; octopamine; oxilofrine (methylsynephrine); pemoline; pentetrazol; phenpromethamine; propylhexedrine; pseudoephedrine<sup>\*\*\*\*</sup>; selegiline; sibutramine; strychnine; tenamfetamine (methylenedioxyamfetamine); trimetazidine; tuaminoheptane; and other substances with a similar chemical structure or similar biological effect(s).


**S8. CANNABINOIDS**

Natural (e.g. **cannabis, hashish, marijuana**) or **synthetic delta 9-tetrahydrocannabinol (THC)** and cannabimimetics (e.g. **"spice", JWH018, JWH073, HU-210**) are prohibited.

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























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## New-Psychoactive-Substance-Law

### Basal Structures

 1H-Indol-3-yl-Naphthalen-1-yl-Methanon	 3-Naphthalen-1-yl-Methyl-1H-Indol	 Naphthalen-1-yl-(1H-Pyrol-3-yl)-Methanon	 3-Methyl-2,3,4,5-tetrahydro-1H-benzodiazepin-1-yl	 3-(2-Hydroxypropyl)-Phenol
 Indolizin-3-yl-Methanon	 1-Hydroxy-3-yl-2-Naphthalen-1-yl-Ethanon	 1-Hydroxy-3-yl-Phenyl-Methanon	 1-(1H-Indol-3-yl-Methyl)-Naphthalen	
 2-Phenyl-ethanamin	 2-Phenyl-ethanamin	 2-(2,5-Dimethoxyphenyl)-ethanamin	 2-(2,3,7-Triethyl-1H-2,5-Benzoxazol-4-yl)-ethanamin	 2-(1-Indol-3-yl)-3-(2-Phenylethyl)-ethanamin
 2-Amino-1-phenylpropan-1-ol	 2-Amino-1-naphthalen-2-ylpropan-1-ol	 1-Phenyl-2-(pyrrolidin-1-yl)propan-1-ol	 1-Amino-1-phenylpropan-2-ol	 1,2,3,4-tetrahydronaphthalen-2-Amin
 2,3-dihydro-1H-inden-2-Amin	 2-(1H-Indol-3-yl)-ethanamin	 1-Benzylpiperazin	 1-Phenylpiperazin	 1-Phenylcyclohexanamin

