PeakMaster 6

Capillary zone electrophoresis
and affinity capillary electrophoresis
simulator

Step-by-step User Guide

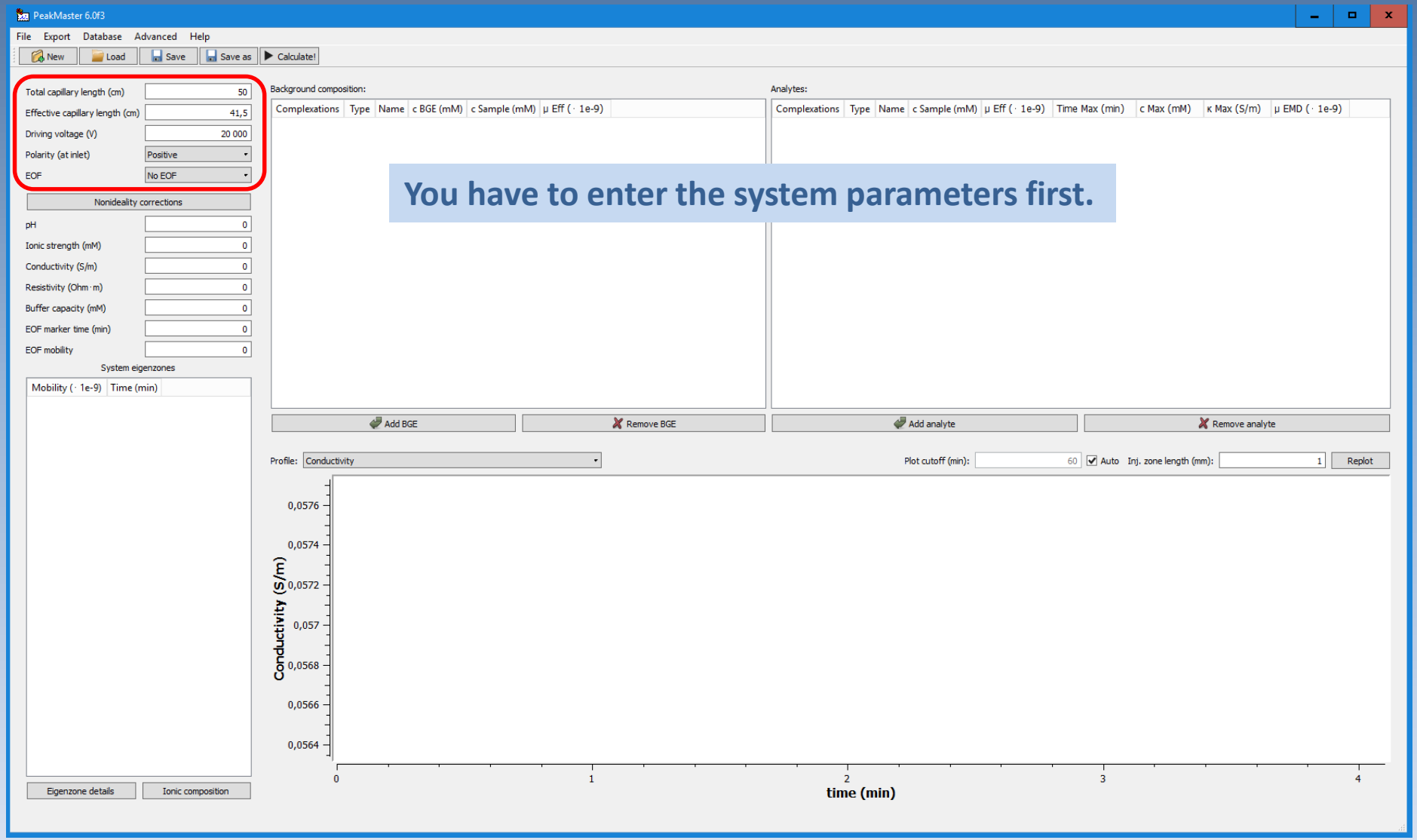
FACULTY OF SCIENCE
Charles University

– ECHMET +

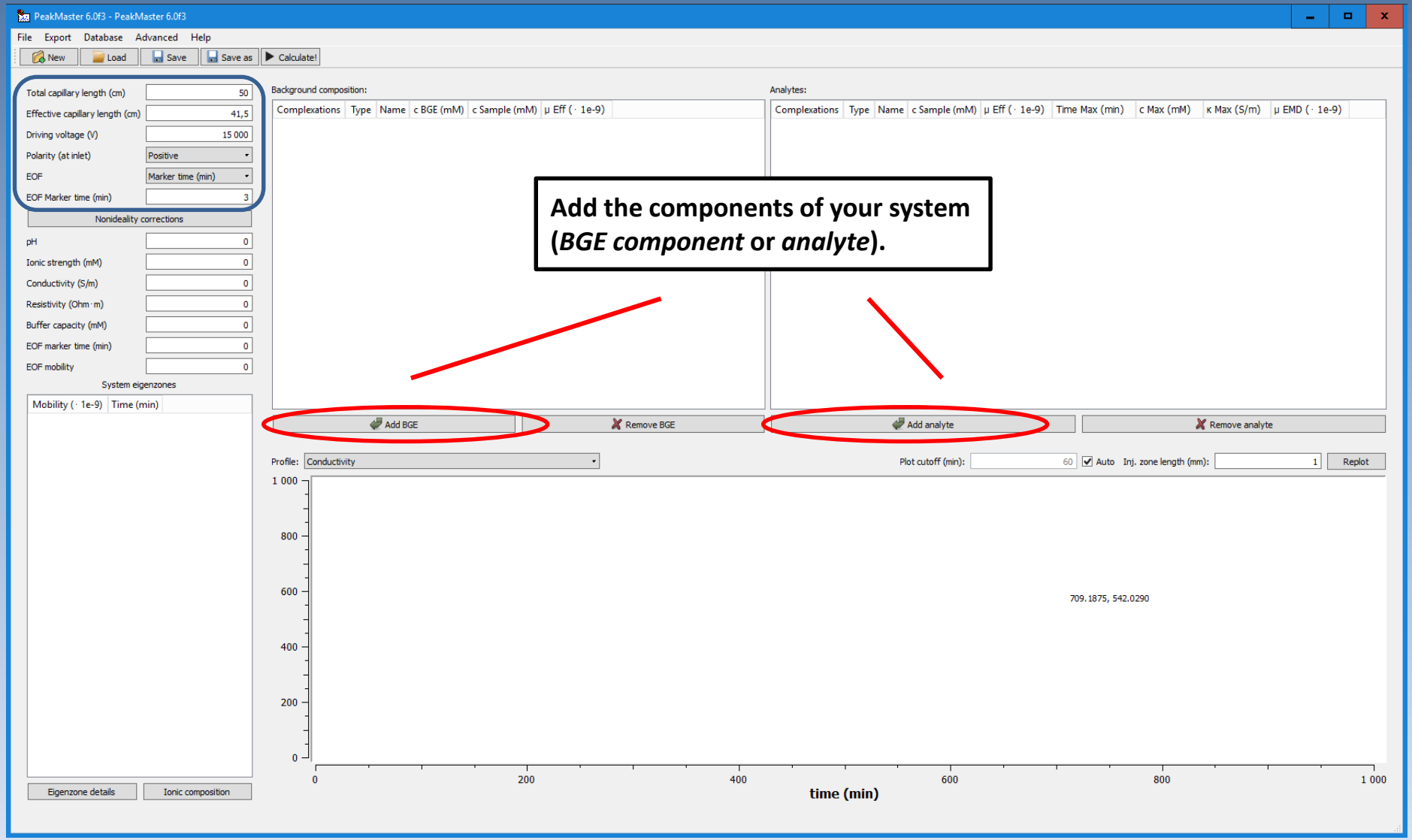
PeakMaster 6 - User Guide

Input Data

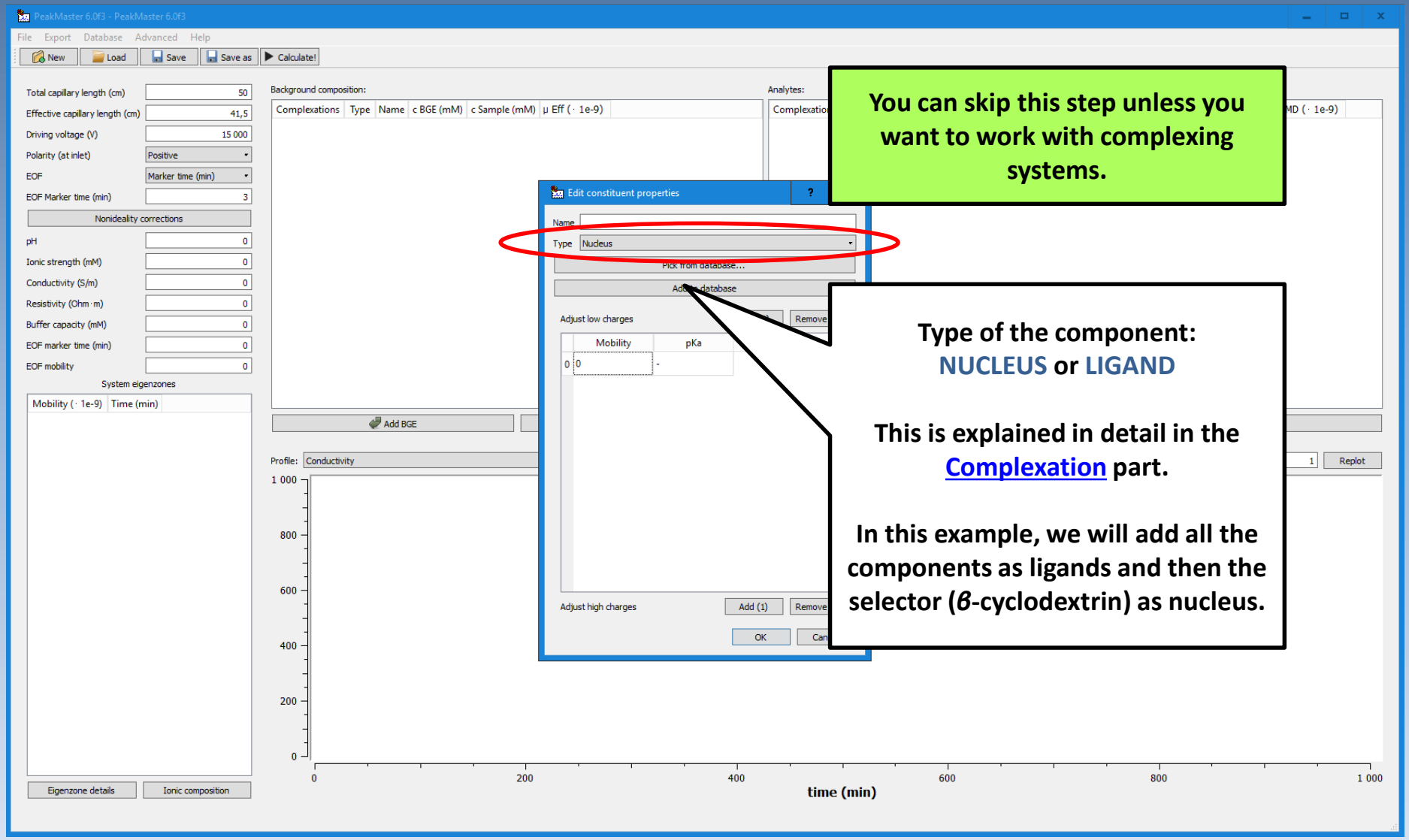
Input Data


PeakMaster 6.0f3
File
Export
Database
Advanced
Help
New
Load
Save
Save as
Calculate!
Total capillary length (cm)
50
Effective capillary length (cm)
41,5
Driving voltage (V)
20 000
Polarity (at inlet)
Positive
EOF
No EOF
Nonideality corrections
pH
Ionic strength (mM)
Conductivity (S/m)
Resistivity (Ohm·m)
Buffer capacity (mM)
EOF marker time (min)
EOF mobility
System eigenzones
Mobility (· 1e-9)
Time (min)
Eigenzone details
Ionic composition
Background composition:
Complexations
Type
Name
c BGE (mM)
c Sample (mM)
μ Eff (· 1e-9)
Analytes:
Complexations
Type
Name
c Sample (mM)
μ Eff (· 1e-9)
Time Max (min)
c Max (mM)
κ Max (S/m)
μ EMD (· 1e-9)
You have to enter the system parameters first.
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile:
Conductivity
Plot cutoff (min):
60
Auto
Inj. zone length (mm):
1
Replot
Conductivity (S/m)
0,0576
0,0574
0,0572
0,057
0,0568
0,0566
0,0564
0
1
2
3
4
time (min)

