

## Tárgytematika / Course Description

### Role of micronutrients in producing functional food and/or dietary additives

N\_DMA55

Tárgyfelelős neve /

Teacher's name: dr. Szakál Pál

Félév / Semester: 2024/25/2

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 0/0/0

Tárgy féléves óraszám /

Teaching hours(sem.): 30/0/0

### OKTATÁS CÉLJA / AIM OF THE COURSE

The aim of the course is to give a comprehensive picture of functional food and dietary additives, the physiological significance of micronutrients, and the processing procedures in the food industry. This course covers the physical and chemical procedures through the production of functional food and dietary additives. The course gives high priority to the content of minerals in functional food products and dietary additives, especially their micronutrient content. The course provides basic knowledge for the courses of "Food biotechnology" and "Applied microbiology".

### TANTÁRGY TARTALMA / DESCRIPTION

1. More important micro-, meso-, and macronutrients in the flora.
2. Physiological role of more important micronutrients in the flora.
3. More important micro-, meso-, and macronutrients in the fauna.
4. Physiological role of more important micronutrients in the fauna.
5. Analytical methods to determine micro-, meso-, and macronutrients.
6. Possibilities of using AAS and ICP techniques to determine micronutrients.
7. Determining nitrogen and phosphorus content in food.
8. Characteristics of functional food.
9. Role of vitamins in the production of functional food.
10. Characteristics of dietary additives.
11. Enriching the food products with micronutrients.
12. Regulating the concentration and limits of micronutrients in food products and dietary additives.

### SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

Meeting the conditions set by the supervisor.

### KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Biró Gy.: Funkcionális élelmiszerek, természetes antioxidánsok szerepe az egészségmegőrzésben

<http://chemonet.hu/osztaly/eloadas/birgyorgy.html>

**Biró Gy., Dworschák E., Zajkás G.** (1997): Élelmiszerek az egészségmegőrzésben. Budapest. Béres Rt. 113 p.

**Diplock, A. T., Aggett, P. J., Ashwell, M., Bornet, F., Fern, E. B., Roberfroid, M. B.** (1999): Scientific concepts of functional foods in Europe: Consensus document. *British Journal of Nutrition*. 81. S1-S27. p.

**Katan, Martijn B.** (1999): Functional foods. *The Lancet*. 354. 794. p.

**Kőrös E.** (1980): Bio-szervetlen kémia, Gondolat Kiadó, Budapest

<http://www.oeti.hu/?m1id=1&m2id=45>

**Takács S.** (2001): A nyomelemek nyomában, Medicina Könyvkiadó Rt., Budapest

---

## AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL