

"Simitec - Revealing future of measuring"1

KOONTI (Digital data compilation software) (Manual)

B A 1 3C X1 F1	B A 1 3C X1 F2	B A 1 3C X1 H1	B A 1 3C X1 H1U
B A 2 3C X1 F1 Dead	B A 2 3C X1 F2 Dead	B A 2 3C X1 H1 Dead	B A 2 3C X1 H1U Dead
B A 3 3C X1 F1	B A 3 3C X1 F2	B A 3 3C X1 H1	B A 3 3C X1 H1U
B A 4 3C X1 F1	B A 4 3C X1 F2	B A 4 3C X1 H1	B A 4 3C X1 H1U
B A 5 3C X1 F1 Dead	B A 5 3C X1 F2 Dead	B A 5 3C X1 H1 Dead	B A 5 3C X1 H1U Dead
B A 6 3C X1 F1	B A 6 3C X1 F2	B A 6 3C X1 H1	B A 6 3C X1 H1U
B A 7 3C X1 F1	B A 7 3C X1 F2	B A 7 3C X1 H1	B A 7 3C X1 H1U
B A 8 3C X1 F1	B A 8 3C X1 F2	B A 8 3C X1 H1	B A 8 3C X1 H1U
B A 9 3C X1 F1	B A 9 3C X1 F2	B A 9 3C X1 H1	B A 9 3C X1 H1U
B A 10 -3C X1 F1	B A 10 -3C X1 F2	B A 10 -3C X1 H1	B A 10 -3C X1 H1U
B A 11 -3C X1 F1	B A 11 -3C X1 F2	B A 11 -3C X1 H1	B A 11 -3C X1 H1U
B A 12 -3C X1 F1	B A 12 -3C X1 F2	B A 12 -3C X1 H1	B A 12 -3C X1 H1U
B A 13 -3C X1 F1	B A 13 -3C X1 F2	B A 13 -3C X1 H1	B A 13 -3C X1 H1U
B A 14 -3C X1 F1	B A 14 -3C X1 F2	B A 14 -3C X1 H1	B A 14 -3C X1 H1U
B A 15 -3C X1 F1	B A 15 -3C X1 F2	B A 15 -3C X1 H1	B A 15 -3C X1 H1U
B A 16 -3C X1 F1	B A 16 -3C X1 F2	B A 16 -3C X1 H1	B A 16 -3C X1 H1U
B A 17 -3C X1 F1	B A 17 -3C X1 F2	B A 17 -3C X1 H1	B A 17 -3C X1 H1U
B A 18 -3C X1 F1	B A 18 -3C X1 F2	B A 18 -3C X1 H1	B A 18 -3C X1 H1U
B A 19 -7C X1 F1	B A 19 -7C X1 F2	B A 19 -7C X1 H1	B A 20 -7C X1 F1
B A 20 -7C X1 F2	B A 20 -7C X1 H1	B A 21 -7C X1 F1	B A 21 -7C X1 F2
B A 21 -7C X1 H1	B A 22 -7C X1 F1	B A 22 -7C X1 F2	B A 22 -7C X1 H1
B A 23 -7C X1 F1	B A 23 -7C X1 F2	B A 23 -7C X1 H1	B A 23 -7C X1 H1U
B A 24 -7C X1 F1	B A 24 -7C X1 F2	B A 24 -7C X1 H1	B A 25 -7C X1 F1
B A 25 -7C X1 F2	B A 25 -7C X1 H1	B A 26 -7C X1 F1	B A 26 -7C X1 F2
B A 26 -7C X1 H1	B A 27 -7C X1 F1	B A 27 -7C X1 F2	B A 27 -7C X1 H1
B A 28 -10C X1 4 F1	B A 28 -10C X1 4 F2	B A 28 -10C X1 4 H1	B A 28 -10C X1 4 H1U
B A 29 -10C X1 4 F1	B A 29 -10C X1 4 F2	B A 29 -10C X1 4 H1	B A 29 -10C X1 4 H1U
B A 30 -10C X1 5 F1	B A 30 -10C X1 5 F2	B A 30 -10C X1 5 H1	B A 30 -10C X1 5 H1U
B A 31 -10C X1 5 F1	B A 31 -10C X1 5 F2	B A 31 -10C X1 5 H1	B A 31 -10C X1 5 H1U
B A 32 -10C X1 5 F1	B A 32 -10C X1 5 F2	B A 32 -10C X1 5 H1	B A 32 -10C X1 5 H1U
B A 33 -10C X1 6 F1	B A 33 -10C X1 6 F2	B A 33 -10C X1 6 H1	B A 34 -10C X1 6 F1
B A 34 -10C X1 6 F2	B A 34 -10C X1 6 H1	B A 34 -10C X1 6 H1U	B A 35 -10C X1 7 F1
B A 35 -10C X1 7 F2	B A 35 -10C X1 7 H1	B A 35 -10C X1 7 H1U	B A 36 -10C X1 7 F1
B A 36 -10C X1 7 F2	B A 36 -10C X1 7 H1	B A 36 -10C X1 7 H1U	

