APPENDIX 21

IFF Risk Assessment document

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1. Introduction and scope

The International Standard for Testing (IST) created by WADA describes the need for a risk assessment in the process of planning doping controls. It states that a risk assessment should contain an evaluation of available doping analysis statistics, doping trends, training and competition seasons, the physical demands of each sport, and the performance enhancing effect of the various doping agents.

The test distribution plan is to be developed based on the risk assessment and possible doping patterns in floorball:

a) The physical demands of floorball and possible performance-enhancing effect that doping may elicit;
b) Available doping analysis statistics;
c) Available research on doping trends;
d) The history of doping in floorball;
e) Training periods and the competition calendar;
f) Information received on possible doping practices

The International Floorball Federation's risk assessment document is based on the IST model above. In addition the study made by Mads Drange from Anti-Doping Norway (AND), *Physiologically based risk assessment of the Olympic sports and the risk assessment for Ball and team Sports*, has been taken into account when evaluating the risks of doping in floorball.

Still the specific demands of floorball have been taken into consideration as well as the history of doping within the sport. The IFF Risk Assessment document functions as a base for the IFF's Test Distribution Plan, which is periodically evaluated and modified.

2. Risks and Patterns of doping

2.1 Physiological profile in floorball

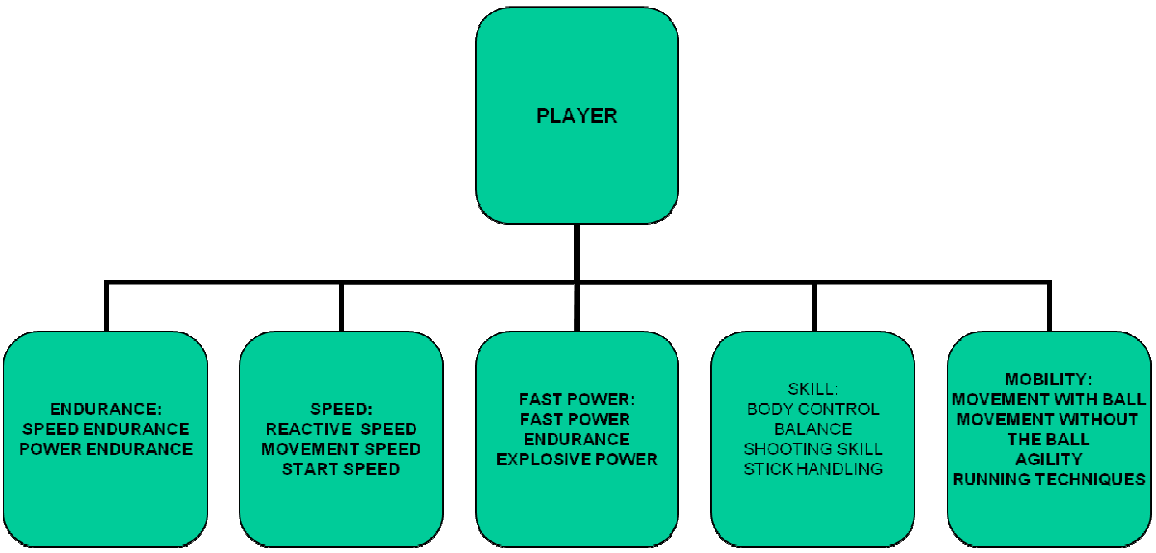
The qualities that make a top level floorball player are diverse, and skill, match intelligence and overview, as well as the ability to play for the team are hard to achieve by using a doping substance or method. However a complex physiological profile is needed in floorball.

In a floorball match there are alternating periods of high and low intensity. The players are on the field for a short period of a time, working at high intensity. But even during this 30-50 seconds time on the court, the level of intensity varies. When the players get off the court, they sit on the bench for a few minutes before going out again.

