

MS Excel

LBF/VAA011 Medicalbiophysics, biometrics and computer technology

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- spreadsheet developed by Microsoft for Windows, macOS, Android and iOS
- Excel are licensed as a standalone product or as a component of Microsoft Office





- 1 Spreadsheets
- 2 Adding and removing rows and columns
- 3 Setting width and height of rows/columns
- 4 Working with cells (address of cell, groups of cells, ...)
- 5 Cells formatting
- 6 Calculations (formulas and built-in functions)
- 7 Graph (creating, inserting, ...)
- 8 Advanced graphs and charts (linear regression, , ...)

Exercise



- 1 Start a new spreadsheet in Microsoft Excel, name first sheet "Capacity"
- 2 Enter the information in the spreadsheet below.

	A	B
1	Y [S]	4,12E-06
2	G [S]	4,52E-07
3	f [Hz]	300
4	C [F]	

- 3 Enter the formula below into cell B4

$$C = \frac{\sqrt{Y^2 - G^2}}{2\pi f}$$

- 4 Insert the calculated capacity (including the unit) in the Word document you created under the heading Conclusion.
- 5 Create new sheet and name it "Radioactivity"

6 Enter the same table as you have in word document, i.e.

papers count	papers width [mm]	$N[Imp/min]$	$N - N_p[Imp/min]$
0	0	$328.6 \cdot 10^3$	
1	0.15	$186.2 \cdot 10^3$	
2	0.3	$100.3 \cdot 10^3$	
3	0.45	$57.47 \cdot 10^3$	
4	0.6	$37.73 \cdot 10^3$	
5	0.75	$25.87 \cdot 10^3$	

7 Enter value of $N_p = 157$ in the cell E2.

8 Compute in Microsoft excel the differences $N - N_p$,

9 Insert result into free cells in the table in your word document

10 In Excel create Scatter chart with smooth lines and markers (x axis represents paper width and y axis difference $N - N_p$)

11 Add name of chart (Absorption curve), label x axis (Thickness of the absorbent layer [mm]), label y axis ($N - N_p[Imp/min]$)

12 Into chart insert exponential trendline and show regression function



- 13 Insert resulted chart into word document under heading Graph.



`www.marketa-trneckova.cz/excel.pdf`