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KOONTI -software

General:

KOONTI compilation software compiles the spectral files in the different folders and their subfolders according to the subject to suit the data format of the LMSSC2 classification software, thus avoiding separate time-consuming operations related to data collection and processing. The software recognizes the most common data formats such as ascii, txt, csv.

As an example, the files related to the heat treatment of the roots of the cover image have been processed by Koonti in this example for LMSSC2 by heat treatment class (+ 3 °C, -3 °C, -7 °C and -10 °C) and are marked with the corresponding codes BE + 3C, BE-3C, BE-7C and BE -10C as shown in Figure 1. The additional notation _F represents a variable (in this example, frequency, Hz), _Col1 is the real part of the impedance (i.e., resistance, Ω), and _Col2 is the imaginary part of the impedance (i.e., reactance, Ω).²

The matrix BE + 3C_Col1 has 45 parallel resistance spectra and the matrix BE-3C_Col2 the corresponding number of reactance spectra. Respectively, the following matrix pairs BE-3C_Col1 & BE-3C_Col2 have 38/38 spectra, BE-7C_Col1 & BE-7C_Col2 have 44/44 spectra and BE-10C_Col1 & BE-10C_Col2 have 48/48 spectra. Each spectrum must have a number of measurement points corresponding to the measurement frequencies.

Program settings:

"Data handling"

Figure 2 shows the configuration software settings, which are divided into the following operating sections. The language selection (Suomi / English) is made by clicking on the relevant selection change button. The green (progress) bar in Figure 2 provides information on the progress of the download.

Compilation									-	D X
Data handling										
Suomi	Load filenames								Similar	
		Clear	🗆 Zreal 🗹 Delta			Read data		Save matrices	ouraiet	
						neud data	Select columns to	Save mances		
Ad	d column name		Select frequency	Select R	Select X		De saved			
R	emove last		Clear	Clear	Clear		Clear			
⊢ıg. i	2.									

² For three-column data (frequency, resistance, reactance), the default entries are _F, Col1, and Col2, unless the columns are named separately.

BE-7C_Col2

BE-10C_Col2

BE-7C_F BE-10C_Col1

BE-10C_F

Fig. 1.

Clicking on the "Load filenames" button opens a selectable path from which to access the desired folder or the subfolder where the measurement data is stored. In the following example, that measurement data could be a spectral file according to the cover image. Use the cursor to select the desired file names (Figure 3) and after selection open the file management dialog by pressing the "Avaa/Open" button in the file manager, the path names of the selected files with their file names and the names of the briefly downloaded files will appear on the left side of the workspace (Figure 4). The magnification of this can be seen in Figure 6.

					Compilation		
B E 1 3C X1 F1	B E 11 3C X1 F1	B E 22 -3C X1 H1U	📄 B E 33 -7C X1 F1	B E 43 -10C X1 7 F2			
B E 1 3C X1 F2	B E 11 3C X1 F2	B E 23 -7C X1 F1	B E 33 -7C X1 F2	B E 43 -10C X1 7 H1	Data handling		
B E 1 3C X1 H1	B E 11 3C X1 H1	B E 23 -7C X1 F2	📄 B E 33 -7C X1 H1	B E 43 -10C X1 7 H1U			flenomes
B E 1 3C X1 H1U	B E 11 3C X1 H1U	B E 23 -7C X1 H1	📄 B E 33 -7C X1 H1U	B E 44 -10C X1 7 F1			menames
B E 2 3C X1 F1	B E 12 - 3C X1 F1	B E 23 -7C X1 H1U	B E 34 -10C X1 4 F1	B E 44 -10C X1 7 F2	Suomi	Load filenames	
B E 2 3C X1 F2	B E 12 - 3C X1 F2	B E 24 -7C X1 F1	B E 34 -10C X1 4 F2	📄 B E 44 -10C X1 7 H1			Class
B E 2 3C X1 H1	B E 12 - 3C X1 H1	B E 24 -7C X1 F2	📄 B E 34 -10C X1 4 H1	📄 B E 44 -10C X1 7 H1U			Clear
B E 2 3C X1 H1U	📄 B E 12 -3C X1 H1U	B E 24 -7C X1 H1	📄 B E 34 -10C X1 4 H1U	B E 45 -10C X1 7 F1			
B E 3 3C X1 F1	B E 14 -3C X1 F1	B E 24 -7C X1 H1U	B E 35 -10C X1 4 F1	B E 45 -10C X1 7 F2	Add	column name	
B E 3 3C X1 F2	B E 14 -3C X1 F2	B E 25 -7C X1 F1	B E 35 -10C X1 4 F2	B E 45 -10C X1 7 H1	7100	column numo	
B E 3 3C X1 H1	B E 14 -3C X1 H1	B E 25 -7C X1 F2	B E 35 -10C X1 4 H1	B E 45 -10C X1 7 H1U	Re	move last	
B E 3 3C X1 H1U	B E 14 -3C X1 H1U	B E 25 -7C X1 H1	B E 35 -10C X1 4 H1U		filename	s filenamesSh	
B E 4 3C X1 F1	B E 15 - 3C X1 F1_Dead	B E 25 -7C X1 H1U	B E 36 -10C X1 5 F1		C:\Users	BE13CX	
B E 4 3C X1 F2	B E 15 -3C X1 F2_Dead	B E 26 -7C X1 F1	B E 36 -10C X1 5 F2		C:\Users	O BE13CX	
B E 4 3C X1 H1	B E 15 - 3C X1 H1_Dead	B E 26 -7C X1 F2	B E 36 -10C X1 5 H1		C:\Users	O BE13CX	
B E 4 3C X1 H1U	B E 15 -3C X1 H1U_Dead	B E 26 -7C X1 H1	B E 36 -10C X1 5 H1U		C:\Users	O BE13CX	
B E 5 3C X1 F1	B E 16 -3C X1 F1	B E 26 -7C X1 H1U	B E 37 -10C X1 5 F1		C:\Users	O BE23CX	
B E 5 3C X1 F2	B E 16 -3C X1 F2	B E 27 -7C X1 F1	B E 37 -10C X1 5 F2		C:\Users	0 BE23CX	
B E 5 3C X1 H1	B E 16 -3C X1 H1	B E 27 -7C X1 F2	B E 37 -10C X1 5 H1		C:\Users	O BE23CX	
B E 5 3C X1 H1U	B E 17 - 3C X1 F1	B E 27 -7C X1 H1	📄 B E 37 -10C X1 5 H1U		C:\Users	O BE33CX	
