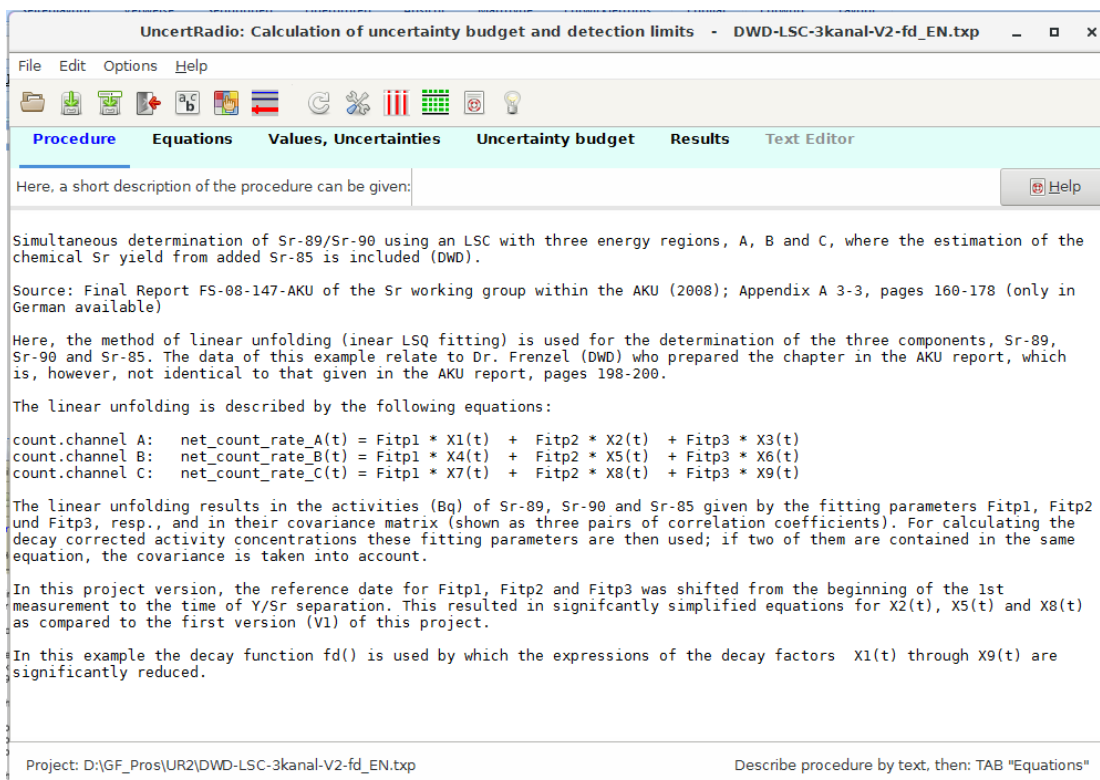


File selection

includes a RecentManager



Start window

TAB Procedure

Text field for leaving notes about the procedure of the current project

It refers to a procedure using linear unfolding (linear weighted LSQ) for simultaneous determination of Sr-90, Sr-89 and Sr-85, measured 10 times in three LSC energy windows

Options

Selection:

Quantiles
 Error probabilities

Quantiles		Error probabilities	
k-alpha	1.6448540	alpha	0.04999996
k-beta	1.6448540	beta	0.04999996

Probability for confidence interval (1-gamma) 0.950
 Coverage factor 1.0
 Detection limit method ISO 11929:2010, by iteration
 Gamma distribution: value of GamDistAdd(0; 0.5, 1) 1.0

language:

List separator (CSV files):

Options

Available from menu Edit

UncertRadio: Calculation of uncertainty budget and detection limits - DWD-LSC-3kanal-V2-fd_EN.txp

File Edit Options Help

Procedure **Equations** Values, Uncertainties Uncertainty budget Results Text Editor

Input of equations, line by line; the first equation defines the output quantity by other quantities, which then are defined by auxiliary equations following the first one.

Equations

```

cSr89 = Fitp1 / (etaSr*mass) * exp(lamSr89 * (tBS - tAS))
cSr90 = Fitp2 / (etaSr*mass) * exp(lamSr90 * (tBS - tAS))
ASr85 = Fitp3 * 1.
etaSr = Fitp3 * EXP(lamSr85*(tCS - tAS)) / ((mass * 1000.) * cSr85V)
rd = Linfit(1, Rbl, eSr85A, eSr85B, eSr85C, eSr90A, eSr90B, eSr90C, eSr89A, eSr89B, eSr89C, &
eY90A, eY90B, eY90C, lamSr85, lamSr90, lamSr89, lamY90, tmess, tstart)
  
```

Complement units and meanings below

Load symbols(1) from equations

Table of symbols:

n	Symbol	Type	Unit	Meaning
1	cSr89	a	Bq/kg	Sr-89 activity concentration, referred to the time of sampling
2	cSr90	a	Bq/kg	Sr-90 activity concentration, referred to the time of sampling
3	ASr85	a	Bq	Sr-85 activity
4	etaSr	a		chemical Sr yield
5	rd	a		dummy variable for calling Linfit , not used in calculations
6	mass	u	kg	sample mass
7	lamSr89	u	1/s	Sr-89 decay constant

Load symbols(2) from finalized symbol table

Active output quantity: cSr89

Select net and gross count rate symbols: net count rate: gross count rate:

Project: D:\GF_Proj\UR2\DWD-LSC-3kanal-V2-fd_EN... Enter equations, then Button "Load symbols from e..."

