



28th November 2023

OFFICIAL NOTICE

AMENDMENTS TO HARNESS RACING NEW ZEALAND REGULATIONS

PROHIBITED SUBSTANCE REGULATIONS – TCO₂

On 22nd November 2023, the HRNZ Special Committee considered and approved an amendment to the Prohibited Substance Regulations, on recommendation from the Racing Integrity Board (RIB), effective 1st December 2023.

By way of background, the RIB has provided the following information:

For over twenty years we have been measuring TCO₂ using instruments that employ ion-selective electrode technology. The international threshold was established using this technique. However, these systems are no longer available and are not supported by the manufacturer anymore.

Head-space gas chromatography/mass spectrometry is the best alternative and the Melbourne lab has spent over two years cross validating a robotic head space system and their new method is now accredited. In November last year, we commissioned an identical system and are now in the final stages of our validation with a view to becoming accredited as soon as possible. This system has also been installed by the labs in Perth and Sydney and will shortly be purchased by labs elsewhere in the world.

The regulations define what TCO₂ measurement means to remove any ambiguity with other types of measurement (particularly from gas-analyser systems). Alkalinising agents increase HCO₃⁻ in blood and this is converted to CO₂ when acid is added to the sample. The CO₂ released must be measured by the original technique (ion selective electrode) or by a technique that has been cross validated to demonstrate that the measurements are equivalent in terms of accuracy and precision. The head-space gas chromatography/mass spectrometry method meets these requirements and will be the standard technique in Australasia (and elsewhere eventually).

The effect of this change is to update clause 10.2 of the Prohibited Substance Regulations to state (amendment underlined):

*“10.2 Total carbon dioxide (TCO₂) means the total carbon dioxide released upon sample acidification as measured by **either** ion-selective electrode or head-space gas chromatography/mass spectrometry.”*

The full amended Regulations will be available on the HRNZ website by 1st December 2023.

Dated this 28th day of November 2023.

A handwritten signature in blue ink, appearing to read "Mauro Barsi", with a long horizontal flourish extending to the right.

Mauro Barsi
Chief Operating Officer