B E 6 3C X1 F1	📄 B E 17 -3C X1 F2	B E 27 -7C X1 H1U	📄 B E 38 -10C X1 5 F1		C:\Users	O BE33CX	
B E 6 3C X1 F2	📄 B E 17 -3C X1 H1	B E 28 -7C X1 F1	📄 B E 38 -10C X1 5 F2		C:\Users	NO BE33CX	
B E 6 3C X1 H1	B E 17 -3C X1 H1U	B E 28 -7C X1 F2	📄 B E 38 -10C X1 5 H1		C:\Users	0BE33CX	
B E 6 3C X1 H1U	B E 18 - 3C X1 F1	B E 28 -7C X1 H1	📄 B E 38 -10C X1 5 H1U		C:\Users	0 BE43CX	
B E 6 3C X1 H1U_2	B E 18 - 3C X1 F2	B E 28 -7C X1 H1U	B E 39 -10C X1 6 F1		C:\Users	O BE43CX	
B E 7 3C X1 F1	B E 18 -3C X1 H1	B E 29 -7C X1 F1	B E 39 -10C X1 6 F2		C:\Users	O BE43CX	
B E 7 3C X1 F2	B E 18 -3C X1 H1U	B E 29 -7C X1 F2	B E 39 -10C X1 6 H1		C:\Users	O BE53CX	
B E 7 3C X1 H1	B E 19 -3C X1 F1	B E 29 -7C X1 H1	B E 39 -10C X1 6 H1U		C:\Users	0 BE53CX	
B E 7 3C X1 H1U	B E 19 -3C X1 F2	B E 29 -7C X1 H1U	B E 40 -10C X1 6 F1		C:\Users	0. BE53CX	
B E 8 3C X1 F1	B E 19 -3C X1 H1	B E 30 -7C X1 F1	B E 40 -10C X1 6 F2		C:\Users	O BE63CX	
B E 8 3C X1 F2	B E 20 -3C X1 F1	B E 30 -7C X1 F2	B E 40 - 10C X1 6 H1		C:\Users	O BE63CX	
B E 8 3C X1 H1	B E 20 -3C X1 F2	B E 30 -7C X1 H1	B E 40 -10C X1 6 H1U		C:\Users	O BE63CX	
B E 8 3C X1 H1U	B E 20 -3C X1 H1	B E 30 -7C X1 H1U	📄 B E 41 -10C X1 6 F1		C:\Users	O BE63CX	
B E 9 3C X1 F1	B E 20 - 3C X1 H1U	B E 31 -7C X1 F1	📄 B E 41 - 10C X1 6 F2		C:\Users		
B E 9 3C X1 F2	B E 21 - 3C X1 F1	B E 31 -7C X1 F2	📄 B E 41 -10C X1 6 H1		C:\Users	0 BE73CX	
B E 9 3C X1 H1	B E 21 -3C X1 F2	B E 31 -7C X1 H1	📄 B E 41 -10C X1 6 H1U		C:\Users	O BE73CX	
B E 9 3C X1 H1U	B E 21 -3C X1 H1	B E 31 -7C X1 H1U	B E 42 -10C X1 6 F1		C:\Users	O BE73CX	
B E 10 3C X1 F1	B E 21 -3C X1 H1U	B E 32 -7C X1 F1	B E 42 -10C X1 6 F2		C:\Users	0 B E 8 3C X	
B E 10 3C X1 F2	B E 22 -3C X1 F1	B E 32 -7C X1 F2	B E 42 -10C X1 6 H1	Fig 3			
B E 10 3C X1 H1	B E 22 -3C X1 F2	B E 32 -7C X1 H1	📄 B E 42 -10C X1 6 H1U	· ·g. 0.	rig. 4.		
B E 10 3C X1 H1U	B E 22 -3C X1 H1	B E 32 -7C X1 H1U	B E 43 -10C X1 7 F1				

