

# Fluor Ban Implementation

May 2023



# 2023/24

- 22nd March – FIS/IBU confirmed full implementation of the fluor wax ban at start of 2023/24 season
- FIS will carry out testing to ensure that skis are fluor-free at top-tier events
  - FIS World Cup
  - FIS World Ski Championships
  - Other major events such as FIS Junior World Ski Championships
  - YOG
- Testing at other level events will be carried out on a random basis to ensure those events are also regulated
  - Cooperation with NSAs

# Status “fluor” detecting system

- The “fluor” detecting system developed in joint cooperation between IBU and FIS
- **The system consists of three parts**
  - The FTIR Spectrometer
  - Multivariate QUANT model
  - The logistical procedure to conduct efficient tests
- **What is it?**
  - A laboratory system in the field of play
  - Measurement results under high time pressure.
- **What does it do?**
  - The system detects the presence of the C-F bond down to a level of no competitive advantage.
  - The control is nondestructive.



# Getting ready for 2023/24

## CLEANING

### Large parts

- Working space
- Waxing tables
- Ski bags

### Working tools

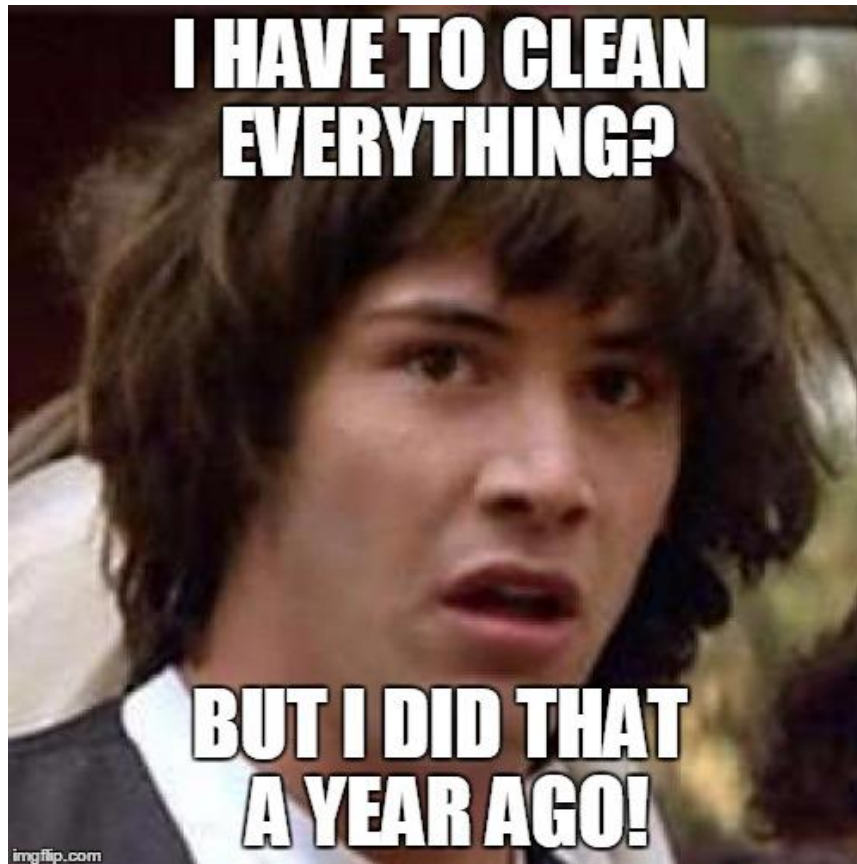
- Tools
- Brushes
- Soft tools (roto brushes hard to clean)

### Skis

- Cleaner + hot wax
- Ski in clean skis
- Stable and reproduceable cleaning method
- Team's responsibility

### NF products

- FIS Equipment control team on site



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# Testing Procedure - TBC

- **Ski marking**
  - Stickers
- **Number of pairs**
  - 1 pair / athlete - Free technique competitions
  - 2 pairs / athlete – Classic technique competitions
  - Max 3 pairs (Mass Start Classic with ski exchange, Skiathlon)
- **Ski delivery time**
  - 30 min – interval, mass start, pursuit
  - 20 min – relays
  - 15 min – sprint heats