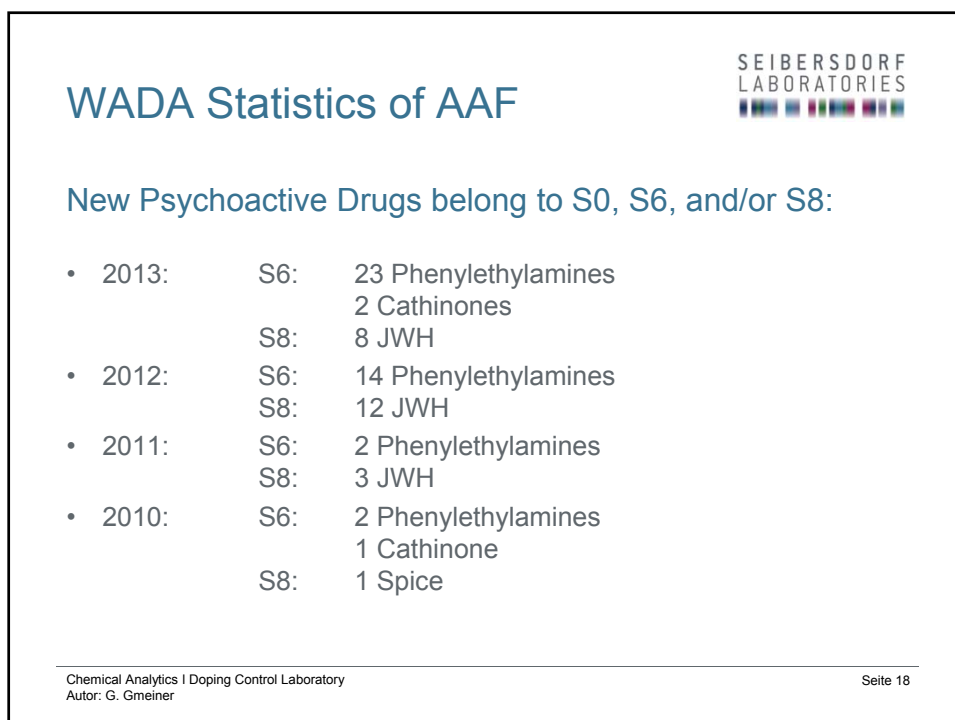
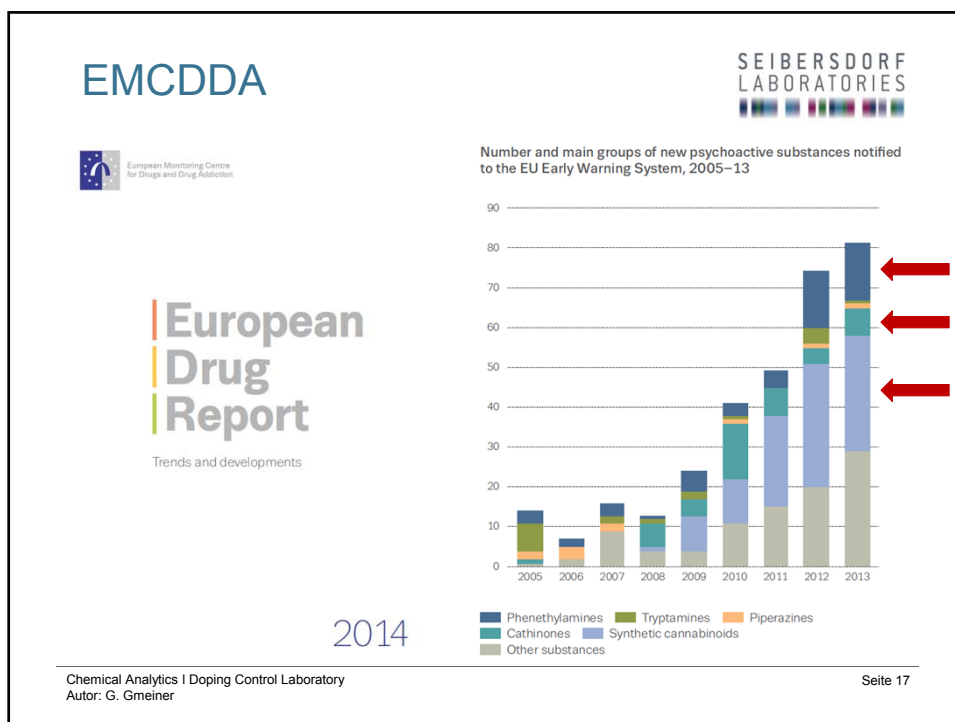
**New Psychoactive Drugs belong to S0, S6, and/or S8**

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### Example: Seizure by Austrian Custom Authorities

Kurzbezeichnung	Substanz	Substanzgruppe BGI Nr. 468/2011
MPPP	4'-Methyl- $\alpha$ -pyrrolidinopropiophenone	Anhang II, Z3
3-MEC (4-MEC)	3-Methylcathinone	Anhang II, Z3
Pentylon	$\beta$ -Keto-Methylbenzodioxolypentanamine	Anhang II, Z3
MDPBP	3',4'-Methylenedioxy- $\alpha$ -pyrrolidinobutophenone	Anhang II, Z3
D2PM	Diphenylprolinol	Anhang II, Z9
AM-694	1-(5-Fluoropentyl)-3-(2-iodobenzoyl)indole	Anhang II, Z1
5-MeO-DALT	5-Methoxy-N,N-diallyltryptamine	Anhang II, Z6
JWH-073	N-Butyl-3-(1-naphthoyl)indole	Anhang II, Z1
25I-NBOMe	4-Iodo-2,5-dimethoxy-N-(2-methoxyphenyl)methylbenzeneethanamine	Anhang II, Z2
2C-E	2,5-Dimethoxy-4-ethylphenethylamine	Anhang II, Z2
TFMPP	1-[3-(Trifluoromethyl)phenyl]piperazine	Anhang II, Z7
Butylone	$\beta$ -keto-N-methylbenzodioxolylbutanamine	Anhang II, Z3
pFPP	1-(p-Fluorophenyl)piperazine	Anhang II, Z7

### Example 3: Endogenous-like Testosterone

- Confiscated Black Market products
- Usual Suspects: predominantly Anabolic Steroids
- Peptide Hormones: rEPOs (e.g. Dynepo), Growth Hormone, HCG...
- Others: Tamoxifen, Ephedrine, Methylhexanamine
- Specials: Viagra, Benzodiazepines, Antidiabetics
- Ca. 30 different testosterone preparations
- **WADA Project:**  
**Analysis of the seized Testosterone preparations with GC/C/IRMS**

