Dangers of Methylhexaneamine (MHA) and Dietary Supplements

The SportAccord Doping-Free Sport Unit advises athletes to **exercise extreme caution when using any food supplement product**.

Food supplement regulation varies from country to country and there is no guarantee that supplements do not contain banned substances (even those sold in pharmacies). These products are not subject to strict manufacturing controls and dietary supplement mislabeling creates a risky environment for athletes. A banned substance might not appear on the product label even if the product contains it; this can be as a result of contamination during the manufacturing process or a manufacturer deliberately leaving it off the label.

Whether due to intentional or unintentional doping, supplements and sport nutrition products continue to be the source of many doping violations around the world. An example of this is the high number of recent violations for methylhexaneamine, a specified stimulant that is prohibited in-competition under the current WADA Prohibited List (S6.b – Specified Stimulants).

Methylhexaneamine, like many drugs, also has several **alternate names**, including:

- methylhexaneamine OR methylhexanamine
- 1,3-dimethylpentylamine OR pentylamine
- 1,3-dimethylamylamine OR DMAA
- Geranamine
- Floradrene
- 2-hexanamine, 4-methyl- OR 2-hexanamine, 4-methyl- (9CI) OR 4-methyl-2-hexanamine OR 4-methyl-2-hexylamine
- 4-methylhexan-2-amine OR 2-amino-4-methylhexane
- Forthan OR Forthane OR 1,3-dimethylamylamineforthane
- $C_7H_{17}N$

Moreover, if "geranium" is listed as an ingredient on the label of a supplement, the product may contain synthetic methylhexaneamine.
A few **examples of products** that currently list some form of methylhexaneamine on the label:

- Jack3d (www.usplabsdirect.com/catalog/product_info.php?products_id=115)
- OxyELITE Pro – USPlabs (www.usplabsdirect.com/OxyELITE-Pro)
- Hemo-Rage Black Ultra Concentrate – Nutrex (underground.nutrex.com/products/hemo-rageUC.asp)
- Rezolution – LG Sciences (www.lgsciences.com/Rezolution-Diet-Pill-p/rezolution.htm)

However, as already mentioned, **even if a prohibited substance is not listed on the product label (with the name on the WADA Prohibited List or one of its alternate names), there remains the real risk of a positive test!**

Athletes must be aware that they assume the risks of adverse health outcomes and positive anti-doping tests when choosing to take supplements, and under the SportAccord Anti-Doping Rules and World Anti-Doping Code, **the athlete is responsible for any prohibited substance found in his or her system, regardless of how it got there (principle of strict liability)**. Before taking any supplements, athletes are therefore urged to take all the necessary steps to be informed consumers and evaluate any supplements, including: understanding all ingredients, consulting with a medical doctor to assess whether taking a supplement is necessary, and having products tested to ensure safety.

SportAccord | Maison du Sport International | Avenue de Rhodanie 54 | CH-1007 Lausanne | Switzerland
Tél. +41 (0)21 612 30 70 | Fax. +41 (0)21 612 30 83 | sportaccord@sportaccord.com | www.sportaccord.com