EURODRYING’ 2023 – FULL PAPER TEMPLATE

First name LAST NAME1, Paweł WAWRZYNIAK2, Grzegorz MUSIELAK3\*

1Affiliation: Name of Faculty, Name of University, Address of University

2Faculty of Processes and Environmental Engineering, Łódź University of Technology

Wólczańska St. 213, 93-005 Łódź, Poland

3Faculty of Chemical Technology, Poznań University of Technology

Berdychowo St. 4, 60-965 Poznań, Poland

\*Corresponding author: grzegorz.musielak@put.poznan.pl

###### **Abstract:** The abstract should be in the form of a paragraph with a maximum length of  300 words. The abstract should include: (I) Background: context and purpose of the study; (2) Brief description of the methods used; (3) Summary of main results; (4) Main conclusions or interpretations. References to literature should not be included in the abstract.

###### The abstract should be written in Times New Roman italics font size 11, line spacing 1.0, justified, with additional margins of +1 cm.

**Keywords***:* *keyword 1; keyword 2; keyword 3…(3-7 keywords specific to the article)*

# Basic information on the preparation of the manuscript

The paper must be original, i.e. not published in any other conference or journal. The size of the manuscript should not exceed eight pages. The whole manuscript should be written in Times New Roman font.

The title of the article should be written in capitals, bold font size 12, line spacing 1.15.

The authors should be written in bold, italics font size 12, line spacing 1.15. The corresponding author should be marked with an asterisk, and the referring author should be underlined.

The affiliation should be written in font size 10, line spacing 1.0.

The keywords should be written in *italics* font size 11, line spacing 1.0.

The main text of the manuscript should be justified, written in Times New Roman font size 12, line spacing 1.0. It should be divided into the following sections: Introduction, Materials and Methods, Mathematical Modeling (optional), Results and Discussion, and Conclusions. Each Section may be divided into subsections (of a maximum 1-2 levels). It should be noted that the above division is not mandatory, as the structure of the document should be adapted to its content.

The title of the section should be written in bold font size 12, aligned to the left, line spacing 1.0.

# Introduction

The introduction should briefly place the study in a broad context. Analyze the current state of the research field and cite key publications. The number of references should not exceed 20. Based on this review, determine the purpose of the work and its meaning. Finally, the main conclusions should be highlighted.

Cited literature should be marked in the text in round brackets, giving the name of the author or authors along with the year of publication of the cited article, e.g. (Wawrzyniak et al., 2012; Musielak, 1982).

# Materials and Methods

## Materials

The title of the subsection should be written in *italic.*

Drying of thyme (*Thymus vulgaris* [L.](https://pl.wikipedia.org/wiki/Karol_Linneusz)) has been tested...

## Drying procedures

Figures should be centered. The minimum recommended resolution for drawings is 300 dpi and for photos is 600 dpi. The figure (Fig. 1) captions should be written in italics, size 11, placed under the drawings in the axis of the drawing (centered), e.g.:



Fig. 1. Schematic of hybrid dryer: 1) fan, 2) ultrasound generator, 3) amplifier, 4) heater, 5) hot air outlet, 6) ultrasound transducer, 7) pyrometer, 8) pan, 9) pan rotation mechanism, 10) balance, 11) magnetron, 12) control cabinet.

Tables should be centered. The table captions should be written in italics, size 11, placed above the table, aligned to the left, tables should be filled in an upright font, size 11, e.g.:

Table 1. Description of the drying schedules.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Code** | **Description** | ***Ta* (°C)** | ***va* (m/s)** | ***P* (W)** |
| 1 | CV | convective drying | 50 | 0,4 | 0 |
| 2 | CVUS | ultrasound-assisted convective drying | 200 |
| 3 | CVMW1 | microwave-assisted convective drying | 100 |
| 4 | CVMW2 | 200 |

*Ta* – temperature of air, *va* – velocity of air in drying chamber, *P* – power of ultrasounds/microwaves

# Mathematical modelling

Mathematical equations should be centered, numbered on the right, numbers in parentheses. In both the equation editor and the manuscript text, variables should be written in italics, e.g.:

The flux of moisture inside the material $\vec{j}$ is described by Fick’s law:

 $\vec{j}=ρ\_{w}\vec{u}=-D\_{eff} gradρ\_{w}=-D\_{eff} ρ\_{s}gradX$ (1)

and the flux of the evaporated mass is described by Newton’s law:

 $\vec{n}∙\vec{j}=-j=-α\left(ρ\_{w}-ρ\_{we}\right)=-αρ\_{s}\left(X-X\_{e}\right)$ (2)

where $ρ\_{s}$ and $ρ\_{w}$ denote the partial densities of the solid phase and water, respectively, $\vec{u}$ is the diffusion velocity (relative moisture velocity), $D\_{eff} $is the effective diffusion coefficient, *X* is moisture content d.b. and $α$ is the mass exchange coefficient. Index *e* means the equilibrium value.

# Results and discussion

This section should contain a concise and precise description of the experimental results and their interpretation. Authors should discuss and interpret the results considering previous results based on the literature. The results and their implications should be discussed as broadly as possible in order to draw final conclusions.

# Conclusions

The aim of this section is to briefly summarize the results and conclusions achieved. At this point, it is worth supplementing the work with indications for further research directions.

##### Acknowledgments

### Acknowledgements should be written in an upright font, size 11, e.g.:

### As the charms of the conference, we would like to warmly thank all members of the organizing committee, members of the scientific committee, sponsors, and above all, the participants of EURODRYING 2023.

##### References

### References should be listed in alphabetical order, font size 11. There should be extra space between each reference. Some sample references are listed below:

#### Chen G., Mujumdar A.S., 2007, Drying of herbal medicines and tea, in “Handbook of Industrial Drying” 3rd edition, ed. A.S. Mujumdar, CRC Taylor and Francis, 635-646.

#### Baehr, H.D., 2006, *Heat and Mass Transfer* (2nd edition), Springer.

#### Szadzińska J., Mierzwa D., Musielak G., 2022, Ultrasound-Assisted Convective Drying of White Mushrooms (Agaricus Bisporus), *Chemical Engineering and Processing - Process Intensification,* 172, 108803-1-108803-11.

#### Wawrzyniak P., Jaskulski M., Piątkowski M., Egan S., Zbiciński I., Zawadzki D., 2019, Detergent Drying in a Counter-Current Spray Dryer with Swirling Air Flow, *Proceedings of Eurodrying’2019*, July 10-12, 2019, Torino, Italy, paper 12, 268- 275.