# Testing set up

- Pre-start – as close as possible to the start
- Testing tent
- Space for ski storage before and after the testing station
  - Each ski will be placed by the technician/athlete in the correct rack.
  - Fenced off area, access only for Jury + FIS staff as well technicians of the athletes who will leave the skis in the space
  - Protection against sun, wind, rain and snowing (roof and some side walls, but no heating)
  - Control by officials to check if all skis are in the position before the indicated time
  - Ski racks with athletes start numbers

# Ski Delivery Time

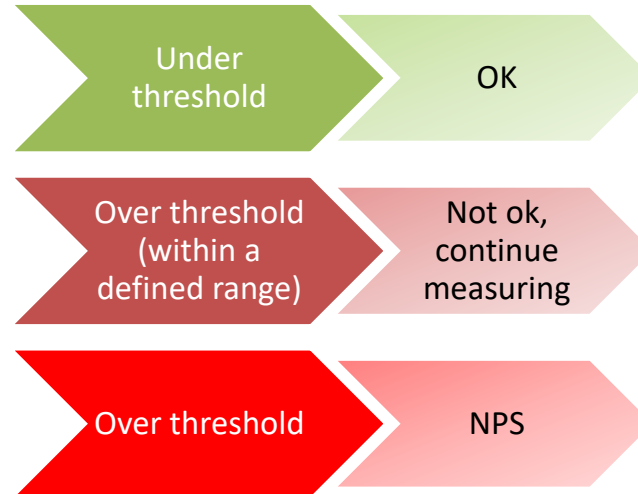
- Start of the season with 30 – 20 – 15 min
  - Avoid bottlenecks
  - Necessity to deal with borderline cases – more time for testing
  - Buffer
- Adjustment (maybe) possible – not guaranteed



FORMAT	TECHNIQUE	NO. OF PAIRS	TIMELINE*	SKIS PICK UP
Mass Start	F	1+1	-30 min	Athletes before start
Mass Start	C	2 + 1	-30 min	Techs after the test – 10 min after ski delivery
Interval Start	F	1	-30 min rolling deadline	Athletes before start
Interval Start	C	2	-30 min rolling deadline	Techs after the test – 10 min after ski delivery
Skiathlon	C+F	2 C, 1 F	-30 min	Techs after the test – 10 min after ski delivery
Pursuit	F	1	-30 min	Athletes before start
Pursuit	C	2	-30 min	Techs after the test – 10 min after ski delivery
Sprint Q	F	1	-30 min rolling deadline	Athletes before start
Sprint Q	C	2	-30 min rolling deadline	Techs after the test – 10 min after ski delivery
Sprint Heats	F	1	15 min before the start of each heat (W and M)	Athletes before start
Sprint Heats	C	2	15 min before the start of each heat (W and M) <b>Not allowed to wax during heats – only kick zone</b>	Techs after the test After finish – skis transported by officials to start
Relay	C F	2 1	20 min before the start of each leg	C - Techs after the test F - Athletes before start

# Measuring procedure - TBC

- Aim to test minimum 1 ski of each pair
- All competitors
- Up to 3 measuring points on each ski
- 20 seconds/measuring point
- Threshold
  - Absolute error of QUANT model
  - Tolerance



# ICR

- **222.8**

Use of fluorinated wax or tuning products containing fluorine is prohibited for all FIS disciplines and levels. Fluorinated wax can be a competitive advantage and its use in competition will result in disqualification. (see competition rules and equipment specifications.)

# Sanctions - TBC

- **Before the start**

## **351 Not Permitted to Start**

Competitors will not be permitted to start in any FIS international ski competition who:

351.2. violates the FIS rules in regard to equipment (art. 222) and commercial markings (art. 207)

- **After the finish**

DSQ as per 222.8 – to be discussed – contamination

- **Not respecting the ski delivery time – sanctions TBC**

– NPS, monetary fines, etc.

# Re-Waxing during the sprint heats - TBC

- **343.12 Equipment exchange**

343.12.6 Waxing, scraping or cleaning of the competitor's skis during the competition is forbidden **with the following exceptions:**

In classical technique competitions competitors may scrape their skis to remove snow and ice, and add wax if necessary. Competitors may only be handed tools or materials and must do this outside of the track without help from any other person. It is not allowed to place branches, tools or materials on or adjacent to the groomed course.

**During classic Individual Sprint competitions, adjustments to the kick wax may be made between the rounds by the competitor or authorized personnel within the designed Control Area.**