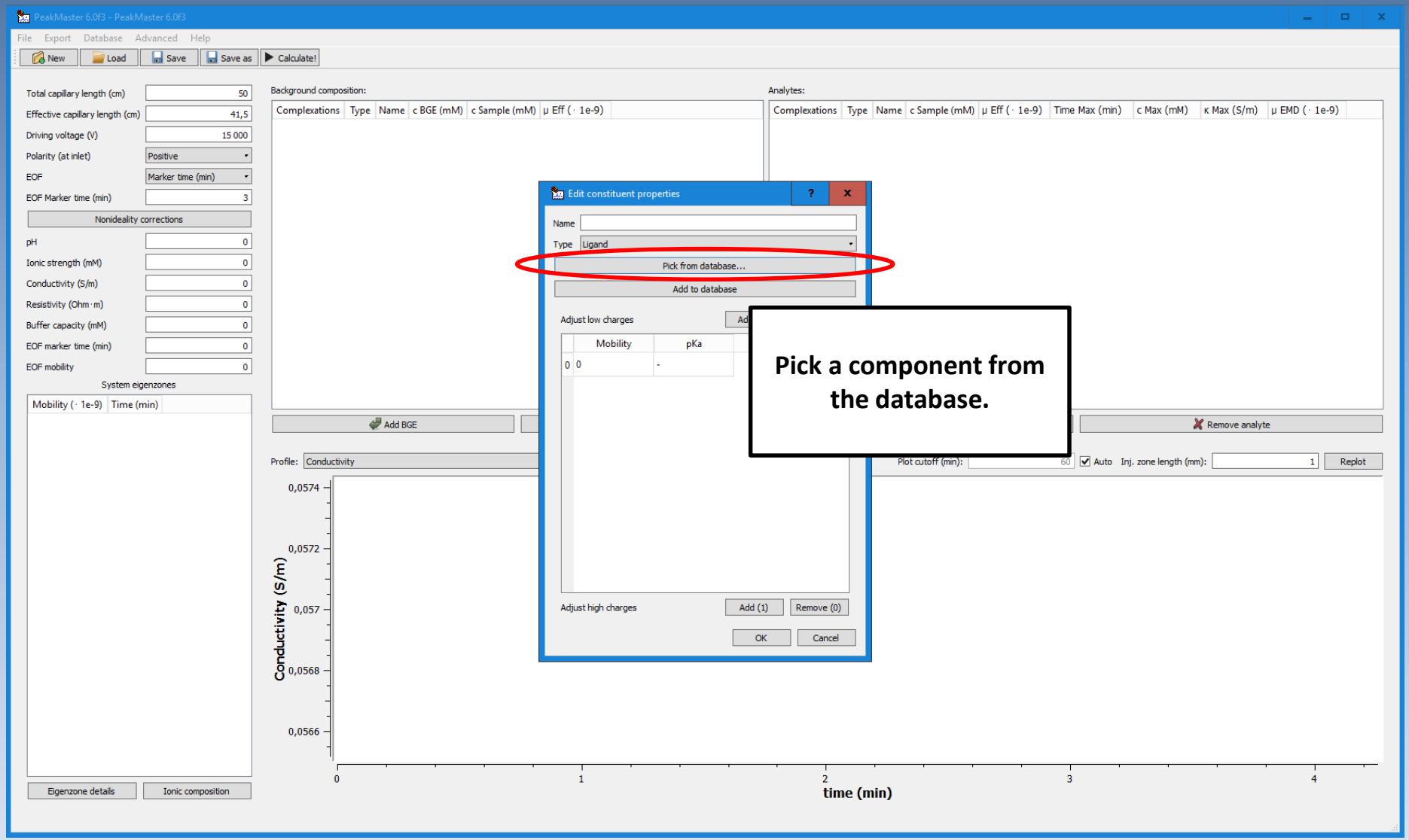
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Add the components of your system (BGE component or analyte).
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
1 000
800
600
400
200
0
709.1875, 542.0290
0
200
400
600
800
1 000
time (min)