|Zreal| shown in Figures 2 and 5 can be used to remove the minus sign in the real part of the impedance of three-column data in some special cases.³

	Clear	🗆 Zreal 🗹 Delta			Read data		Save matrice
olumn name		Select frequency	Select R	Select X		Select columns to be saved	
nove last		Clear	Clear	Clear	1	Clear	
nove last		Clear	Clear	Clear		Clear	
	lumn name	lumn name ove last	Clear □ Zreal ☑ Delta Iumn name Select frequency ove last Clear	Clear Zreal ☑ Delta Iumn name Select frequency Iove last Clear	Clear Zreal ☑ Delta Iumn name Select frequency Select x Clear Clear	Clear Zreal ☑ Delta	Clear Zreal Ø Delta Freed data Image: Clear Select frequency Select R Select frequency Select R Select X Ove last Clear Clear Clear

³ The minus sign of the real part of the impedance usually comes from the noise at the performance limits of the EIS device. The negative resistance region is known and is related to the tunneling phenomenon of charges through a very thin insulating layer. Leo Esaki, Ivar Giaver and Brian Josephson were awarded the Nobel Prize in 1973 for their explanation of this tunneling phenomenon.

ŝuomi	Load filenames	filenames B E 1 3C X1 F1.bt B E 1 3C X1 F2.bt	Col1 Col2						Similar
		Clear	🗆 Zreal) 🗆 Delta			Dead data		Cara making	ourmet
Add column name Remove last filenames Cillsers/Omstaja/Desktopi.ux6 Cillsers/Omstaja/Desktopi.ux		Select frequency Select B Select X				Select columns to be saved	Save matrices		
Add	column name		Select frequency	Select R Sele					
Remove last	emove last		Clear	Clear	Clear		Clear		
filename	25				fi	mamesShort			
C/Users	Omistaja/Desktop/Lu	okittelu/KOONTI -ohielma-Janestan	atonData/EIS101 Blackcurra	nt/Ben/B E 1 3C X1 F	1 M B	1 3C X1 F1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	atonData/EIS101_Blackcurra	nt\Ben\B E 1 3C X1 F	2.bxt B	E 1 3C X1 F2.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu\KOONTI -ohjelma\Jarjestan	atonData/EIS101_Blackcurra	nt/Ben/BE13CX1F	H1.txt B	1 3C X1 H1.bt			
C:\Users	Omistaja Desktop Lu	okittelu/KOONTI -ohjelma/Järjestän	atonData/EIS101_Blackcurra	nt/Ben/BE13CX1H	HIU.bd B	1 3C X1 H1U.bd			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestan	hatonData/EIS101_Blackcurra	nt/Ben/BE23CX1F	1.txt B	2 3C X1 F1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestan	atonData/EIS101_Blackcurra	nt/Ben/BE23CX1F	2.bxt B	2 3C X1 F2 txt			
C:/Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt/Ben/BE23CX1F	H1.bd B	2 3C X1 H1.bt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	atonData/EIS101_Blackcurra	nt\Ben\B E 2 3C X1 H	HIU.bd B	2 3C X1 H1U.bd			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	atonData/EIS101_Blackcurra	nt/Ben/BE33CX1F	1.bxt B	3 3C X1 F1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestan	atonData/EIS101_Blackcurra	nt\Ben\B E 3 3C X1 F	2.bxt B	3 3C X1 F2.bt			
C:\Users	Omistaja\Desktop\Lu	okittelu\KOONTI -ohjelma\Jarjestan	atonData/EIS101_Blackcurra	nt\Ben\B E 3 3C X1 H	H1.txt B	E 3 3C X1 H1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Jarjestan	atonData/EIS101_Blackcurra	nt/Ben/BE33CX1F	HIU.txt B	3 3C X1 H1U.bt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestan	atonData\EIS101_Blackcurra	nt/Ben/BE43CX1F	1.bxt B	4 3C X1 F1.bt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	natonData/EIS101_Blackcurra	nt\Ben\B E 4 3C X1 F	2.txt B	4 3C X1 F2.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Jarjestan	atonData\EIS101_Blackcurra	nt\Ben\B E 4 3C X1 H	i1.txt B	E 4 3C X1 H1.txt			
C:\Users	iOmistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Jarjestan	hatonData/EIS101_Blackcurra	nt\Ben\B E 4 3C X1 F	HIU.bd B	4 3C X1 H1U.bt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 5 3C X1 F	1.bxt B	5 3C X1 F1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	nationData/EIS101_Blackcurra	nt/Ben/BE53CX1F	2.txt B	5 3C X1 F2.txt			
C:\Users	Omistaja Desktop Lu	okittelu/KOONTI -ohjelma/Järjestan	natonData/EIS101_Blackcurra	nt\Ben\B E 5 3C X1 H	11.txt B	5 3C X1 H1.txt			
C:\Users	iOmistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 5 3C X1 H	HIU.txt B	5 3C X1 H1U.bt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Jarjestan	hatonData/EIS101_Blackcurra	nt\Ben\B E 6 3C X1 F	1.txt B	E 6 3C X1 F1.bd			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	atonData/EIS101_Blackcurra	nt\Ben\B E 6 3C X1 F	2.bxt B	6 3C X1 F2.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	atonData/EIS101_Blackcurra	nt/Ben/BE63CX1F	11.txt B	E 6 3C X1 H1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 6 3C X1 H	HIU.bd B	E 6 3C X1 H1U.bd			
C:\Users	(Omistaja)Desktop)Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 6 3C X1 H	HIU_2.bxt B	E 6 3C X1 H1U_2.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 7 3C X1 F	1.bt B	E 7 3C X1 F1.txt			
C:\Users	Omistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 7 3C X1 F	2.txt B	7 3C X1 F2.txt			
C:\Users	IOmistaja\Desktop\Lu	okittelu/KOONTI -ohjelma/Järjestän	hatonData/EIS101_Blackcurra	nt\Ben\B E 7 3C X1 H	H1.bd B	7 3C X1 H1.txt			
1 PRAIR DOWNER	(Checklore) Checklore) I is								

Fig. 6.

