

# STUDYING OF NUTRITION VALUE OF RED PALM OIL OF "PREMIUM CARATINO" (REPUBLIC OF UZBEKISTAN)

Ermатов N.J.<sup>1</sup>, Rustamov B.B.<sup>2</sup> (Republic of Uzbekistan)

Email: Ermatov542@scientifictext.ru

<sup>1</sup>Ermatov Nizom Jumakulovich – Doctor of Medical Sciences, Associate Professor, Head,  
DEPARTMENT OF HYGIENE OF CHILDREN, TEENAGERS AND NUTRITION HYGIENE,  
MEDICAL ACADEMY, TASHKENT;

<sup>2</sup>Rustamov Bakhtiyor Boysariyevich – Sanitary Doctor of the highest category,  
THE CENTER OF THE STATE SANITARY AND EPIDEMIOLOGICAL SURVEILLANCE, SAMARKAND,  
REPUBLIC OF UZBEKISTAN

**Abstract:** the research of composition of red palm oil allowed to establish that «Premium Caratino» oil is characterized by the high content of carotinoids, tocopherols and tocotrienol. The recommended portion of red palm oil for the person makes 14 g, the maintenance of carotinoids in red palm oil made 450 mg/kg, the general contents saturated and monounsaturated fatty acids in this oil, respectively above, than in sunflower. The studied oil can be entered into a ration for a diet restore by natural carotinoids ( $\beta$ -carotinum), vitamin E and Coenzyme Q10.

**Keywords:** nutrition hygiene, nutrition value, palm oil, acid number, carotenoid, tocopherol, tocotrienol, saturated and monounsaturated fatty acids.

## ИЗУЧЕНИЕ ПИЩЕВОЙ ЦЕННОСТИ КРАСНОГО ПАЛЬМОВОГО МАСЛА "PREMIUM CARATINO" (РЕСПУБЛИКА УЗБЕКИСТАН)

Эрматов Н.Ж.<sup>1</sup>, Рустамов Б.Б.<sup>2</sup> (Республика Узбекистан)

<sup>1</sup>Эрматов Низом Жумакулович – доктор медицинских наук, доцент, заведующий кафедрой,  
кафедра гигиены детей, подростков и гигиены питания,  
Ташкентская медицинская академия, г. Ташкент;

<sup>2</sup>Рустамов Бахтиёр Бойсариевич – санитарный врач высшей категории,  
Центр государственного санитарно-эпидемиологического надзора, г. Самарканд,  
Республика Узбекистан

**Аннотация:** исследование состава красного пальмового масла позволило установить, что масло «Premium Caratino» характеризуется высоким содержанием каротиноидов, токоферолов и токотриенолов. Рекомендуемая порция красного пальмового масла для человека составляет 14 г, содержание каротиноидов в красном пальмовом масле составило 450 мг/кг, общее содержание насыщенных и мононенасыщенных жирных кислот в данном масле соответственно выше, чем в подсолнечном. Изучаемое масло может быть введено в рацион для восполнения диеты натуральными каротиноидами ( $\beta$ -каротин), витамином E и Коензиме Q10.

**Ключевые слова:** гигиена питания, пищевая ценность, пальмовое масло, кислотное число, каротиноид, токоферол, токотриенол, насыщенные и мононенасыщенные жирные кислоты.

Nutrition is one of the fundamental factor defining health of the population, providing normal body height and development of the children promoting active longevity, increasing fastness of an organism to adverse factors of the environment. The deficiency or excess macro - and micronutrients as causes immediate developing of diseases (anemia, an obesity, an endemic struma and others) and depression of resilience of an organism to acute respiratories and infectious diseases and creates conditions for development of this or that pathology (diseases of cardiovascular system, illness of a metabolism, the system of digestion and others) [1; 2, p. 88].

Use of this oil in a delivery with the preventive and medical purpose is approved by the Swiss institute of vitamins, the Austrian fund of heart, cardiologic funds of the Republic of South Africa of Singapore. By Karotino it was approved and it is widely applied by the population of Great Britain, Portugal, Japan, Avtria, India, Malaysia, Singapore, the Baltic States, Russia and others [4; p. 60].

Red palm oil is manufactured in Malaysia in rather large volume and to well wide range of consumers. It is got from palm tree fetuses. Due to new technologies, the carotenoids which are contained in oil which give color to oil can be kept also in the refined product.

Various components of a nutrition (macro - and micronutrients) and natural biological active bonds of a plant origin and also the active metabolites which are formed as a result of their hydrolysis are the potent factors rendering both the immediate, and mediated influence on an expression of genes, synthesis of proteins including, and the enzymes defining specificity, kinetic features and orientation of metabolic processes [3; p. 22].

Palm oil is one of the most ancient vegetable oils applied by the person to cooking. Now, in the world 20 million tons of palm oil, or 25% of all vegetable oils [5; p. 5783]. One of types of palm oil is «Premium Caratino» - the natural recreational, refined red palm oil from the pulp of fetuses enveloping seeds of a palm tree.

When determining nutrition value of red palm oil it was taped that the acid number of red palm oil makes 0,68 mg KOH. If to consider that, oil is used as biological active additives, but not as alimentary, then the indicator of acid number is within admissible size. The value of iodine number of oil (72,2% of J<sub>2</sub>) shows that this oil is enriched with fatty acids what the composition of fatty acids established by a gas liquid chromatography method testifies to.

The recommended portion of red palm oil for the person makes 14 g. It is calculated that, the biological value of one portion following: fats - 14 g (from them monosated – 6,5 g, polysated - 1,9 g and sated - 5,6 g); natural carotinoids – 7 mg, β-carotinum (Pro-vitamin A) – 3,32 mg, α-carotinum (Pro-vitamin A) – 2,59 mg, other carotinums – 1,09 mg; vitamin E - 11,20 mg; Coenzyme Q10 – 0,6 mg. The maintenance of carotenoids in red palm oil made 450 mg/kg, other oils don't contain carotenoids in the structure.

Thus, the research of composition of red palm oil allowed to establish that «Premium Caratino» oil is characterized by the high content of carotinoids, tocopherols and tokotriyenol. The general contents saturated and monounsaturated fatty acids in this oil, respectively above, than in sunflower. The studied oil can be entered into a ration for a diet restore by natural carotenoids (β-carotinum), vitamin E and Coenzyme Q10.

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