

Summer Research Internship Project Proposal

Project Topic	Palatinose in food and food supplements		
Name	Jiří Pazourek	Field	biochemistry, analytical chemistry, sugars
Department	Dept Chem Drug, Faculty of Pharmacy	Keywords	Palatinose, food supplements, HPLC

Description of the Project (overview, expected outcomes, reason for research, proposed outcomes for student(s))

The molecule of Palatinose (isomaltulose) cannot be metabolically broken down into glucose and fructose as quickly as sucrose. This has prompted ongoing clinical trials on isomaltulose in dietary supplements for physical performance. Today, it is widely added to fitness supplements for athletes as a long-term source of energy. It can be also found on the market as a substitute for sugar in tooth-friendly chewing gum, instant teas (prevention of tooth decay) or in lifestyle nutrition.

The goal of the proposal is to map food and food supplement products containing Palatinose in the growing market of the Czech Republic and to check its content declared by the producer.

The student will learn about the nutritional and dietary effect of Palatinose, how widely it is used in the food industry and how it can be determined using modern separation methods of analytical chemistry.

Student Requirements (prerequisites, experience, acceptable fields of study, etc.)

- Chemistry/biochemistry/analytical chemistry/biology
- Separation methods/HPLC

Proposed responsibilities of the student(s)

- Sample collection/selection
- Laboratory work
 - Sample preparation
 - Data collection on HPLC system
 - Data evaluation
 - Presentation of results

Additional important information (max. number of students, additional staff/faculty involved, etc.)

- 1 student