Optimal rhythm in a floorball match:

- 30 - 50 second shifts
- 2 - 3 minutes recovery
- 20 +/- shifts player/match (except goalkeeper)

2.1.1 Summary of requirement needed in floorball



2.1.2 Time on the field and changing rhythm within the match

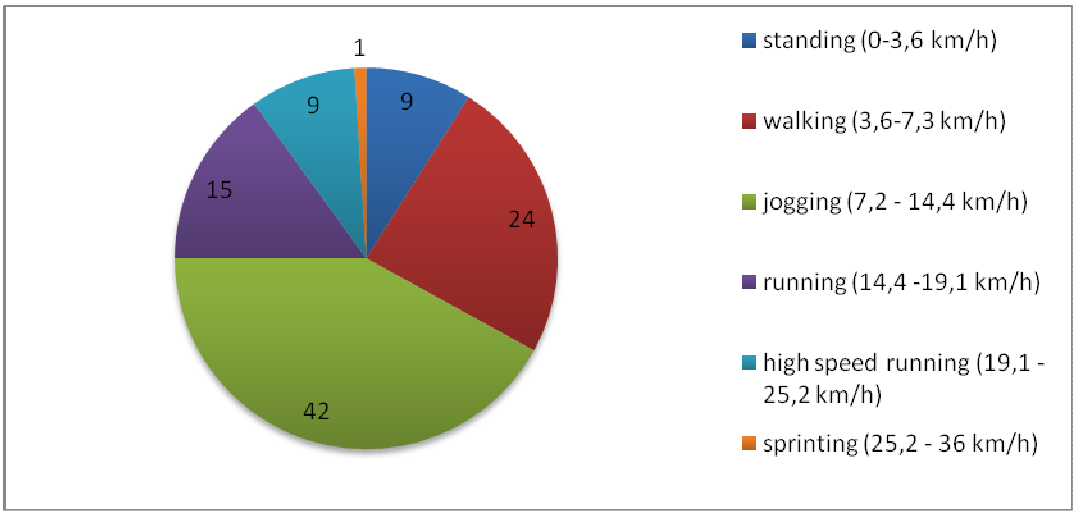
The average of a total match time is about 1h and 27 min and shows the total time of the competition strain for a player. The actual time that a player plays on the court is approximately 34 min. +/- 6 min depending on the system of playing. For each player (excluding the goalkeeper) the average time on the court with action is about 30-50 seconds.

	Average	Defence	Centre	Forward
Total game time	01:26:54	01:27:39	01:28:23	01:26:07
Time on the field	00:34:31	00:35:50	00:35:59	00:33:18
Shifts	20,4	20,3	19,6	23,2

2.1.3 Floorball running statistics

According to statistical analysis of Men's World Floorball Championships top players a floorball player runs 3839 m in average during a match and 192 m in average during one shift. There are quite big differences between different matches/teams/players, which are a result of different floorball tactics used.

The running intensity during a match is different and can be divided into different categories:



Based on a study made in Switzerland 2013 on a Swiss League & Finnish national team player

2.1.4 Floorball players' pulse measurements

Male top players' maximal pulses during a floorball match:

The averages of male players' maximal capacities (% max. pulse) and occasional max. pulses during a game in a study made on 19 Finnish national team players in 2000:

- Highest max. (average) 192 ±8
- Two players values over 200
- All players average 180 ±7

Average pulse levels based on a study made on 18 Finnish League players during floorball games during season 2013-2014:

- Highest max (average): 186-188
- Average pulse level: 130 (86-188)
- Average %VO2max (ml/kg/min): 20 (11-24)
- Highest %VO2max (ml/kg/min): 48 (36-55)

2.1.5 Floorball lactic acid measurements

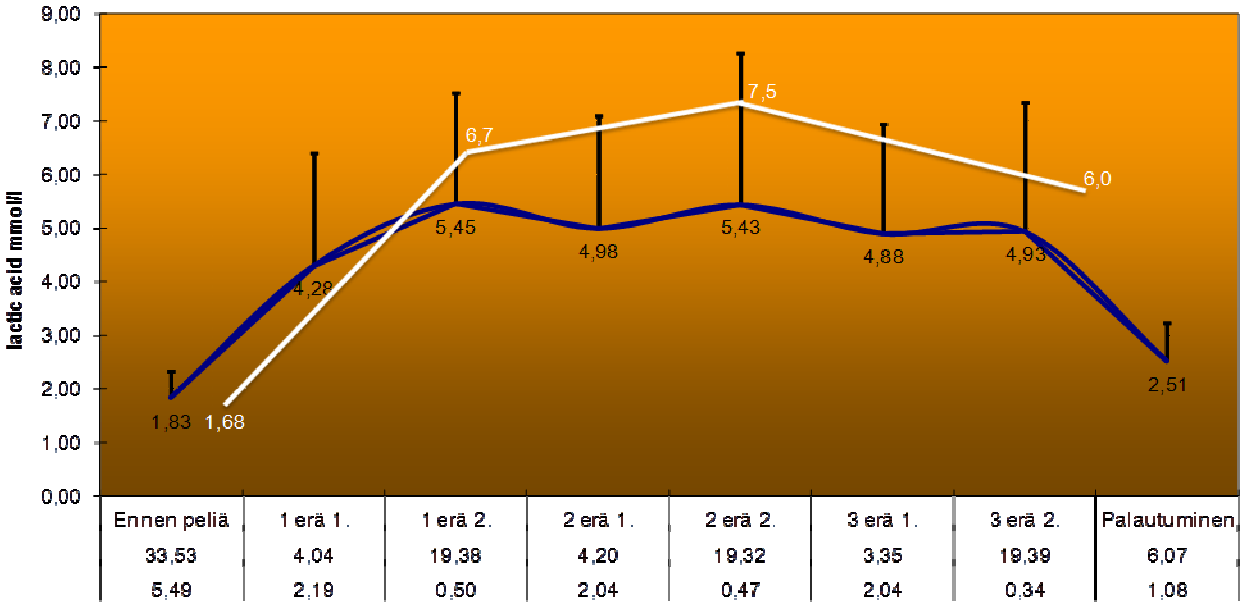
Lactic acid measurements made on 19 Finnish top floorball players made in 2000:

- Biggest occasional value 14,56
- All players averages 4,98 ±1,62

Lactic acid measurements made on 18 Finnish top floorball players made in 2014:

- Biggest occasional value 11,47
- All players averages 6,7

The average lactic acid values on different measuring points (before the game, first period, 2nd period, 3rd period and after the game):



Lactic acid values measured in floorball matches in 2000 (in blue) compared to 2014 (in white)
Based on studies made on Finnish top male players in 2000 and top Finnish top male players in 2014

2.1.6 Countermovement jumps (CMJ)

CMJ measurements made during season 2013-2014 on 18 top Finnish Floorball players in three games:

- Average CMJ before the game: 41,0 cm
- Average CMJ after first period: 45,7 cm
- Average CMJ after second period: 45,6 cm
- Average CMJ after the match: 45,7 cm

2.1.7 Physiological differences between the different player positions

The different player positions have an effect on the physiological profiles. Still there is not that much difference between the defenders, wing forwards and centres. Not much studies have been made on floorball goalkeepers, who need to have fast reactions, agility, muscle endurance and balance, whereas the running skills or endurance are not important.

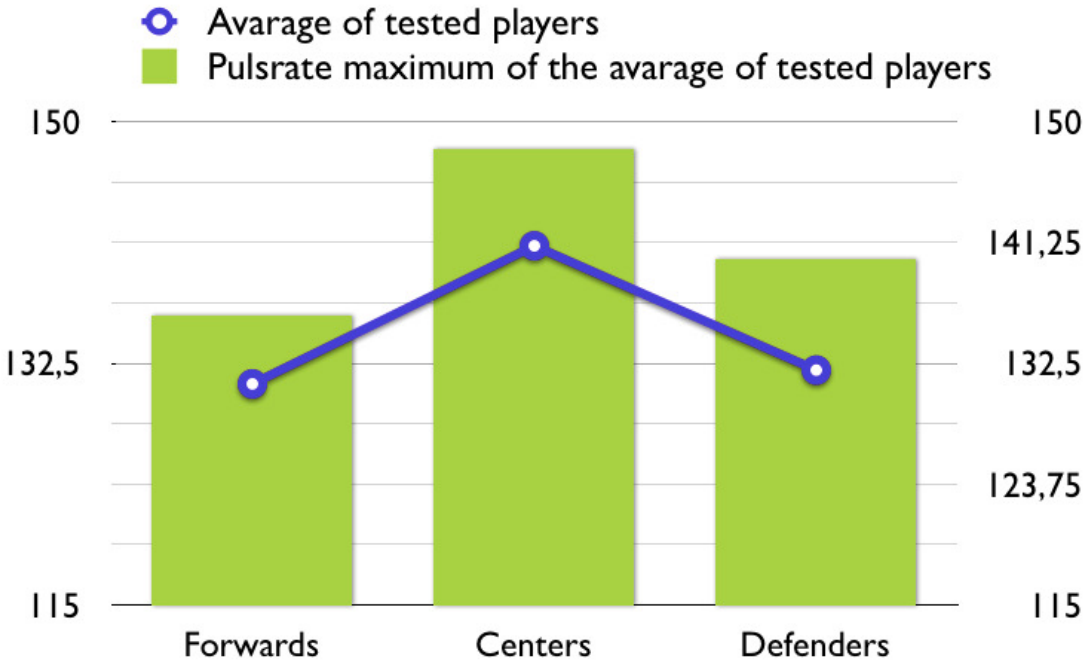
The chosen floorball tactic of the team, for example fore-checking style etc, also affects the workload for different players.

There is a small tendency that centre players need to run more than others. But the difference is not significant.

	Average	Defence	Centre	Forward
Total distance	3838,9	3756,9	3939,6	3883,5
Distance per shift	191,6	188,4	203,6	192,0

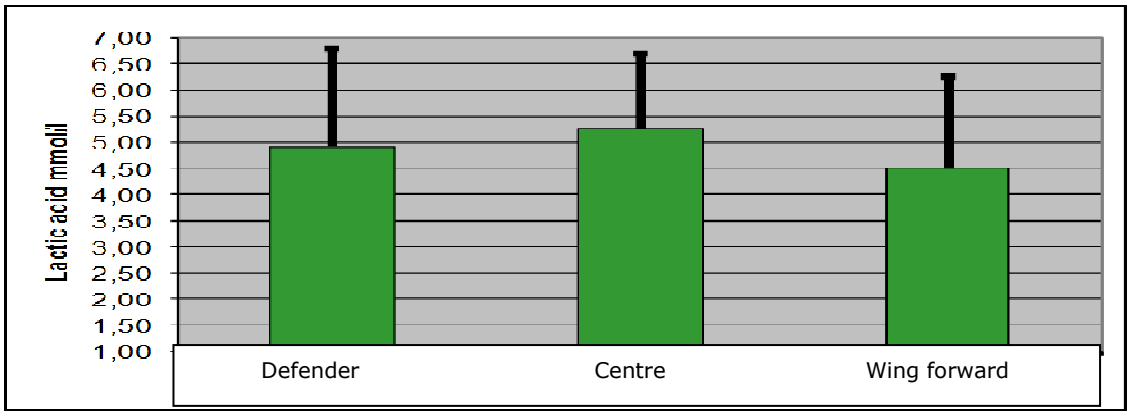
Based on a study made in Switzerland 2013 on Men's WFC top players

Average max pulse levels according to position:

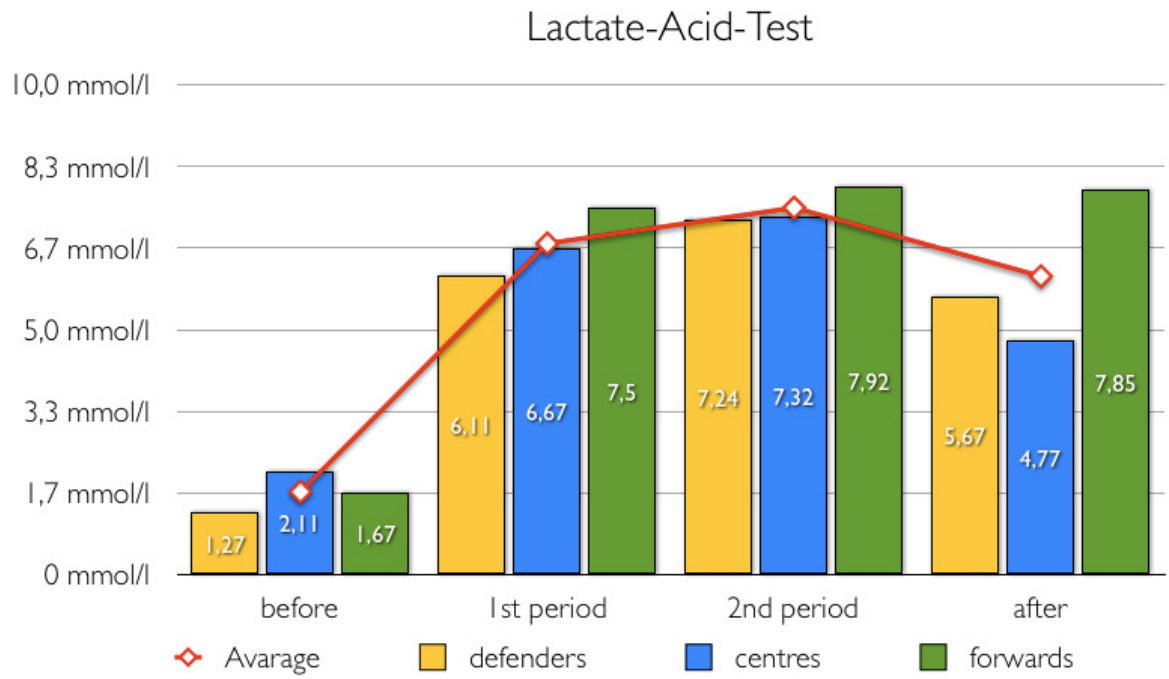


Based on a study made on Finnish top male players in 2013-2014

Lactic acids according to position in 2000 and in 2014:



Based on a study made on Finnish top male players in 2000

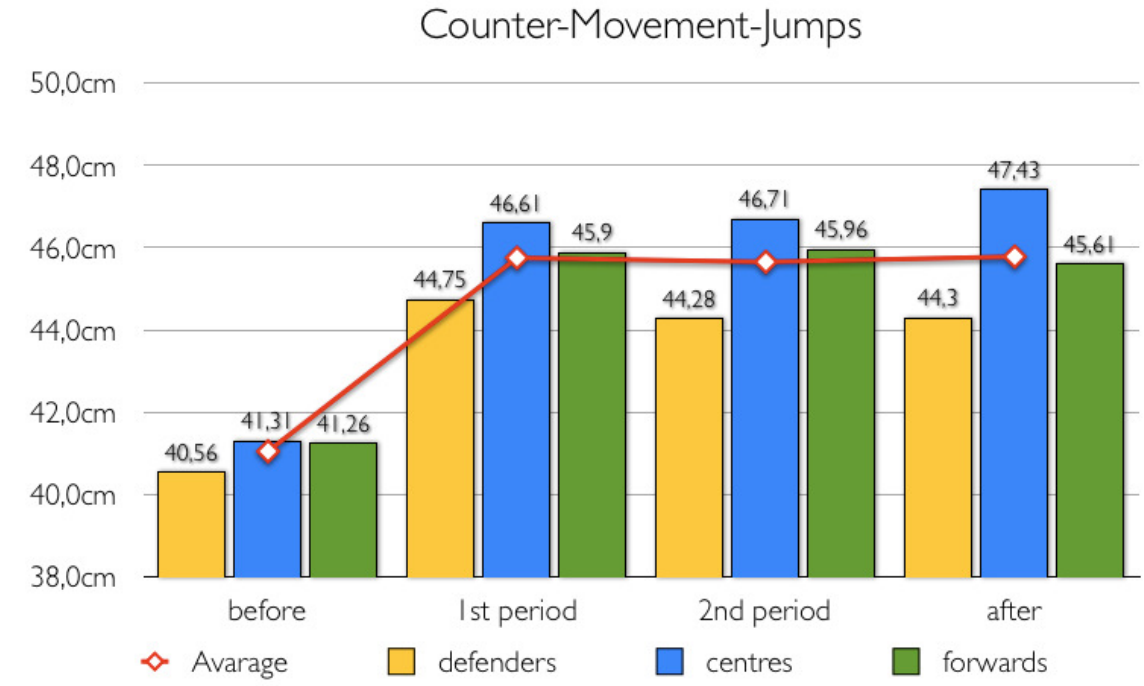


Based on a study made on Finnish top male players in 2014

Lactic acid measurements made during season 2013-2014 on 18 top Finnish Floorball players in three games:

- Average lactic acid levels before the game: 1,6
- Average lactic acid levels after first period: 6,7
- Average lactic acid levels after second period: 7,5
- Average lactic acid levels after the match: 6,0

CMJ according to position:



Based on a study made on 18 Finnish top male players in 2014

2.2 Performance-enhancing drugs in floorball

Floorball requires a complex physiological profile, and there are some differences within players of the same team. At the moment, not much study has been made on the goalkeepers.

As the physiological profile of floorball players is complex it is hard to evaluate which substances in particular could be abused to enhance performance? Even though some prohibited substances might have a positive effect or the performance of a floorball player; it can also be argued that the level of the physiological features that are required to become the best floorball player in the world can be reached without using prohibited substances. A top floorball player needs to be fast enough, strong enough and have enough endurance to be able to perform on the court, but none of the qualities are that much more important that the other. In addition a top level athlete cannot become a top level floorball player without mastering the technical and tactical aspects of the sport.

It is also important to take into consideration other factors that have a huge effect on the players' performance on the floorball court. Factors such as ball handling skills, shooting technique, game understanding skills, tactical skills as well as social and psychological factors make a big difference in how good a player and team perform on the court.

Also the incentives and economical rewards have an effect of the risk of doping. The risk of doping abuse is still low in floorball due to the fact that there are no professional leagues and not a lot of money involved. Only a few players in the world receive salary for playing and the economical benefits are still low.

3. Training and competition schedules

A floorball season can roughly be divided into a competition season and off season. The competition season in the top men's and women's leagues starts in September and ends in April. The month of August is usually a pre-competition season meaning that many top teams then play pre-season matches.

3.1 National League seasons

As floorball is a team sport the players train mostly together as a team. During the season the teams train together 3-5 times a week in addition to various kinds of physical exercises like strength training, agility training, endurance training and technique trainings. The focus and exercises differ a lot depending on the team and the time during season.

The top national floorball leagues start in September and continue until April the following year. National league matches are played, except from rare occasions, only during the weekends as many of the players have a regular job. Usually the teams play 1-2 matches per week.

The total amount of regular season matches in the top leagues varies between 22-26 matches and then the best teams advance to the play-offs. During the international weekends the national leagues have a break.

3.2 International Events & training camps

The major international floorball events, the Adult World Floorball Championships (WFC), are played in December. The Men's WFC is played during even years (2010, 2012, 2014 etc.) and the Women's WFC is played during uneven years (2011, 2013, 2015 etc.). The Qualifications to the World Floorball Championships Final Round are played in February the same year.

In addition to the World Floorball Championships the top club competition for the best men's and women's club teams in the world, the Floorball Champions Cup (CC), is played each year in October.

The national teams also play international tournaments or single internationals during the international weekends, 1st weekend of February (when not playing in the WFC Qualifications), 4th weekend of April, 2nd weekend of September and 1st weekend of November.

In connection with and in addition to the international events the top national teams also organise training camps. The amount of national team training camps per year vary depending on if it is the WFC year for men or women. The top three national teams have 2-5 national team training camps per year.

4. History of doping

There is a quite low risk of doping in Floorball. When looking at the Anti-Doping Rule Violations in floorball, cannabis is the most common prohibited substance. Since 2005 when the statistics have been collected by the IFF there have been 10 Anti-Doping Rule Violations in floorball from which seven are results of recreational drugs, including six cannabis cases. All of these ADRV's have been in the national leagues and the National Anti-Doping Organisations have been the results management authority. No positive tests have been found in the in competition and out of competition tests initiated by the IFF.

All IFF initiated tests as well as the NADO tests are standard urine analysis, except from some blood tests reported to have been conducted in 2010 in Switzerland.

The doping analysis statistics (2005 – 2012) are summarized below:

Year	**Substance**	**Nationality**	**Event/League**	**Sanction**
2005	Cannabis	FIN	Finnish League	6 months
2005	Norandrosterone	NOR	Out of comp. NOR	Two years
2005	Norandrosterone	NOR	Norwegian League	Two years
2005	Cocaine	NOR	Norwegian League	Two years

2007	Cannabis	CZE	Czech League	3 months
2007	Cannabis	GER	German League	6 months
2008	Methylephedrine	JPN	Japan League	3 months
2010	Cannabis	FIN	Norwegian League	1 year (2nd ARDV)
2010	Cannabis	SWE	Norwegian League	4 months
2010	Terbutaline	FIN	Finnish League	Warning
2012	Cannabis	CZE	Czech League	14 months
2012	Methylhexaneamine	NOR	Norwegian League	6 months
2012	Methylhexaneamine	NOR	Norwegian League	6 months

5. Doping control test statistics

The IFF annually collects the statistics of all doping controls made in floorball and publishes the statistics on the IFF website www.floorball.org under Anti-Doping. All IFF Member Associations annually reports on the doping controls performed nationally by the National Anti-Doping Organisations.

Floorball Test Statistics 2005-2013

Year	Total amount of Tests initiated in-competition by IFF	Out-of-Competition tests conducted by IFF	Total amount of Tests conducted in-competition (IFF + NADOs & MAs)	Total amount of Tests conducted out-of-competition	Total amount of Tests conducted in Floorball
2005	34	-	178	223	401
2006	32	-	184	171	355
2007	44	-	286	322	608
2008	92*	10	303	351	654
2009	52	19	264	306	570
2010	54	19	251	273	524
2011	58	26	253	278	531
2012	61	28	291	238	529
2013	61	31	256	233	489

**change of IFF competition system (2 EFC's played in 2008)*

The IFF is gathering the test statistic from each national member association and their NADOs in order to know how many doping controls are being carried out in each IFF member association. The doping control activities in the IFF member associations can then affect the IFF's Test Distribution Planning.

Test statistics reported by IFF Member Associations or NADOs 2008 – 2013

2013 MA Test statistics (tests by NADOs):

Country	In competition tests	Out of competition tests	Total
Sweden	40	114	154
Finland	65	72	137
Norway	52	12	64
Switzerland	16	1	17
Czech Republic	20	3	23
Latvia	2	0	2

2012 MA Test statistics (tests by NADOs):

Country	In competition tests	Out of competition tests	Total
Sweden	68	136	204
Finland	55	62	117
Norway	54	4	58
Switzerland	29	4	33
Czech Republic	20	4	24
Latvia	4	0	4

2011 MA Test statistics (tests by NADOs):

Country	In competition tests	Out of competition tests	Total
Sweden	56	136	192
Finland	48	47	95
Switzerland	22	38	60
Germany	9	31	40
Norway	32	0	32
Czech Republic	20	0	24
Latvia	4	0	4

2010 MA Test statistics (tests by NADOs):

Country	In competition tests	Out of competition tests	Total
Sweden	64	148	222
Finland	37	48	85
Switzerland	26	30 (10 blood)	56
Norway	32	0	32
Germany	6	18	24
Czech Republic	24	0	24

2009 MA Test statistics (tests by NADOs):

Country	In competition tests	Out of competition tests	Total

Sweden	59	194	253
Finland	43	43	86
Norway	48	16	64
Germany	15	33	48
Switzerland	18	1	19
Czech Republic	20	0	20
Latvia	4	0	4

2008 MA Test statistics (tests by NADOs):

Country	**In competition tests**	**Out of competition tests**	**Total**
Sweden	68	202	270
Finland	38	47	85
Germany	13	53	66
Norway	27	21	48
Switzerland	30	8	38
Czech Republic	15	4	19
Latvia	2	2	4

6. IFF Registered Testing Pools 2010-2014

Based on its risk assessment the IFF Testing Pool system is based on a pyramid approach and the focuses on the players who compete on the highest level according to ranking and other criteria**.** Each RTP1 player is tested at 1-2 times during their RTP 1 period (+ NADO tests).

Players who retire while being in the IFF RTP1, and that are making a comeback to the national team level, need to notice the IFF about their comeback in advance if they wish to continue their career on the national team level. These players are then included to the IFF RTP1. Also players that are serving a period of ineligibility are to be included in the IFF Testing Pool as well as possible suspected dopers.

IFF has two Registered Testing Pools (RTP´s):
1) Registered Testing Pool for Individual players (RTP 1)
2) Registered Testing Pool for National teams (RTP 2)

6.1 IFF RTP 1

An athlete in the IFF Registered Testing Pool 1 (RTP 1) is required to make a quarterly Whereabouts Filing that provides accurate and complete information about the Athlete's whereabouts during the forthcoming quarter.