TAB Equations

1. Writing equations
2. Load symbol list
3. Explain symbols
4. Reload symbol list
5. Select net and gross counting rate symbols

Model of the decay curve:

Linear Model: $Y(t) = a1*X1(t) + a2*X2(t) + a3*X3(t)$

a1--> Fitp1; a2--> Fitp2; a3--> Fitp3

Which terms to fit:
 Fix: quantify Fitp(i) in "Values, Uncertainties"!

<input type="button" value="fit"/>	a1*X1(t): first component	<input type="button" value="3"/>	number of counting channels (A, B, C)
<input type="button" value="fit"/>	a2*X2(t): second component		
<input type="button" value="fit"/>	a3*X3(t): third component		

apply weighted fit
 use covariances betw. net counting rates
 define Xj(t) separately for each measurement?

Definition of functions X1 to Xn (n=3*nchs): Ordering: like SQL: 'ORDER BY Channel, measurement, term-number'

Equations of the form $X_i = a_i * i$ -th function $X_i(t)$:

```

X1 = eSr89A * fd(tAS+tstart,tmess,lamSr89)
X2 = eSr90A * fd(tAS+tstart,tmess,lamSr90) + &
eY90A * lamY90/(lamY90-lamSr90) * ( fd(tAS+tstart,tmess,lamSr90) - fd(tAS+tstart,tmess,lamY90) )
X3 = eSr85A * fd(tAS+tstart,tmess,lamSr85)
X4 = eSr89B * fd(tAS+tstart,tmess,lamSr89)
X5 = eSr90B * fd(tAS+tstart,tmess,lamSr90) + &
eY90B * lamY90/(lamY90-lamSr90) * ( fd(tAS+tstart,tmess,lamSr90) - fd(tAS+tstart,tmess,lamY90) )
X6 = eSr85B * fd(tAS+tstart,tmess,lamSr85)
X7 = eSr89C * fd(tAS+tstart,tmess,lamSr89)
X8 = eSr90C * fd(tAS+tstart,tmess,lamSr90) + &
eY90C * lamY90/(lamY90-lamSr90) * ( fd(tAS+tstart,tmess,lamSr90) - fd(tAS+tstart,tmess,lamY90) )
X9 = eSr85C * fd(tAS+tstart,tmess,lamSr85)
  
```

Define details of the model for the LSQ-analysis

of a complex decay curve

Define decay corrections for each nuclide and each counting channel

number of eqs:
(3 x num of channels)

UncertRadio: Calculation of uncertainty budget and detection limits - DWD-LSC-3kanal-V2-fd_EN.txp

File Edit Options Help

Procedure Equations **Values, Uncertainties** Uncertainty budget Results Text Editor

Text cell for editing a longer formula

Table of values, uncertainties:

n	Symbol	Type	Unit	Value	distribut	StdDevFormula	StdDevValue	Half width	abs/rel	abs.Std.Unc.
1	cSr89	a	Bq/kg	10898.6601	Normal				abs	1734.8436892
2	cSr90	a	Bq/kg	1005.06572	Normal				abs	20.006713354
3	ASr85	a	Bq	3.02056533	Normal				abs	4.3093280557E-02
4	etaSr	a		1.06154810	Normal				abs	1.7973264655E-02
5	rd	a		2.28410362	Normal				abs	0.37337053813
6	mass	u	kg	2.0060E-02	Normal		8.190E-05		abs	8.190E-05
7	lamSr89	u	1/s	1.58650E-01	Normal				abs	0.0
8	tBS	u	s	31807080.0	Normal				abs	0.0
9	tAS	u	s	2679300.0	Normal				abs	0.0
10	lamSr90	u	1/s	7.6266660E	Normal				abs	0.0
11	lamSr85	u	1/s	1.23716670	Normal				abs	0.0
12	tCS	u	s	31807080.0	Normal				abs	0.0
13	cSr85V	u	Bq/g	5.210	Normal		4.2540E-02		abs	4.2540E-02

Input of covariances/correlations:

n	SymbolA	SymbolB	Type	Formula	Value
1	Fitp1	Fitp2	correlation		-9.1039051
2	Fitp2	Fitp3	correlation		-4.8313121
3	Fitp1	Fitp3	correlation		3.545014E
4					
5					

Calculation of uncertainties

Project: D:\GF_Proj\UR2\DWD-LSC-3kanal-V2-fd_EN... fill out both tables, then Button "Calculation of uncer..."

TAB Values, uncertainties

Measured values and associated uncertainties, the latter also by a half-width of a rectangular or triangular distribution type

White cells: user input
colored cells: UR output

A priori known covariance or correlation values may be given here

Values of the decay curve:

Net blank count rate: 1.0000000E-07

Date + Time of separation: 01.01.2005 12:12

time basis for count-time and -rates: s

Date format: 01.01.2015 08:30:15

n	Start date (gross)	Count time (gross)	Counts (gross)	CountRate (gross)	u(CountRate) (gross)	Count time (BG)	Counts (BG)	CountRate (BG)	u(CountRate) (BG)	CountRate (net)	u(CountRate) (net)
1	0.	7200.0	12849.0	1.78458333333	1.5743531888E-02	7200.0	177.0	2.4583333333E-02	1.8477964855E-03	1.75999990	1.5851597653E-02
2	7920.	7200.0	12905.0	1.79236111111	1.5777802230E-02	7200.0	175.0	2.4305555556E-02	1.8373272994E-03	1.7680554555	1.5884420506E-02
3	15840.	7200.0	12931.0	1.79597222222	1.5793688183E-02	7200.0	180.0	2.50E-02	1.8633899812E-03	1.7709721222	1.5903232648E-02
4	23760.	7200.0	13152.0	1.82666666667	1.5928079096E-02	7200.0	178.0	2.4722222222E-02	1.8530088978E-03	1.8019443445	1.6035502663E-02
5	31680.	7200.0	13222.0	1.83638888889	1.5970410525E-02	7200.0	168.0	2.3333333333E-02	1.8002057496E-03	1.8130554556	1.6071551048E-02
6	39600.	7200.0	12956.0	1.79944444444	1.5808948083E-02	7200.0	183.0	2.5416666667E-02	1.8788540637E-03	1.7740276777	1.5920205152E-02
7	47520.	7200.0	12865.0	1.78680555556	1.5753331021E-02	7200.0	193.0	2.6805555556E-02	1.9295061096E-03	1.75999990	1.5871056426E-02
8	55440.	7200.0	12814.0	1.77622222222	1.5722874689E-02	7200.0	178.0	2.4722222222E-02	1.8530088978E-03	1.75400000	1.5830896408E-02

calculate count rates

OK Cancel

Grid for details of the data for deriving the curve of count rates;

White colored cells refer to input data (also by copy and paste of column blocks from Excel);

the red colored ones can be calculated with the button below the grid

UncertRadio: Calculation of uncertainty budget and detection limits - DWD-LSC-3kanal-V2-fd_EN.txp

File Edit Options Help

Procedure Equations Values, Uncertainties **Uncertainty budget** Results Text Editor

linfout.txt

Result of decay curve analysis (with covariances): Method: NLSQ
 LinFit(t) = a1*X1(t) + a2*X2(t) + a3*X3(t)

i	t (m)	X1(t)	X2(t)	X3(t)	NetRate (cps)	rUnc. (%)	LinFit (cps)	relDev (%)	uTest
1	0.00	0.01046	0.05635	0.18986	1.7599999	0.90	1.7769004	-1.0	-1.0
2	132.00	0.01045	0.05635	0.18968	1.7680555	0.90	1.7763030	-0.5	-0.5
3	264.00	0.01043	0.05635	0.18949	1.7709721	0.90	1.7757061	-0.3	-0.3
4	396.00	0.01042	0.05635	0.18931	1.8019443	0.89	1.7751097	1.5	1.5
5	528.00	0.01041	0.05635	0.18912	1.8130555	0.89	1.7745139	2.2	2.2
6	660.00	0.01039	0.05635	0.18893	1.7740277	0.90	1.7739187	0.0	0.0
7	792.00	0.01038	0.05635	0.18875	1.7599999	0.90	1.7733240	-0.8	-0.8
8	924.00	0.01037	0.05635	0.18856	1.7549999	0.90	1.7727299	-1.0	-1.0
9	1056.00	0.01036	0.05635	0.18838	1.7880555	0.89	1.7721364	0.9	0.9
10	1188.00	0.01034	0.05635	0.18820	1.7530555	0.90	1.7715433	-1.0	-1.1
11	0.00	0.20940	1.04185	0.02471	22.3799999	0.25	22.3612609	0.1	0.2
12	132.00	0.20914	1.04185	0.02468	22.4099999	0.25	22.3604945	0.2	0.5
13	264.00	0.20887	1.04184	0.02466	22.4099999	0.25	22.3597279	0.2	0.5
14	396.00	0.20861	1.04184	0.02463	22.3499999	0.25	22.3589613	-0.0	-0.1
15	528.00	0.20835	1.04183	0.02461	22.3099999	0.25	22.3581947	-0.2	-0.5
16	660.00	0.20809	1.04183	0.02458	22.3499999	0.25	22.3574280	-0.0	-0.1
17	792.00	0.20783	1.04182	0.02456	22.2899999	0.25	22.3566613	-0.3	-0.7
18	924.00	0.20757	1.04182	0.02454	22.3299999	0.25	22.3558947	-0.1	-0.3
19	1056.00	0.20730	1.04181	0.02451	22.3599999	0.25	22.3551280	0.0	0.1
20	1188.00	0.20704	1.04181	0.02449	22.3899999	0.25	22.3543614	0.2	0.4
21	0.00	0.26918	0.54037	0.00707	11.9699999	0.34	11.9474366	0.2	0.4
22	132.00	0.26884	0.54037	0.00707	11.9999999	0.34	11.9466549	0.4	0.9
23	264.00	0.26850	0.54037	0.00706	12.0099999	0.34	11.9458723	0.5	1.0
24	396.00	0.26817	0.54037	0.00705	11.9599999	0.34	11.9450889	0.1	0.2
25	528.00	0.26783	0.54037	0.00705	11.9299999	0.34	11.9443047	-0.1	-0.2
26	660.00	0.26749	0.54037	0.00704	11.8299999	0.34	11.9435197	-1.0	-1.9
27	792.00	0.26716	0.54037	0.00703	11.8999999	0.34	11.9427340	-0.4	-0.7
28	924.00	0.26682	0.54037	0.00703	11.9299999	0.34	11.9419477	-0.1	-0.2
29	1056.00	0.26649	0.54037	0.00702	11.9199999	0.34	11.9411607	-0.2	-0.3
30	1188.00	0.26615	0.54037	0.00701	11.9899999	0.34	11.9403731	0.4	0.8

LinFit: a1= 2.2841036 a2= 20.9323174 a3= 3.0205653 (given in cps !)
 ra1= 16.346 ra2= 0.628 ra3= 1.426 (given in % !)
 CHi2R= 1.272E+00
 Prob= 0.000002 Prob= 0.000000 Prob= 0.000000 (t-test-signific. !)

Close Save As

Project: D:\GF_Pro\UR2\DWD-LSC-3kanal-V2-fd_EN... fill out both tables, then Button "Calculation of uncer..."

Intermediate result from curve fitting
 shown in the new Text editor tab
 (10 measurements in 3 LSC energy windows)

channel A (1-10)

channel B (21-20)

channel C (21-30)

UncertRadio: Calculation of uncertainty budget and detection limits - DWD-LSC-3kanal-V2-fd_EN.txp

File Edit Options Help

Procedure Equations Values, Uncertainties **Uncertainty budget** Results Text Editor

Change budget type Help

Table of uncertainty budget for cSr89 :

n	Symbol	Type	Unit	Value	StdDevValue	Sensit. coefficient	rel. contribution(%)
1	cSr89	a	Bq/kg	10898.660109	1734.8436892	0.0	100.0
2	cSr90	a	Bq/kg	1005.0657240	20.006713354	0.0	0.0
3	ASr85	a	Bq	3.0205653352	4.3093280557E-02	0.0	0.0
4	etaSr	a		1.0615481046	1.7973264655E-02	0.0	0.0
5	rd	a		2.2841036237	0.37337053813	0.0	0.0
6	mass	u	kg	2.0060E-02	8.190E-05	4.4276092706E-05	0.0
7	lamSr89	u	1/s	1.58650E-07	0.0	0.0	0.0
8	tBS	u	s	31807080.0	0.0	0.0	0.0
9	tAS	u	s	2679300.0	0.0	0.0	0.0
10	lamSr90	u	1/s	7.6266660E-10	0.0	0.0	0.0
11	lamSr85	u	1/s	1.23716670E-0	0.0	0.0	0.0
12	tCS	u	s	31807080.0	0.0	0.0	0.0
13	cSr85V	u	Bq/g	5.210	4.2540E-02	2091.8733416	0.26311465653
14	Fitp1	u	Bq	2.2841036237	0.37337053813	4771.5261232	102.19554252
15	Fitp2	u	Bq	20.932317421	0.13149071922	0.0	0.0
16	Fitp3	u	Bq	3.0205653352	4.3071159939E-02	-3608.152411	-2.458657179
17	Rbl	u	1/s	1.0E-07	0.0	0.0	0.0
18	eSr85A	u		0.26460	1.080E-03	0.0	0.0
19	eSr85B	u		3.4430E-02	1.4060E-04	0.0	0.0
20	eSr85C	u		9.8580E-03	4.0250E-05	0.0	0.0
21	eSr90A	u		4.7940E-02	1.9570E-04	0.0	0.0
22	eSr90B	u		0.79190	3.2330E-03	0.0	0.0
23	eSr90C	u		2.6510E-02	1.0820E-04	0.0	0.0
24	eSr89A	u		1.6010E-02	6.5380E-05	0.0	0.0

Project: D:\GF_Pro\UR2\DWD-LSC-3kanal-V2-fd_EN... fill out both tables, then Button "Calculation of uncer..."

TAB
Uncertainty budget
 (relative budget component values in %; absolute component values also selectable)

UncertRadio: Calculation of uncertainty budget and detection limits - DWD-LSC-3kanal-V2-fd_EN.txp

File Edit Options Help

Procedure Equations Values, Uncertainties Uncertainty budget **Results** Text Editor

Final measurement result for cSr89 :

Coverage factor k: 1.0

Value output quantity: 10898.66 Bq/kg

extendend (Std.-)uncertainty: 1734.844 Bq/kg

relative erw. (Std.-)Unsicherheit: 15.91795 %

Best Bayesian Estimates:

Value output quantity: 10898.66 Bq/kg

extendend (Std.-)uncertainty: 1734.844 Bq/kg

lower confidence limit: 7498.429 Bq/kg

upper confidence limit: 14298.89 Bq/kg

Probability (1-gamma): 0.950

Decision threshold and detection limit for cSr89 :

Decision threshold (DT): 2923.170 Bq/kg Iterations: 1

Detection limit (DL): 5805.050 Bq/kg Iterations: 4

k_alpha=1.645, k_beta=1.645 Method: ISO 11929:2010, by iteration

NLSQ: standard uncertainty of the fit parameter:

from LS analysis: 0.3733705 Bq

from uncertainty propagation: 0.3733357 Bq

reduced Chi-squared: 1.2723

Monte Carlo Simulation:

number of simul. measurements: 10000 Values <0 included

number of runs: 1 min. Coverage interval

rSD%:

Value output quantity: Bq/kg

extendend uncertainty: Bq/kg

relative erw. Unsicherheit: %

lower confidence limit: Bq/kg

upper confidence limit: Bq/kg

Decision threshold (DT): Bq/kg

Detection limit (DL): Bq/kg

active run: IT: Start MC

Project: D:\GF_Projs\UR2\DWD-LSC-3kanal-V2-fd_EN... fill out both tables, then Button "Calculation of uncer..."

TAB Results

Stating the results obtained by ISO 11929 analytically in the upper part

UncertRadio: Calculation of uncertainty budget and detection limits - DWD-LSC-3kanal-V2-fd_EN.txp

File Edit Options Help

Procedure Equations Values, Uncertainties Uncertainty budget **Results** Text Editor

Final measurement result for cSr89 :

Coverage factor k: 1.0

Value output quantity: 10898.66 Bq/kg

extendend (Std.-)uncertainty: 1734.844 Bq/kg

relative erw. (Std.-)Unsicherheit: 15.91795 %

Best Bayesian Estimates:

Value output quantity: 10898.66 Bq/kg

extendend (Std.-)uncertainty: 1734.844 Bq/kg

lower confidence limit: 7498.429 Bq/kg

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Probability (1-gamma): 0.950

Decision threshold and detection limit for cSr89 :

Decision threshold (DT): 2923.170 Bq/kg Iterations: 1

Detection limit (DL): 5805.050 Bq/kg Iterations: 4

k_alpha=1.645, k_beta=1.645 Method: ISO 11929:2010, by iteration

NLSQ: standard uncertainty of the fit parameter:

from LS analysis: 0.3733705 Bq

from uncertainty propagation: 0.3733357 Bq

reduced Chi-squared: 1.2723

Monte Carlo Simulation:

number of simul. measurements: 50000 Values <0 included

number of runs: 1 min. Coverage interval

rSD%:

Value output quantity: 10879.05 Bq/kg 0.072

extendend uncertainty: 1741.097 Bq/kg 0.316

relative erw. Unsicherheit: 16.00413 %

lower confidence limit: 7439.787 Bq/kg 0.280

upper confidence limit: 14268.68 Bq/kg 0.146

Decision threshold (DT): 2895.620 Bq/kg 0.575

Detection limit (DL): 5795.624 Bq/kg 0.405

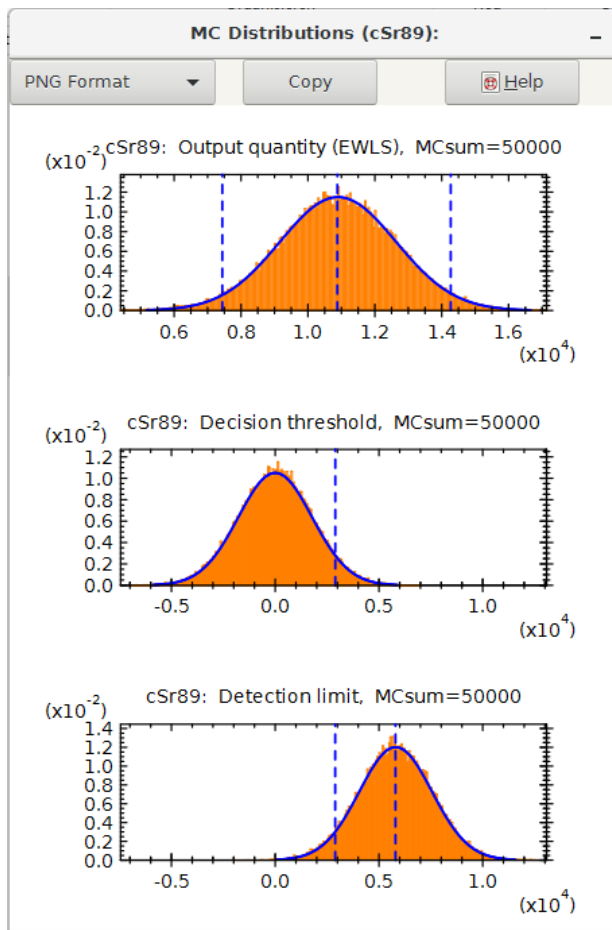
active run: 1 IT: 11 Start MC

Project: D:\GF_Projs\UR2\DWD-LSC-3kanal-V2-fd_EN.txp Ready!

TAB Results

The button **Save to csv** adds the values in these fields to a permanent CSV file

Stating the results from a **Monte Carlo simulation**

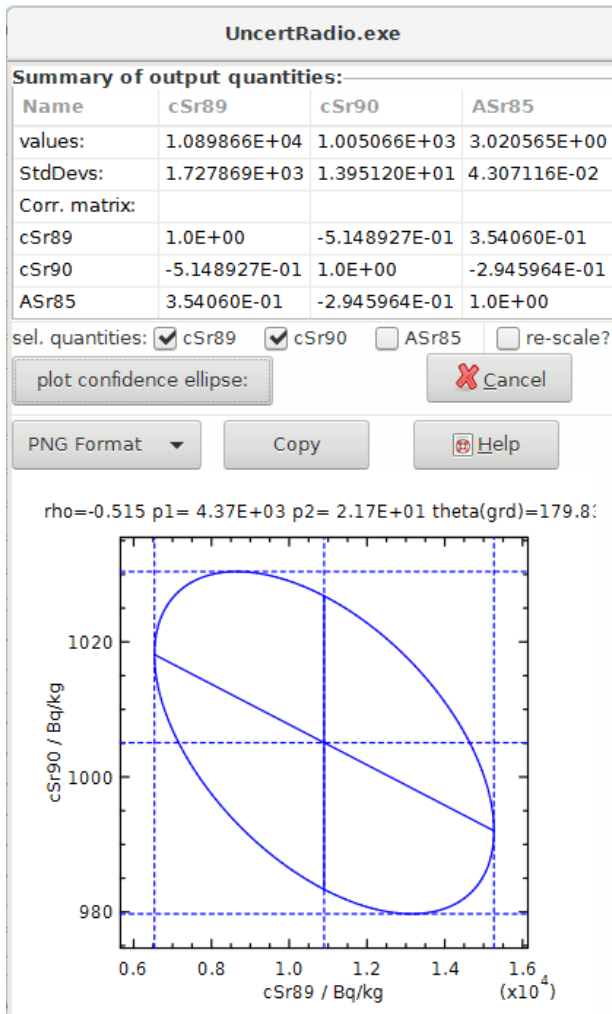


TAB Results

MC Distributions of output quantity, decision threshold, detection limit

blue curves: ISO 11929 analytically

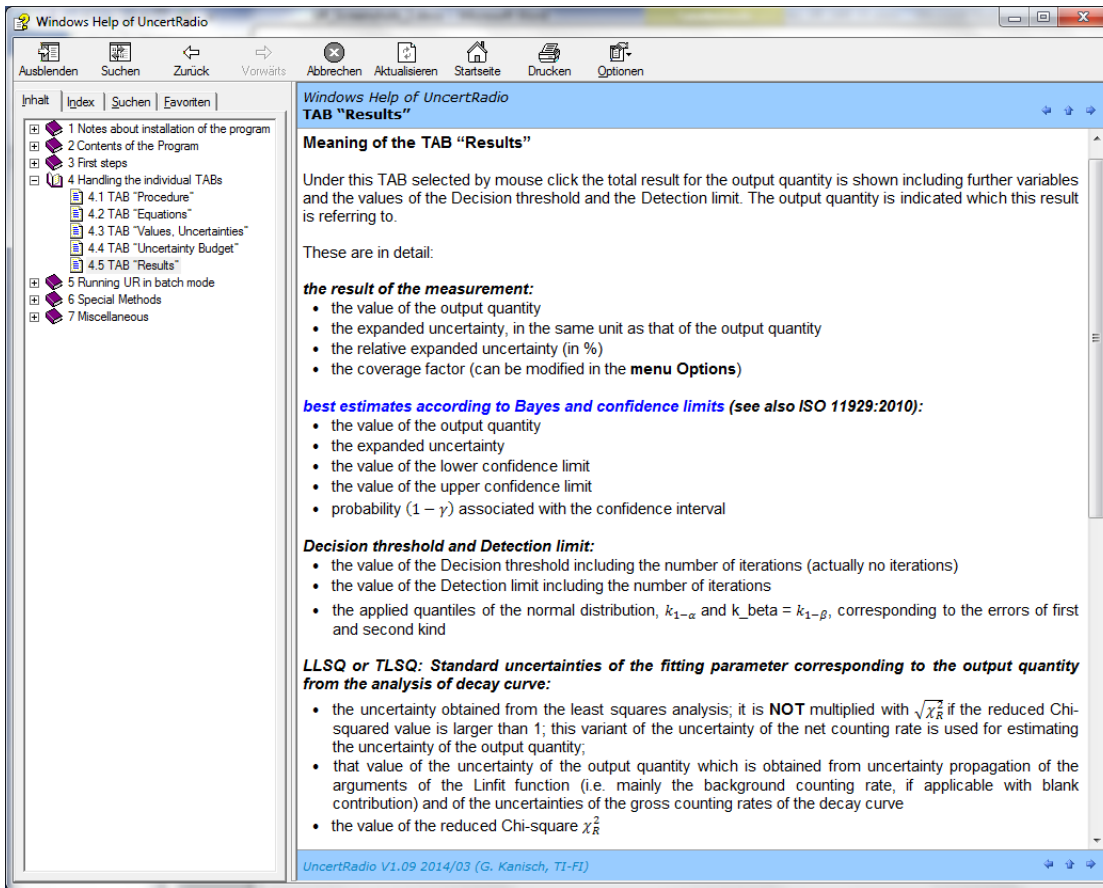
the single graphic field may be copied to the Windows clipboard or to a file



Menu Options – calculate confidence ellipsoid

shows the correlation matrix of output quantities;

