Documentation to HPLC Data Vision

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1 About

This application provides users with the ability to interact with data from High Performance Liquid Chromatography. Its features include extracting data from *.txt files, exporting data to Excel sheets, generating LaTeX code for PDF protocols (such as the template described in section 3), and displaying chromatograms in a separate window.

1.1 Technical Information

1.1.1 Compatibility

Application is compatible with LabSolutions (ver. 5.99). It is specifically designed for HPLC with PDA detector.

1.1.2 System Requirements

Operating system: Windows

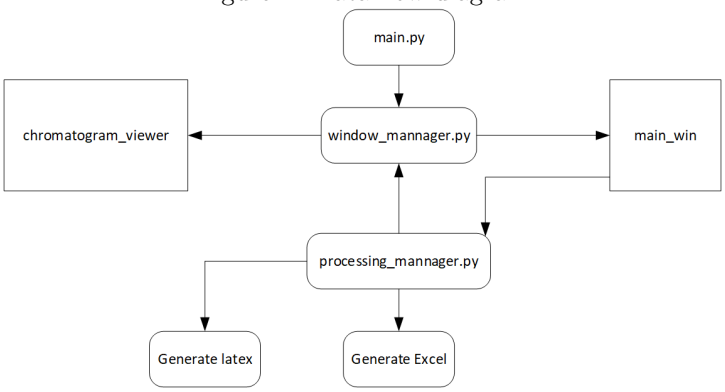
Hardware: unspecified

1.1.3 Source Codes & Architecture Diagram

Programming
Program was written in Python 3.13. Used modules:

1. CustomTkinter [1]
2. TeX Live [6]
3. OpenPyXL [4]
4. NumPy [3]
5. Matplotlib [2]
6. Pillow [5]

Figure 1: Data flow diagram



1.1.4 Support

For further information contact me through my e-mail: jakub.vencel24@gmail.com.

2 How to use

2.1 Instructions

1. Export files from LabSolutions (ver. 5.99) to *.txt; use default item separator (tabulator).
2. Load HPLC Data Vison (Figure 2) and select folder, where you store exported *.txt files. (Warning: Selected folder should contain just *.txt from LabSolutions (ver. 5.99)!)
3. Mark off desired operations (Figure 3).
4. Loading...
5. In a new window with chromatogram (Figure 4) you can choose wavelength and displayed file.

Figure 2: Main Window

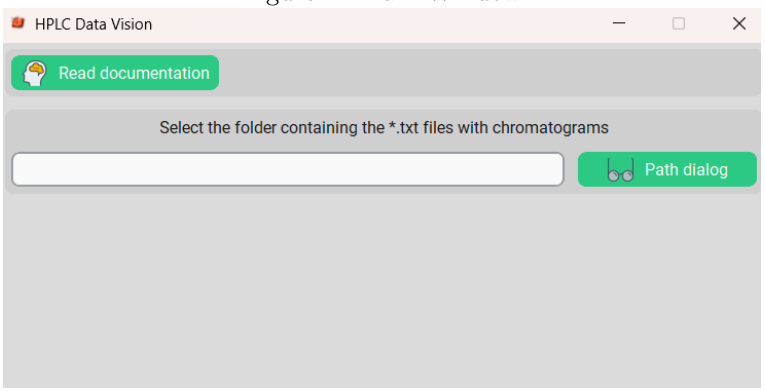


Figure 3: Select Parameters

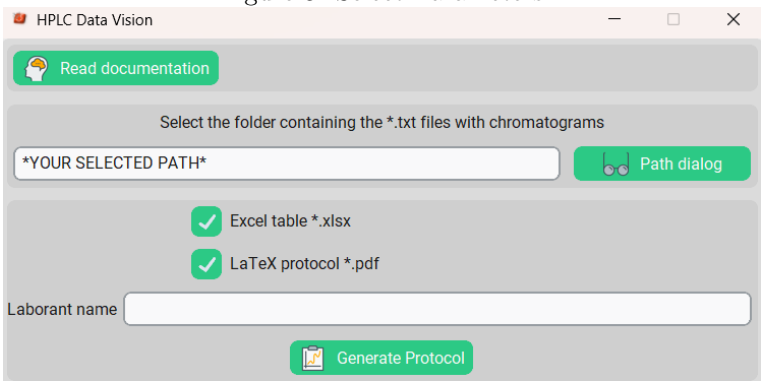
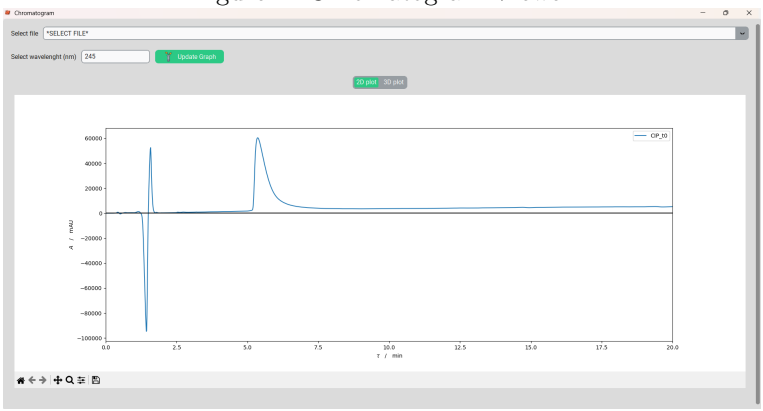


Figure 4: Chromatogram Viewer



2.2 Disclaimer

Not following instructions mentioned above may lead to unpredictable behavior!

3 Protocol Template

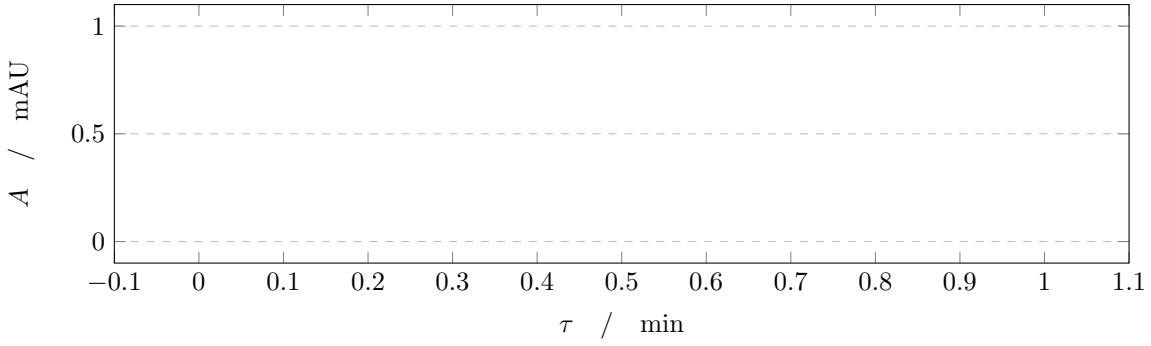
3.1 Measurement Information

File Name	
Sample Name	
Date	
Time	
Measuarment time (min)	
Method File	
Data File	
Batch File	
Instrument	
Detector	

3.2 Peaks

peak id	τ min	area	height	c

3.3 Chromatogram



Contents

A Acknowledgment

References

[1] Customtkinter. https://customtkinter.tomschimansky.com/.

[2] Matplotlib. https://matplotlib.org/.

[3] Numpy. https://numpy.org/.

[4] Openpyxl. https://openpyxl.readthedocs.io/en/stable/.

[5] Pillow. https://pillow.readthedocs.io/en/stable/.

[6] Tex live. https://www.tug.org/texlive/.