

<b>Name and surname:</b>	<b>Elżbieta Rytel</b>
Academic Degree:	dr hab. inż. (DSc.)
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UPWr Base of Knowledge - link:	<a href="https://bazawiedzy.upwr.edu.pl/info/author/UPWr595b66b716c24643ace58602cc88d2a5?">https://bazawiedzy.upwr.edu.pl/info/author/UPWr595b66b716c24643ace58602cc88d2a5?</a>
Researchgate:	
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	Research project from the National Science Center, no.2019 / 35 / O / NZ9 / 00168, entitled: The use of fruit and vegetable juices to stabilise the colour of anthocyanins isolated from potatoes with purple and red flesh.
PhD topic:	The study of the structure and color stability of acylated anthocyanins subjected to co-pigmentation using herbs rich in phenolic compounds and selected polysaccharides in model studies
Research discipline in Doctoral School:	Nutrition and Food Technology
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	<p>The aim of the research will be to improve the stability of the structure and color of acylated anthocyanins isolated from potatoes of red-fleshed and purple-fleshed cultivars in the process of co-pigmentation using herbs and natural polysaccharides. The Project will also aim to study the structure and color of the obtained co-pigments under model conditions.</p> <p>Research will entail the isolation of anthocyanin pigments from potato juices. The juices will be obtained from different cultivars of potatoes with colored flesh: 3 red-fleshed cultivars and 3 purple-flesh cultivars. Investigations will be conducted in three stages in accordance with specific research objectives. The blank sample will consist of pigments not subjected to co-pigmentation.</p> <p>Specific research objectives:</p> <ol style="list-style-type: none"> <li>1. Isolation of anthocyanin pigments from juices made from potatoes of red-fleshed and purple-fleshed cultivars differing in composition and content of anthocyanins.</li> <li>2. Co-pigmentation of anthocyanin pigments with extracts from peppermint, green and black tea extracts, coltsfoot, and dandelion as well as with hyaluronic acid and RS3 potato starch.</li> <li>3. Examination of the structure and color of the resultant co-pigments under model conditions.</li> </ol>
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	The candidate is required to complete higher education with a master's degree, specializing in food and nutrition technology, biotechnology, food chemistry. The candidate should have knowledge of English at the B2 level and basic programs, i.e. Word, Excel, PowerPoint, Statistica; ability to work in a food analysis laboratory, knowledge of methods for analyzing plant raw materials and methods using liquid chromatography techniques. The candidate should have knowledge of the technology of plant raw materials, functional foods, and biologically active compounds found in plant raw materials.
a) Project title:	none
b) Agreement number:	none
c) Number of months in the project to support PhD student (in months; starting from 1st of October 2024):	0
Project website:	