

April 10, 2016

POLYTECH - Biochemistry - Biotechnology Department of the University of Thessaly

Larisa, 10.4.2016



NEW COOPERATION

Date

9 - 10/4/2016

Location

Athens Science Festival, Gazi

POLYTECH activity

Presentation of Biolab during the Athens Science Festival 2016.



AN INNOVATIVE APPARATUS FOR DETERMINING THE ANTIOXIDANT CAPACITY OF LIQUID FOOD

"The scientific team of Thessaly University, led by Professor D. Kouretas, after research and clinical studies for the enhancement of the antioxidant human defenses, developed a device that can calculate the antioxidant capacity of liquids such as coffee, juices, beer and wine. These daily drinks can give us the perfect amount of antioxidants to our body with the proper measurement.

The device is very easy to operate, includes a colorimeter and a software, the combination of which allows the measurement of the antioxidant capacity of a liquid using essentially only one drop of it. Many studies recognize the importance of food with antioxidant properties for their role in our health. These superfoods have become part of our daily diet for covering the body's needs in antioxidants which play a particularly important role in the protection of both the cell and the entire organism from free radicals.

Antioxidants neutralize the excess of free radicals, but when the endogenous amount is insufficient, the supply of dietary antioxidants is essential in order not to drive the organization to a phenomenon called oxidative stress and is associated for years with a variety of pathological conditions such as various cancers, cardiovascular diseases, neurodegenerative diseases. Plant products before they reach the consumer are being processed which can greatly affect their properties.

However, the final product can enhance the antioxidant defense of the organism as has been demonstrated by the clinical studies conducted in the Animal Physiology Organizations Laboratory of Biochemistry and Biotechnology Department, University of Thessaly, conducted by Professor Dimitris Kouretas group. In particular, it seemed that the daily consumption of pomegranate juice for two weeks improved the redox image of the organization, increasing antioxidants and reducing oxidative stress indicators. In order to create an individual diet based on the needs of each person in antioxidants first should be measured the antioxidant capacity of any human organism something that could be easily done by another device that is projected by the same group.

This effort aims to personalize medicine so in long term to allow the existence of individual therapies based on the metabolic and genetic profile of each individual. This trend is global, even the US president, Barack Obama, recently made an announcement concerning the 'Precision Medicine Initiative'."

The apparatus was presented at Athens Science Festival at Gazi 9-10 of April, 2016.

With the scientific team, cooperated three domestic companies: Polytech, Coffee Island, Serinth.