



Megamin
Activ®

TRIBOMECHANICALLY ACTIVATED
ZEOLITE (TMA-Z) – MEGAMIN ACTIV
NEW **ENZIMATIC** ANTIOXIDANT AS
A PRODUCT OF NANOTECHNOLOGY



Image1: Device for dynamic grinding micronization (TRIBOMECHANICAL ACTIVATOR)

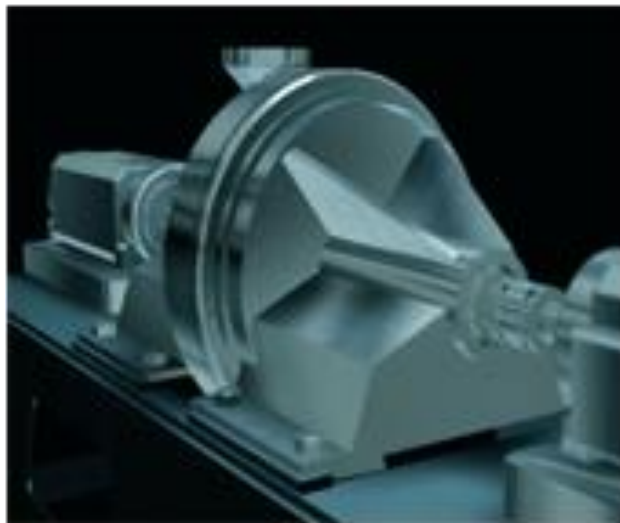
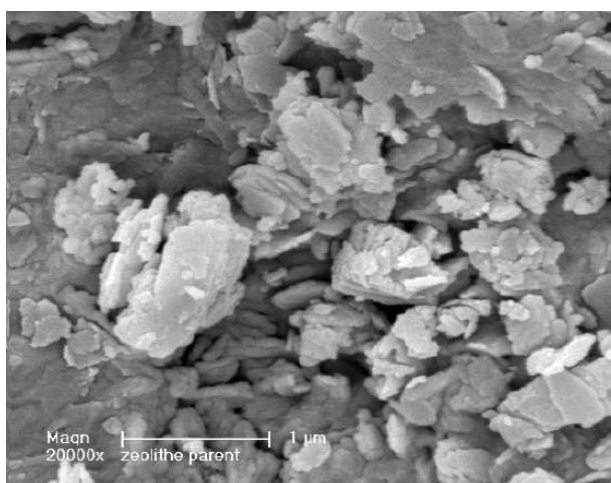


Image2: Tribomechanically Activated Zeolite (TMA-Z) 20000X



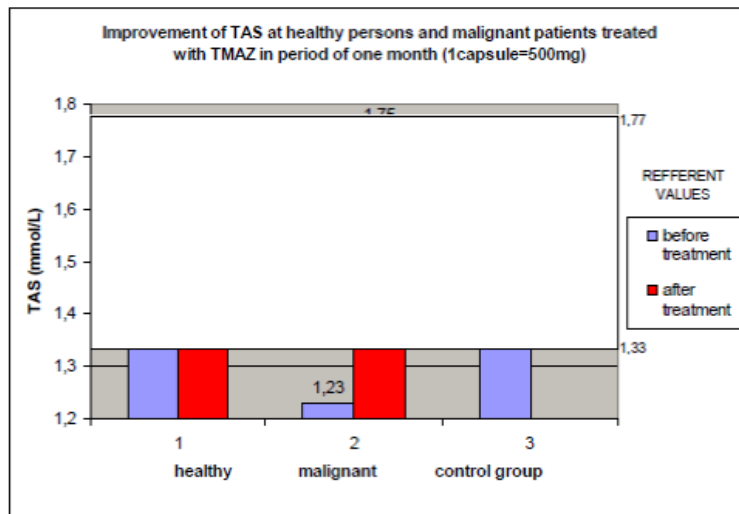
Tribomechanical activation and micronization (TMA)

Samples of powdered whey protein concentrate were tribomechanically treated with the laboratory equipment for tribomechanical micronisation and activation (TMA equipment) shown in image

1. The equipment consists of housing that was cooled with cold water and two rotor disks placed one against the other. Each disk supplied with 3 to 7 concentric wreaths with especially constructed hard metal elements. Disks rotated in opposite directions at the same angular rate. The starting material entered the equipment through the central part of the rotor system by ventilating air streaming. Therefore, the particles were accelerated and, because of the repeated change of motion directions, they were in collision and friction at short time intervals (< 1 ms). The results of such treatment were fragmentation, increase of specific area and change of energetic potential(activity) of materials.