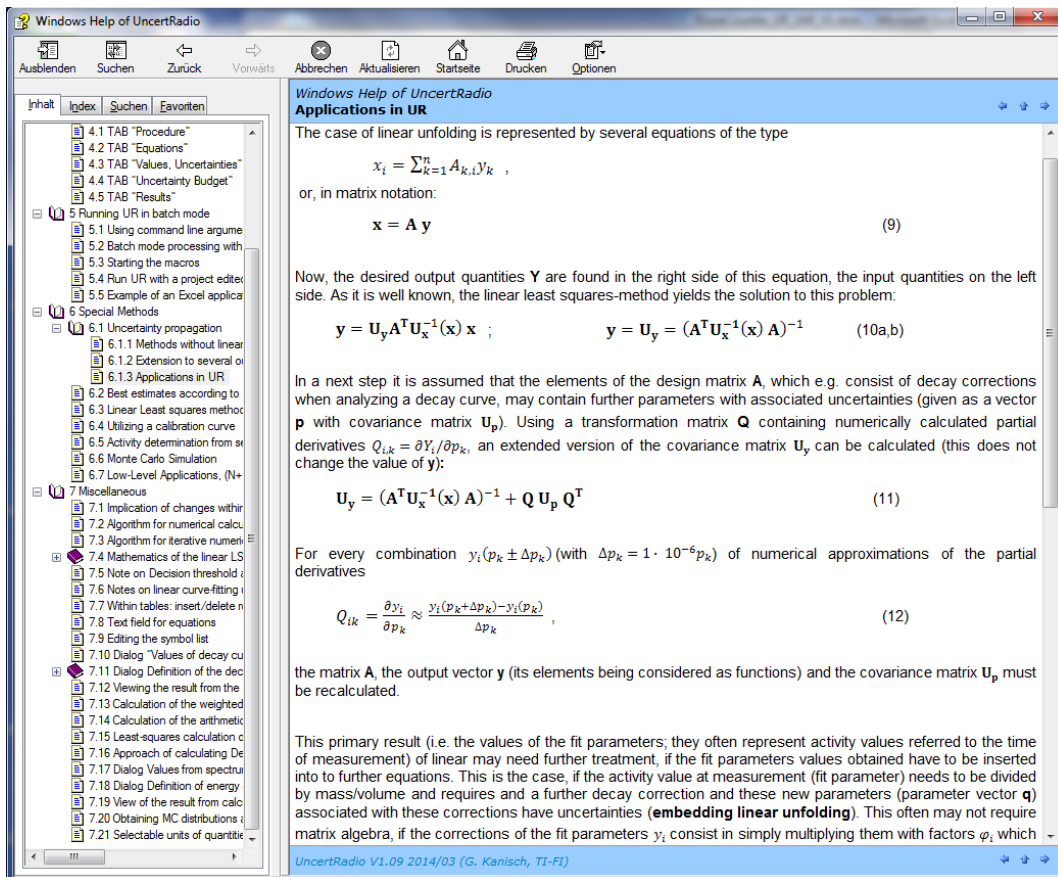
shows the confidence ellipsoid for two selected output quantities



Example of

UR's Windows CHM help

Specific topics are also available from via Help button within most of the dialogs