Next, the (column) packages of the downloaded files are compiled by clicking on the "Read data" button, whereby the names of the packages given to them in the storage situation in the measurement data folder (here: F, Col1 and Col2) are logged in the top left printable scroll bar (Figure 6). For classification, these can be named manually, if desired, by entering the column package name in the dialog box below the green bar, and the save acknowledgment is made with the "Add Column Name" button (Figure 7). In this example, the first packet has been f, the next R, and the next X (i.e., frequency, resistance, and reactance). Before moving these entries to the titles of the frequency vector (f), resistance matrix (R) and reactance matrix (X), they must be marked sequentially with the cursor and confirmed with the "Select frequency", "Select R" and "Select X" buttons. If you want to create your own spectrum packet for the loss factor called "Loss angle", you do so by activating the Delta

Suomi	Load filenames	filenam B E 1 3	ies IC X1 F1.txt	í	X f				^			f R					
		BE13	C X1 F2.txt Clear		Coss_angle Zreal				A Loss_angle		Simil			2			
	f R Xdd column name		f		R	x		Read o	Read data		Sa	ve matrices					
Add				Select fre	Select frequency		S	Select X									
R	emove last				Cle	ar	Clear		Clear			Clear					
B E 1 30 X1 F1.5	B E 1 3C t X1 F2.txt	B E 1 3C X1 H1.txt	B E 1 3C X1 H1U.txt	BE23C X1F1.txt	BE23C X1F2.bt	B E 2 30 X1 H1.b	B E 2 3C X1 H1U.bxt	B E 3 3C X1 F1.txt	B E 3 3C X1 F2.bt	BE33C X1H1.txt	B E 3 30 X1 H1U	BE43C txt X1F1.txt	B E 4 3C X1 F2.txt	B E 4 3C X1 H1.bxt	B E 4 3C X1 H1U.txt	BE53C X1F1.txt	B E 5 30 X1 F2.b
-0.09919	20.108563	-0.057922	-0.084826	-0.085278	-0.067421	-0.04649		-0.062733	-0.053443	-0.058511	-0.07220	00.097149	-0.087802	-0.092112	-0.121845	-0.112199	-0.09808
-0.14021	10.147392	-0.106277	-0.130786	-0.124578	-0.107508	-0.09286	-0.107855	-0.104270.	-0.094436	-0.100136	-0.11298	50.136147	-0.128197	-0.131991	-0.160159	-0.153054	-0.13936
-0.16014	80.165221	-0.130176	-0.153222	-0.143373	-0.127174	-0.11614	0.131220	-0.124792	-0.115280	-0.120879	-0.13303	00.154362	-0.147214	-0.150150	-0.176988	-0.172598	-0.15873
-0.17222	40.175685	-0.146080	-0.166980	-0.154365	-0.138990	-0.13087	-0.145526	-0.138623.	-0.128046	-0.133453	-0,14484	30.165000	-0.159048	-0.160677.	-0.186822	-0.183934	-0.17059
-0,18362	00.186042	-0.161532	-0,180673	-0,164892	-0.150313	-0.14522	0,159025	-0.149158	-0,140133	-0.145127	-0,15610	50.174855	-0.168849	-0,171170.	-0,195728	-0,194667	-0,18180
-0,19473	40,195585	-0,176310	-0,193491	-0,174223	-0,161662	-0,15795		-0,160907	-0,151313	-0,155671	-0,166344	40,184061	-0,179157	-0,179775	-0.202941	-0,204166	-0,19147
-0,19892	50,198766	-0,182582	-0,198874	-0,177137	-0,166207	-0,16334	0,177899	-0,163830	-0,155579	-0,159203	-0,169743	30,186794	-0,182332	-0,182875	-0,205471	-0,205997	-0,1947
-0,20298	10,201194	-0,189087	-0,203101	-0,179698	-0,169810	-0,16763		-0,166720	-0,158313	-0,161861	-0,17180	60,188653	-0,185327	-0,184521	-0,205936	-0,207621	-0,19692
-0,20463	50,202628	-0,192755	-0,203953	-0,180676	-0,172670	-0,17013	0,184674	-0,166883	-0,160301	-0,163094	-0,171949	90,188966	-0,185366	-0,185561	-0,205712	-0,207255	-0,1973
-0.20563	70.203018	-0,195574	-0.207346	-0,180183	-0,173593	-0,17129		-0.166223	-0,160117	-0,161435	-0,171120	-0,188988	-0,186354	-0,185046.	-0.205307	-0.205828	-0,19692
-0.20564	50,202504	-0,196260	-0.207727	-0,179439	-0,173614	-0,17016	0,185842	-0,164123	-0,159093	-0,159541	-0,16885	70,187673	-0,185557	-0,183743	-0,203688	-0,202584	-0,19463