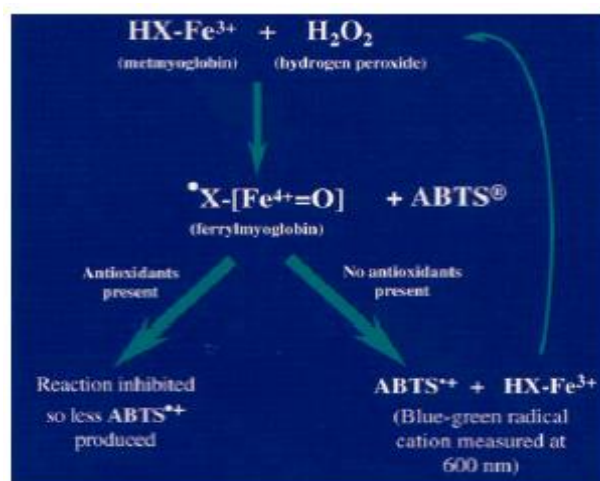


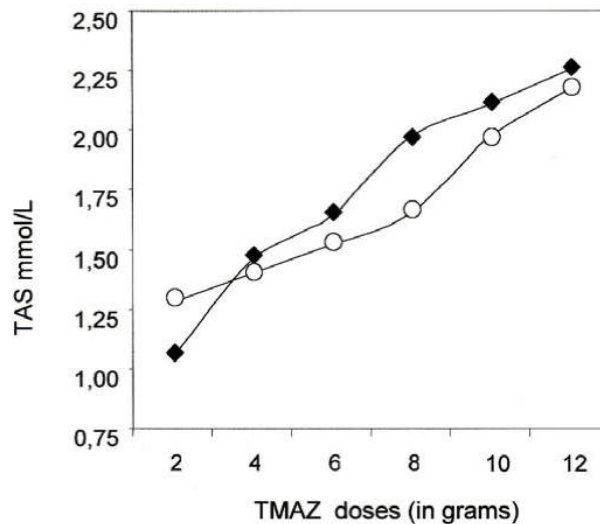
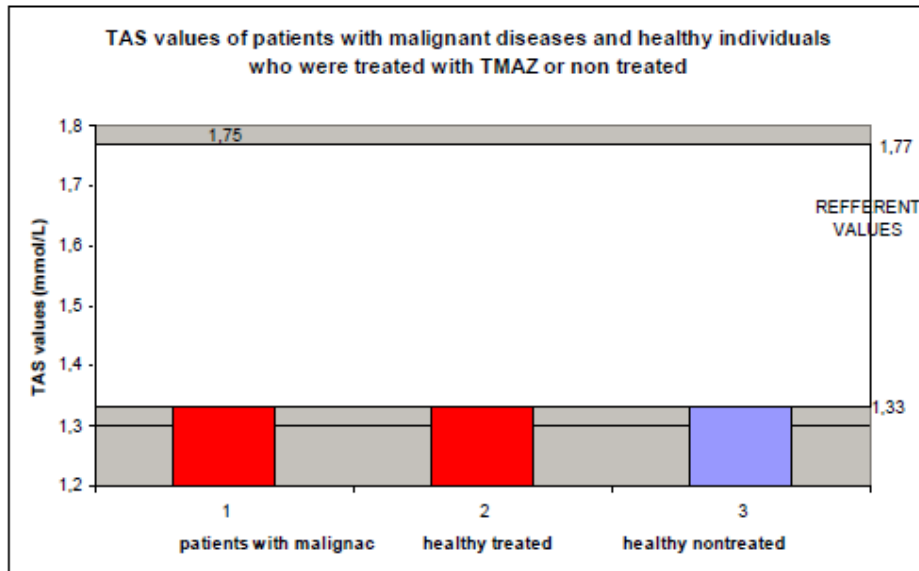
Antioxidant effect of TMA-Z (tribomechanically activated zeolite) – MEGAMIN AKTIV



