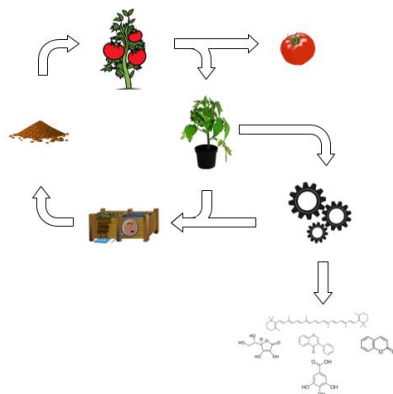


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|---|--|
| <input checked="" type="checkbox"/> Bachelor's thesis | <input type="checkbox"/> theoretical             |
| <input checked="" type="checkbox"/> Bioref Project    | <input checked="" type="checkbox"/> experimental |
| <input type="checkbox"/> Plant design practice        | <input checked="" type="checkbox"/> constructive |
| <input checked="" type="checkbox"/> Master's thesis   |  |

### Topic: **UV-Vis spectrophotometric analysis of tomato plant extracts**

Biomass waste streams are often left on fields for rotting or used for thermal energy production. But before we degrade or thermally convert the biomass waste to compost or energy, we can use the high potential of these wastes for production of high valuable molecules.



Tomato is one of the most consumed vegetable, mainly produced in greenhouses, all over the world. In 2018 about 182 million tonnes of fresh tomatoes were produced worldwide (FAO2018) and up to 230 mio tonnes of vegetative biomass alongside. Tomato vegetative residues are an environmental concern as they can be inhabited by a large number of pathogenes. Therefore these residues need to be treated somehow. Vegetative tomato residues

contain antioxidative, -fungal, -bacterial or inflammatory agents that can be used in many industries.

The aim of the work is the extraction of bioactive molecules and the UV-Vis spectrophotometric analysis of the extracts to determine the total amount of extracted polyphenolic and flavonoid compounds in order to evaluate the extraction process.

The thesis includes:

- Literature research
- Performing of experiments
- Analysis of samples
- Interpretation of data
- Writing scientific reports

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