IFF RTP 1 consists of at least 14 athletes, seven men and seven women. The athletes will be chosen every year from the top three countries according to the previous World Floorball Championships standings. The National Associations of the top three countries will propose their top players (first and second line players) to the IFF and the IFF will choose the players according to this pattern:

3 players from the Men's reigning World Champion nation

3 players from the Women’s reigning World Champion nation
2 players from the Men’s 2nd ranked nation
2 players from the Women’s 2nd ranked nation
2 players from the Men’s 3rd ranked nation
2 players from the Women’s 3rd ranked nation

These players will submit their individual whereabouts flings to the IFF four times a year.

6.2 IFF RTP 2

IFF RTP 2 consist top 4 national teams according to the world ranking. There will be 8 teams all together, top 4 Women’s teams and top 4 Men’s teams. The National Associations of the top 4 countries need to provide to the IFF the detailed information of all national team training camps, matches, tournaments and the players participating these national team activities.

The National Associations of the top 4 Men’s and Women’s national teams shall keep the IFF up to date about all training camps and matches. The detailed national team schedule with the national team roster shall also be sent to the IFF office latest 10 days before the start of the national team activity.

7. IFF Test Distribution Plan 2010-2014

2010:
Out of competition tests 2010: 19
In competition tests 2010: 54

2011:
Out of competition tests: 26
In competition tests: 58

2012:
Out of competition tests: 28
In competition tests: 61

2013:
Out of competition tests: 31
In competition tests: 61

2014:
Out of competition tests: over 30
In competition tests: over 60

7.1 In competition testing plan

- **Adults World Floorball Championships (WFC)**
  - Minimum 1 per team in the preliminary round (16) +
  - Minimum 8 tests in the play-offs starting from 2012 (4 tests 2010 & 2011)
  - 2011: 20
  - 2012: 24
  - 2013: 24
- **Champions Cup (CC)**
  - Minimum 1 per team in the preliminary round (12 tests)
- **Under 19 World Floorball Championships (U19 WFC)**
  - Minimum 8 tests
- **EuroFloorball Cup Final round (EFC)**
  - Minimum 4 tests in the play-offs
- **EuroFloorball Cup Qualifications (EFC Q)**
  - No mandatory tests
- **World Floorball Championships Qualifications (WFCQ)**
  - Minimum 1 test per team in the semi-finals (if semi-finals are played). Otherwise 2-4 teams will be tested according to the agreement with the organiser.
  - 2011: 14 tests divided as follows:
    - 6 Eur2Poland WFCQ (6 teams), 4 Eur1Spain WFCQ (5 teams), 2 tests AOFCQ (2 teams) and 2 tests AmericaWFCQ (2 teams)
  - 2012: 13 tests divided as follows:
    - 3 tests Eur1Germany (6 teams), 3 tests Eur2Slovenia (6 teams), 3 tests Eur3poland (5 teams), 2 tests AOFCQ (4 teams) and 2 tests AmericaQ (3 teams).
  - 2013: 13 tests divided as follows
    - Eur1: 4, Eur2: 4, AOFC: 3, America: 2

- 2014: 16 tests divided as follows
  - Eur1, Poland: 3 tests
  - Eur2, Slovakia: 3 tests
  - Eur3, Netherlands: 2
  - Eur4, Latvia: 3 tests
  - AOFC, New Zealand: 3 tests
  - America, Canada: 2 tests
- **Under 19 World Floorball Championships Qualifications (U19 WFC Q)**
  - No mandatory tests

7.2 Out of competition testing plan

- 2011: 25 OOC tests per year (28 in 2012 and 30+ in 2013-2014)
  - 2011 example:
    - 18 RTP1:
      - 17 1 hour time slot tests (3 RTP1 2010 players) +
      - 1 RTP 1 test outside one hour time slot +
    - 7 RTP 2

- 2012: 28 OOC tests per year
  - 2012 example:
    - 20 RTP 1
      - 17 1 hour time slot
      - 3 RTP 1 tests outside one hour time slot
    - 8 RTP 2

- 2013 example: over 30 (31) OOC tests per year
  - 2013 example:
    - 21 RTP 1
      - 18 1 hour time slot
      - 3 RTP 1 tests outside time slot
    - 10 RTP 2

- 2014 example: over 30 (31) OOC tests per year
  - 2013 example:
    - 21 RTP 1
      - 18 1 hour time slot
      - 3 RTP 1 tests outside time slot
    - 10 RTP 2