-0,20462	80,200805	-0,195732	-0,206301	-0,176798	-0,172641	-0,17017		-0,160200	-0,156242	-0,155845	-0,165340	00,184545	-0,182911	-0,181016	-0,199520	-0,198036	-0,19172
-0,20456	70,200579	-0,196390	-0,207406	-0,175350	-0,172492	-0,17014	0,183981	-0,157060	-0,154456	-0.153439	-0,16320	90,182932	-0,181892	-0,179671	-0,196952	-0,194583	-0,1896
-0,20329	50,198839	-0,195783	-0,204540	-0,172951	-0,170524	-0,16821	0,181086	-0,154519	-0,151715	-0,149895	-0,159623	20,179925	-0,178771	-0,176363	-0,193445	-0,190420	-0,18679
-0,20561	80,201012	-0,198667	-0,207098	-0,173165	-0,171634	-0,16892	0,181963	-0,151999	-0,150520	-0,148539	-0,158449	90,179521	-0,179054	-0,176675	-0,193214	-0,188640	-0,18580
-0,21535	20,210189	-0,208516	-0,216179	-0,180355	-0,179066	-0,17651	0,189610	-0,157532	-0,156453	-0,154302	-0,16415	60,186381	-0,186406	-0,183925	-0,200712	-0,195511	-0,19383
-0,22203	80,216781	-0,214981	-0,223751	-0,185808	-0,184714	-0,18200	0,194460	-0,161782	-0,160392	-0,158406	-0,168240	00,190783	-0,190881	-0,188144	-0,205060	-0,200885	-0,19833
-0,22834	00,221529	-0,220979	-0,227552	-0,190074	-0,189231	-0,18646	60,197869	-0,164617	-0,163813	-0,161242	-0,17172	10,193231	-0,193711	-0,190883	-0,207295	-0,204261	-0,20238
-0,23363	70,226837	-0,227389	-0,232058	-0,194666	-0,192967	-0,19028	50,201829	-0,168241	-0,167871	-0,165205	-0,17536	60,196109	-0,196291	-0,193793	-0,209201	-0,208033	-0,2069
-0,23647	90,228448	-0,229687	-0,233781	-0,196203	-0,195222.	-0,19270		-0,169550	-0,169683	-0,166962	-0,17649	80,196279	-0,196768	-0,194050	-0,209361	-0,210166	-0,2090
-0,23708	60,228748	-0,230332	-0,233584	-0,197188	-0,195771	-0,19384		-0,170675	-0,171258	-0,168292	-0,17696	80,195395	-0,195403	-0,193533	-0,208066	-0,210348	-0,20958
-0,23729	80,226469	-0,231180	-0,230561	-0,197839	-0,195934	-0,19387		-0,171517	-0,172290	-0,168954	-0,17664	40,193062	-0,193681	-0,191165	-0,205622	-0,209580	-0,2091
-0,23634	00,224157	-0,230569	-0,228853	-0,197379	-0,195646	-0,19414	0,200706	-0,172071	-0,172989	-0,169555	-0,177203	30,190918	-0,191506	-0,188919	-0,203004	-0,208497	-0,2078
-0,23343	90,220325	-0,227338	-0,223776	-0,194887	-0,193686	-0,19109		-0,171320	-0,171930	-0,168128	-0,17520	50,187154	-0.187209	-0,184610	-0,198134	-0,205713	-0.2044
-0,22996	20,215536	-0,224030	-0,219532	-0,193595	-0,190918	-0,18963	0,194641	-0,170156	-0,171201	-0,167467	-0,17302	90,183041	-0,182615	-0,181277	-0,193367	-0,202835	-0,2009
-0.22332	60.207599	-0.218492	-0.210480	-0.189557	-0.186092	-0.18589		-0.167425	-0.168353	-0.164706	-0,16857;	20.175805	-0.175556	-0,174130.	-0.185106	-0.195807	-0,1940
-0,21903	10,202063	-0,213911	-0.204742	-0,186424	-0,182541	-0,18255	0,183068	-0,165156	-0,166148	-0,162690	-0,165812	20,170956	-0,170258	-0,169076	-0,178919	-0,191195	-0,1892
0.01074	0 0 105224	0.007005								and the second se		all and the second s					

function. In this case, the program calculates the loss angle spectrum from the formula $\delta = \operatorname{atan} (X/R)$ when the "Read data" function is repeated. In this case, in addition to R, X and f, Loss angle appears in the scroll window. Before saving to the file, select the desired f vector, R, X and Loss angle matrices from the "Select columns to be saved" button, as can be seen in the dialog box above it. Before the actual save, the file manager asks for the save folder and the main title of the file, for example "... \ Blackcurrant Ben + 3C", which then logs the selected vectors and matrices as follows: "Blackcurrant Ben + 3C f", "Blackcurrant Ben + 3C R", "Blackcurrant Ben + 3C X", "Blackcurrant Ben +3C Loss angle".