Assay principle

Incubation of ABTS® with a peroxidase (metmyoglobin) and hydrogen peroxide results in the production of the radical cation ABTS^{•+}. This species is blue-green in colour and can be detected at 600 nm. Antioxidants present in patient serum or plasma samples inhibit the reaction and development of the blue-green colour. The degree of inhibition is proportional to the concentration of antioxidants in the patient sample. The Randox Total Antioxidant Status test is a two-reagent assay, and can be performed using serum or plasma samples. Additionally, the assay may be used to measure the antioxidant potential of (suitably solubilised) food and drug samples.





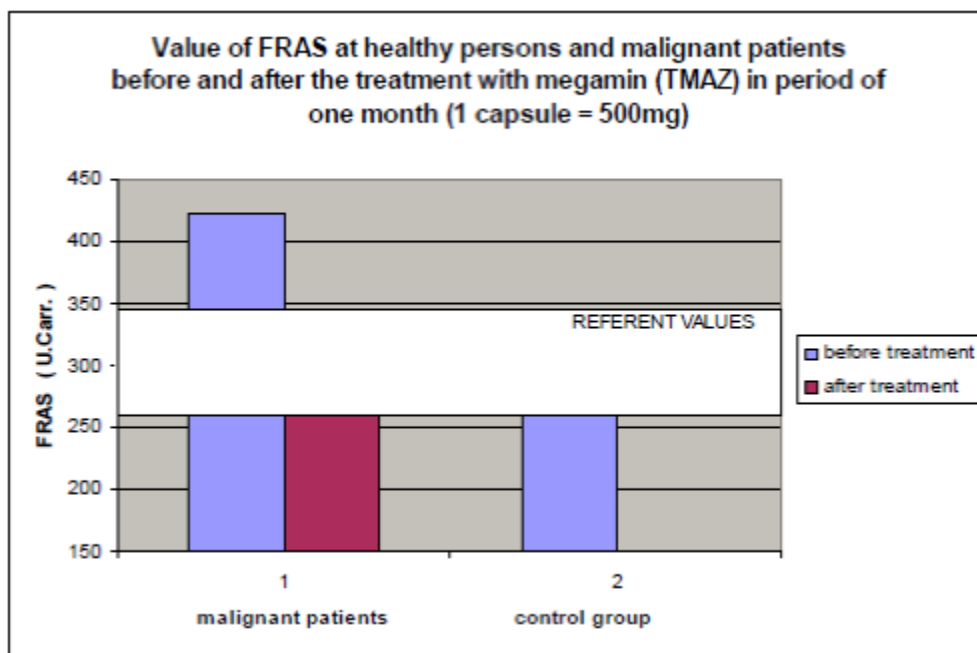
TAS values of patients with malignant disease (line with rhombs), and healthy individuals (line with circles)

Chinery and associates showed that the antioxidants pyrrolidinedithiocarbamate and vitamin E can induce apoptosis in colorectal cancer cells. They found that this effect is mediated by induction of p21, a potent inhibitor of the cell cycle. These effects were independent of p53, which is thought to monitor the integrity of the cellular genome and responds to DNA damage by inducing cell-cycle arrest and/or apoptosis.