## IRMS - Analysis

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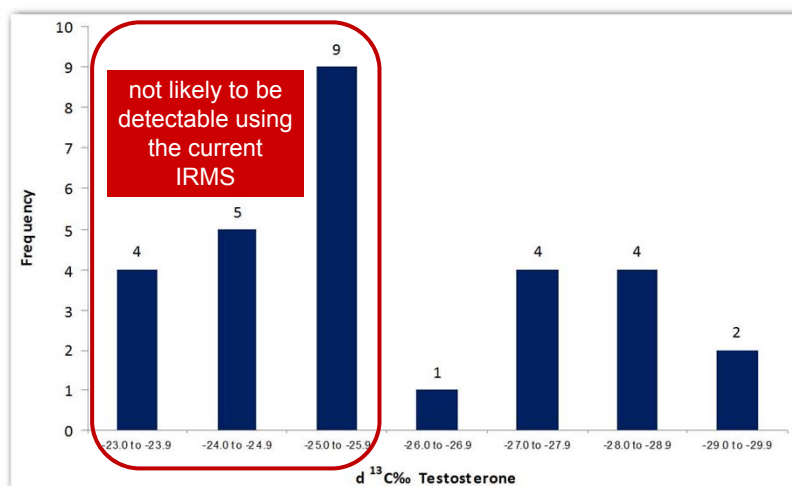
- Method for the Discrimination of synthetic and endogenous Testosterone
- Detection of Synthetic Testosterone Application
- Only possible, if the  $\delta^{13}\text{C}\text{‰}$  value of the applied synthetic product is lower than the endogenous Testosterone
- Result:  
**About 62 % of the testosterone products investigated are close to endogenous  $\delta^{13}\text{C}\text{‰}$  values**
- Detection of Doping with these preparations is **not likely to be detectable using the current IRMS** approach

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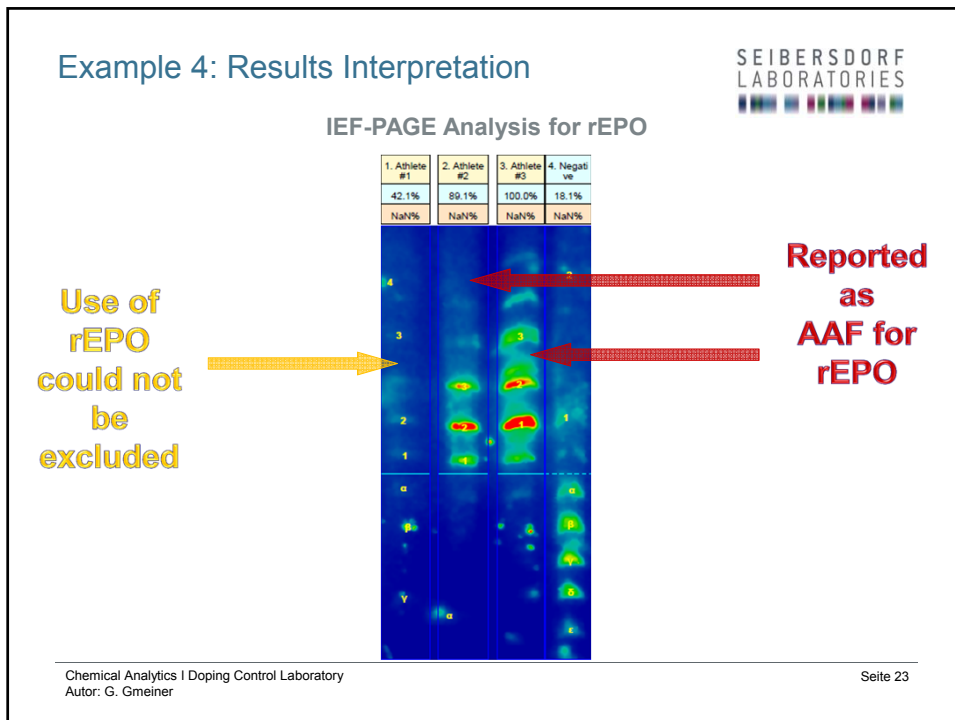
## IRMS - Analysis

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### Acknowledgement

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- Integrity in Sports Unit, Ministry of Int. Affairs
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