The files collected after recording can be loaded into the LMSSC2 classification program and then the desired LMC and / or SSC classification can be made, or the distributions of the spectra stored in the files can be viewed in the "Plot" section.

RECOMMENDED CUSTOMER GROUP

- Industry and companies
- Universities and Research Institutes

PRICE

- 1) "KOONTI" software compiles the spectral files in the different folders and their subfolders according to the subject to suit the data format of the LMSSC2 classification software, thus avoiding separate time-consuming operations related to data collection and processing. The software recognizes the most common data formats such as ascii, csv, txt. "Koonti" program work on laptop.
- 2) "KOONTI" installation media and operating license 1260,00 €⁴. The "KOONTI" software is stored on a USB memory stick for delivery to the customer, and after installation on the computer, the stick acts as a license key. Therefore, it must be connected to the USB port while using the program.
- 3) Laptop (option)
 - Matte 15.6 "HD WLED display (1920x1080) or better
 - 5th generation Intel Core is 2 core processor (max 2.70GHz) or equivalent
 - o Integrated Intel HD Graphics 5500 graphics card or better with at least 8GB of DDR3L memory or more
 - 256GB SSD hard disk or larger
 - WLAN and Bluetooth 4.0
 - HDMI connector
 - 2 USB 3.0 and 1 USB 2.0 connectors
 - Ethernet (RJ-45) network interface
 - Windows 10 operating system 64bit

IN TOTAL: $1260 \notin (VAT \ 0\%)^5$; EXW Joensuu

Terms & Conditions

Equipment EXW JOENSUU (Incoterms 2010). Other terms and conditions according to TK Services 2010. The ownership of the supplied equipment will be transferred to the subscriber when the entire trade amount has been paid to the supplier. Equipment and work not mentioned in this offer and its annexes and other components are treated as additional work.

Delivery terms in the following order: 1. KOONTI Price list, 2. TK Services 2010.

⁴ For installation the software there exist several options: (i) The subscriber can do it first hand, (ii) The supplier can do it through a reliable internet connection, (iii) The subscriber purchases a laptop that meets the above minimum requirements and sends it to the vendor for software installation, or (iv) The supplier purchases the laptop, installs necessary software and invoices the subscriber separately for laptop price and installation work according to the Simitec Ltd service price list. ⁵ Changes in prices are reserved.

Transfer of risk

The risk is transferred to the Subscriber when the goods are handed over to the subscriber or transported by an independent carrier in accordance with the contract, subject to the delivery clause.

If the item is not handed over at the right time and this is due to the fact that the Subscriber or the Subscriber is involved, the Liability shall be transferred to the Subscriber when the Supplier has done what he or she is required by the contract to enable the transfer.

Delivery time

Delivery time is agreed separately. The Agreement enters into force when the Subscriber's written order confirmation (including e-mail is accepted) has been received and confirmed from the Supplier's side to the Subscriber.

Payment terms

The terms of the offer are as follows. Late interest rate 10.5%.

The total price of the product when ordering, 14 days net

Additional work and any other supplies and equipment not included in the delivery will be billed after delivery, 14 days net.

Warranty and maintenance

The warranty for the devices to be delivered is 12 months from the time the equipment is ready for EXW. The warranty does not include travel and accommodation costs.

This offer includes KOONTI for email and phone support for the warranty period without any charge. If the Subscriber makes his own changes to the KOONTI system, the warranty will expire. The repair of the program is done by Simitec Ltd and the costs are invoiced according to the company's service price list and they are charged 100% afterwards, 14 days net. After the warranty period, the training, support and installation services and repair work will be billed according to the current Simitec Ltd service price list and will be charged afterwards at 100%, 14 days net.

For example, the cost of repairing a bug or installing an update will be charged on the basis of work hours and parts used for repair after work.

Fee for additional work

Additional and modifications must be agreed in advance and are based on a service price list. Other costs will be charged to actual amounts based on the Supplier's selling prices and terms and conditions set out in the Job Charging Pricing Schedule.