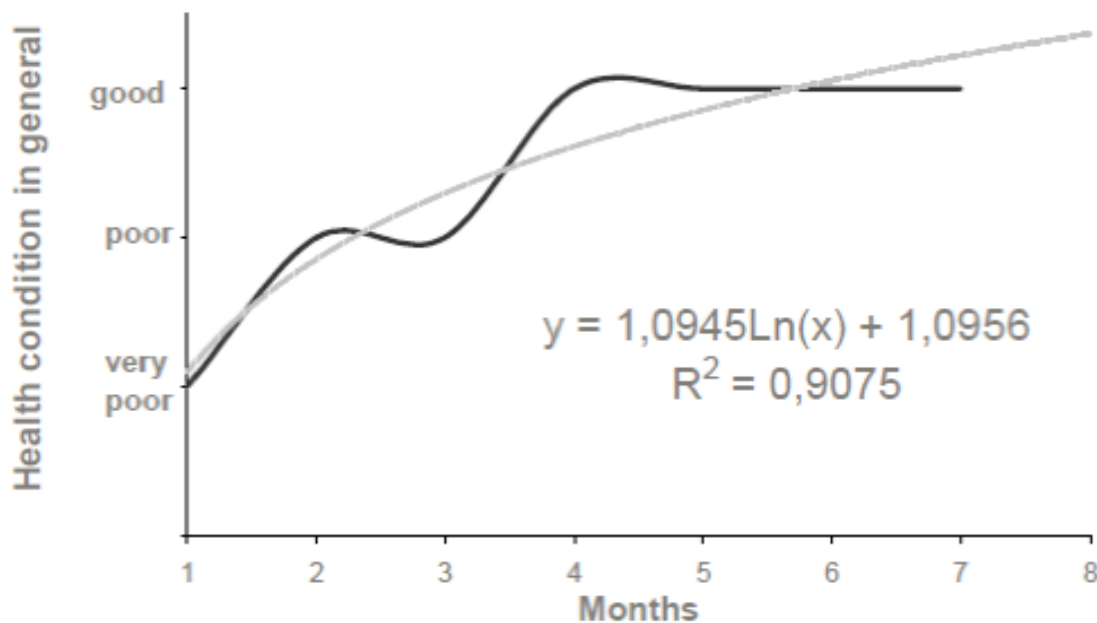
Free Radical Analyse System (FRAS)

Free Radical Levels

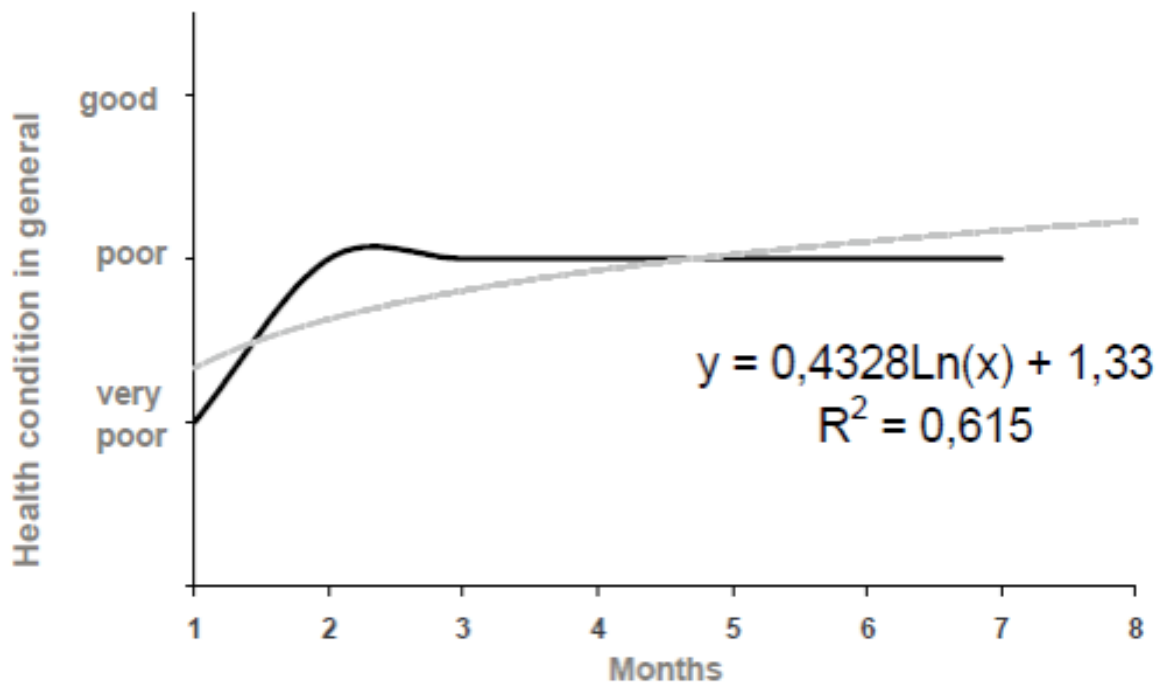
FRAS (Free Radical Analytical System) is the only system available in the world which is able to dose all types of hydrperoxide present in a biological sample via a simple, rapid, reliable and repeatable method using mere a drop of blood.