Example of

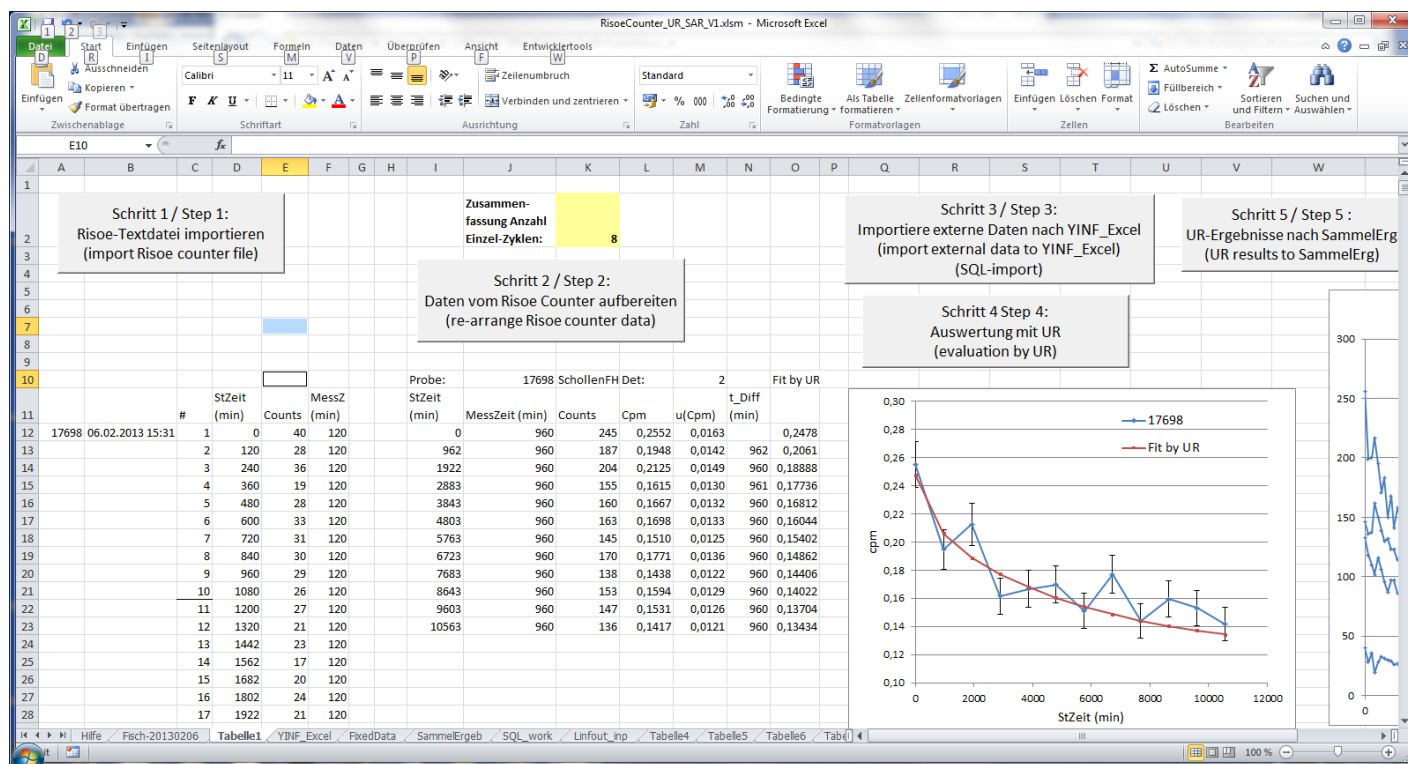
UR's Windows CHM help

UR can meanwhile be accessed from within an Excel file

Such an example is shown below.

It reads in data of an Y-90 decay curve from a text output file of a beta counter (the Risoe GM Counter). After re-arranging these data and importing some additional data characterizing analytical sample data by SQL, and transferring all these data into CSV sheet (Tabelle4) of the associated UR project (located in Tabelle4), this modified sheet Tabelle4 is exported,

executed by UR and UR's results are then re-imported into sheet Tabelle5. These operations are performed using VBA modules.



Below: lower part of „Tabelle4“ containing the associated UR project file in CSV style; this sheet has to be updated (in its lower part) for each additional sample evaluation.

A	B	C	D	E	F	G	H	I	J	K	L	M
64	Werte, Unsicherheiten:											
65	1 a	1,17E-03	1		-9,99E+02	-9,99E+02	1	1,43E-04				
66	2 phi	5,03E-01	1		-9,99E+02	-9,99E+02	1	1,23E-02				
67	3 Rn	2,32E-03	1		-9,99E+02	-9,99E+02	1	2,79E-04				
68	4 f1	1,04E+00	1		-9,99E+02	-9,99E+02	1	1,67E-04				
69	5 eps	4,19E-01	1		2,50E-02	-9,99E+02	2	4,10E-03				
70	6 etaY	7,92E-01	1		2,00E-02	-9,99E+02	2	1,76E-02				
71	7 ma	5,11E+01	1		4,00E-03	-9,99E+02	2	3,00E-02				
72	8 FA	4,75E+01	1		2,00E-02	-9,99E+02	2	7,34E-01				
73	9 Rbl	4,67E-06	1		2,83E-07	-9,99E+02	1	2,83E-05				
74	10 HwzY90	2,31E+05	1		1,12E+02	-9,99E+02	1	1,12E+02				
75	11 Hwzlong	1,00E+14	1		-9,99E+02	-9,99E+02	1	-9,99E+02				
76	12 HwzAc228	2,21E+04	1		-9,99E+02	-9,99E+02	1	-9,99E+02				
77	13 tmess	7,20E+04	1		-9,99E+02	-9,99E+02	1	-9,99E+02				
78	14 tstart	0,00E+00	1		-9,99E+02	-9,99E+02	1	-9,99E+02				
79	15 tprobe	4,29E+02	1		2,10E-01	-9,99E+02	1	2,00E-01				
80	16 HWZSR90	1,05E+04	1		2,56E+01	-9,99E+02	1	2,56E+01				
81	CovarGrid:											
82	AbklingGrid:	fitp1?	fitp2?	fitp3?	weighted f.	use covs?	fitmeth?	time base(s/m):				
83	ModPar	1	0	1	1	1	1	1				
84	Trenn-Datum	07.02.2013 07:37										
85	1	07.02.2013 15:33	5,76E+04	8,68E+02	-9,99E+02	-9,99E+02	2,88E+05	6,24E+02	-9,99E+02	-9,99E+02	-9,99E+02	-9,99E+02
86	2	08.02.2013 07:33	5,76E+04	7,07E+02	-9,99E+02	-9,99E+02	2,88E+05	6,24E+02	-9,99E+02	-9,99E+02	-9,99E+02	-9,99E+02
87	3	08.02.2013 23:34	5,76E+04	5,91E+02	-9,99E+02	-9,99E+02	2,88E+05	6,24E+02	-9,99E+02	-9,99E+02	-9,99E+02	-9,99E+02
88	4	09.02.2013 15:34	5,76E+04	4,95E+02	-9,99E+02	-9,99E+02	2,88E+05	6,24E+02	-9,99E+02	-9,99E+02	-9,99E+02	-9,99E+02
89	5	10.02.2013 07:34	5,76E+04	4,63E+02	-9,99E+02	-9,99E+02	2,88E+05	6,24E+02	-9,99E+02	-9,99E+02	-9,99E+02	-9,99E+02
90	6	10.02.2013 23:34	5,76E+04	3,65E+02	-9,99E+02	-9,99E+02	2,88E+05	6,24E+02	-9,99E+02	-9,99E+02	-9,99E+02	-9,99E+02
91	7	11.02.2013 15:34	57600	357	-999	-999	288000	624	-999	-999	-999	-999
92	8	12.02.2013 07:34	57600	303	-999	-999	288000	624	-999	-999	-999	-999
93	9	12.02.2013 23:34	57600	292	-999	-999	288000	624	-999	-999	-999	-999
94	10	13.02.2013 15:34	57600	264	-999	-999	288000	624	-999	-999	-999	-999