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“FUCO-BAR” – A product that improves an athlete’s performance

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High achievements in sports require the development of new technologies which help reduce the negative impact of intense physical exertion as well as improve the homeostasis of the main energy provider - glucose. Specialists of the Russian company ProtenFarma, specializing in the development of Specialized Medical, Sports Nutrition, have developed a Specialized Nutrition (release form bar) fortified bar to improve the athlete's nutritional status. To increase the efficiency of this product, it was important for it to not just provide macro and micronutrients, but for the product to also be able to help use these nutrients effectively in order to build and maintain such body functions as metabolism. To do this, the sulfated polysaccharide fucoidan, developed by Fucoidan-World Co., was added to the “Balance Energy” bar as one of its ingredients. Hence, the bar was named “Fuco-Bar”. The “Fuco-Bar” has been successfully tested in Minsk at the Belarusian University of Physical Culture with young male national team athletes, middle distance runners, during training camp. They each were given their nutrition bar twice a day – in the morning and evening. Various indicators of athletic performance were measured both at the beginning and end of training camp: during the 30m run – speed capabilities; during the 3km run – aerobic endurance; during the standing long jump a special formula was used to calculate the instantaneous power in watts (W). A treadmill simulator was used; blood sugar, hemoglobin, erythrocyte and leukocyte levels were also determined. Furthermore, practice sessions missed due to illness were thoroughly recorded. Following the end of training camp all of the listed indicators were once again measured, evaluated and compared to the initial data as a percentage. The control group showed an improvement in performance in two tests: during the 3 km run and on the treadmill. At the same time, this group showed an increase in their leukocyte levels and their number of missed training sessions due to illness exceeded the team's average. The experimental group showed a statistically significant improvement in all test indicators, while the number of missed workout sessions in this group proved to be three times lower. This innovative product passed the test in a WADA Accredited Laboratory and received a protocol on the absence of any drugs the consumption of which is prohibited in sports. Thus, “Fuco-Bar” is a successful, specialized, non-doping product for enhancing an athlete's performance.

Biography

Emil Mukhamejanov is a doctor of medical sciences, professor. In 1964-1972, I worked in the Institute of Physiology, responsible for the regulation of muscle contraction. In 1974-1991, I worked in the Institute of nutrition, responsible for the regulation of energy metabolism and metabolic diseases. Developed metabolic model of balanced diet coupled with effects of toxic compounds, physical activity and dietary factors. Has developed specialized nutrition products for athletes and for the prevention and treatment of metabolic diseases. Currently working in the Scientific Center of anti-infective disorders, develop approaches of reducing the negative impact of drugs. I participate in a grant (JSC National Medical University named after S. Asfendiarov) for the study of polymorphism in diabetes mellitus. I am a scientific consultant at Fucoidan-World.

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