Lung carcinoma patients



Digestive carcinoma patients



Our results indicate that tribomechanically activated zeolite clinoptilolite, is potentially a new antioxidant which seems to have bigger capacity than already known antioxidants. Scientist and at all showed that TMA-Z has strong adjuvant and in some cases direct anti tumour effect in treatment of some solid tumours induction followed by programmed cell death of some human tumour cells. We have noticed that in animals. TMA-Z induces p21Cif1/Waf1 and p27 Kip1 patients with malignant diseases who were taking TMA-Z significantly increases TAS values of patients with malignant diseases as well as healthy individuals. Daily dose of patients with malignant diseases should be 16 capsules, what is more than RDA. Megamin can be used as an adjuvans or reborans in any standard therapy of malignant disease, with the aim to improve the general health condition of patients and help them to recover much TMA-Z, have improved their general health condition. easier and in a shorter period of time. Roborans (general health condition) effect of TMA-Z Anticancer therapeutic protocols based on specific combination of various antioxidants are accepted. Here we present a new potential antioxidant tribomechanically activated zeolite (TMA-Z). TMA-Z significantly increases total antioxidant status (TAS) of patients with malignant diseases as well as healthy individuals. TMA-Z can be used as an adjuvans or reborans in any standard therapy of malignant diseases, with the aim to improve the general health condition of patients and help them to recover much easier and in shorter period of time.

THE EFFECT OF TRIBOMECHANICALLY ACTIVATED ZEOLITE (TMA-Z) ON TOTAL ANTIOXIDANT STATUS OF HEALTHY INDIVIDUALS AND PATIENTS WITH MALIGNANT DISEASE

Subject of study: Anticancer therapeutic protocols based on specific combination of various antioxidants are accepted. Here we present a new potential antioxidant tribo-mechanically activated zeolite TMA-Z as a product of Nano Technology. TMA-Z significantly increases total antioxidant status (TAS) and lower free radicals in blood, measured by Free Radicals Analysis System (FRAS). We have performed both tests on patients with malignant disease as well as healthy individuals. TMA-Z is gained in the process called tribomechanical micronization and activation (nanomedicine- technology).

Patients, materials and methods: Total antioxidant status. By measuring Total Antioxidant Status we followed overall activity of three antioxidant enzymes Saiperoxid Dismutase (SOD), Glutathion Peroxidase (GPx) and Gluthation Reductase (GR). We used test system from Randox Laboratories Ltd, Crumlin, United Kingdom. Antioxidants in added sample cause inhibition of the radical

(cation ABTS+®) to a degree that is proportional to their concentration. Test has been performed on 45 individuals. 22 healthy (10 male, 12 female), 18 patients with malignant disease (7 male, 11 female), all in the age of 40—70, 5 individuals were in the control group. FRAS is a system which is able to dose all types of hydroperoxide present in a biological sample via a simple rapid, reliable and repeatable method using a mere drop of blood. We had 22 female patients and 24 male patients with malignant disease.

Summary: Our results indicate that tribomechanically activated zeolite, clinoptilolite is potentially a new antioxidant which seems to have bigger capacity than already known antioxidants. We have noticed that patients with malignant disease, who were taking TMA-Z, have improved their general health condition. TMA-Z also significantly increases TAS values.

Conclusion: TMA-Z can be used as an adjuvans or roborans in any standard therapy of malignant disease, with the aim to improve the general health condition of patients and help them recover much easier and in a shorter period of time.