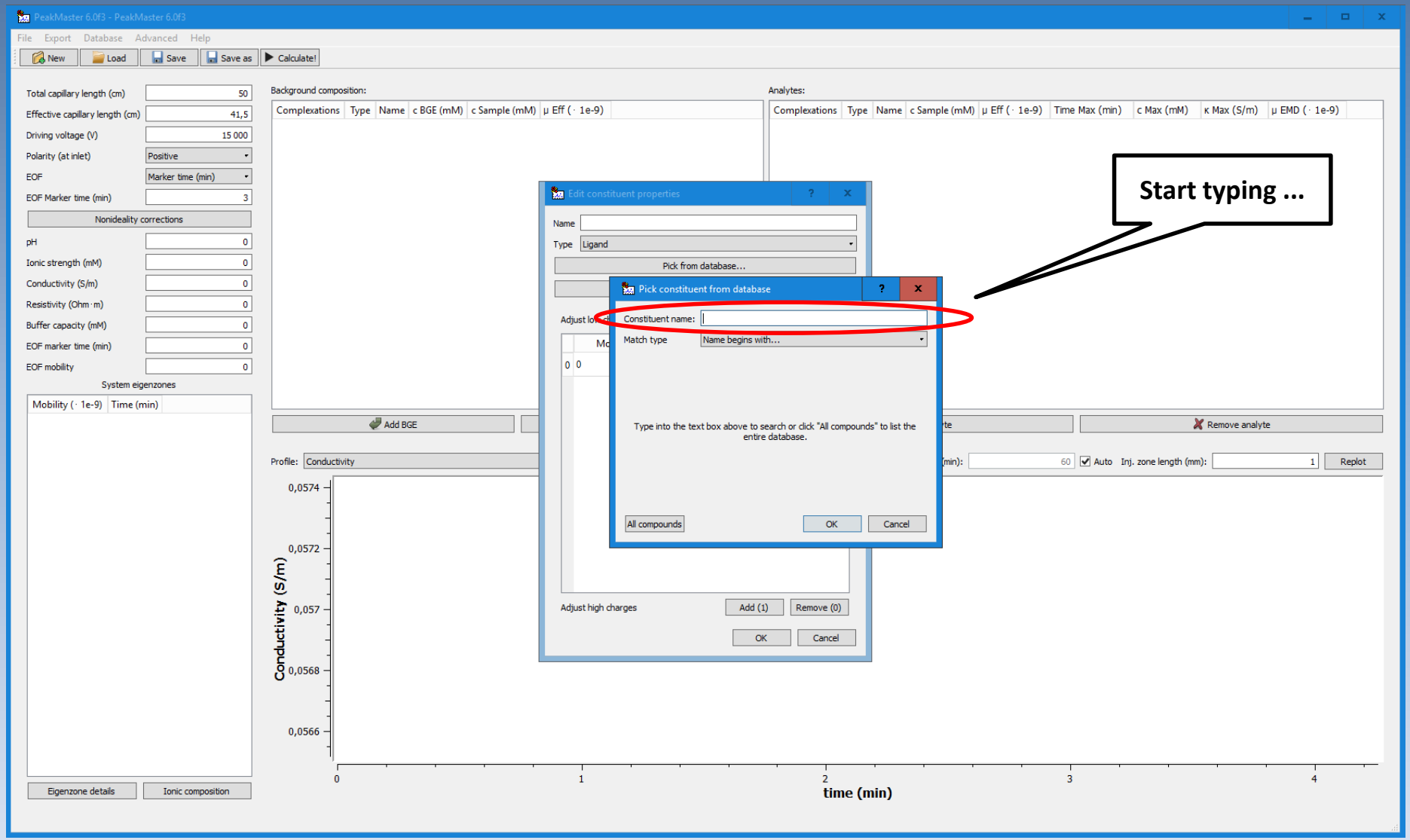
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
Analytes:
Add BGE
Profile: Conductivity
Replot
1 000
800
600
400
200
0
0 200 400 600 800 1 000
time (min)
Edit constituent properties
Name
Type Nucleus
Pick from database...
Add to database
Adjust low charges
Remove
Mobility pKa
0 0 -
Adjust high charges
Add (1)
Remove
OK
You can skip this step unless you want to work with complexing systems.
Type of the component:
NUCLEUS or LIGAND
This is explained in detail in the Complexation part.
In this example, we will add all the components as ligands and then the selector (β-cyclodextrin) as nucleus.

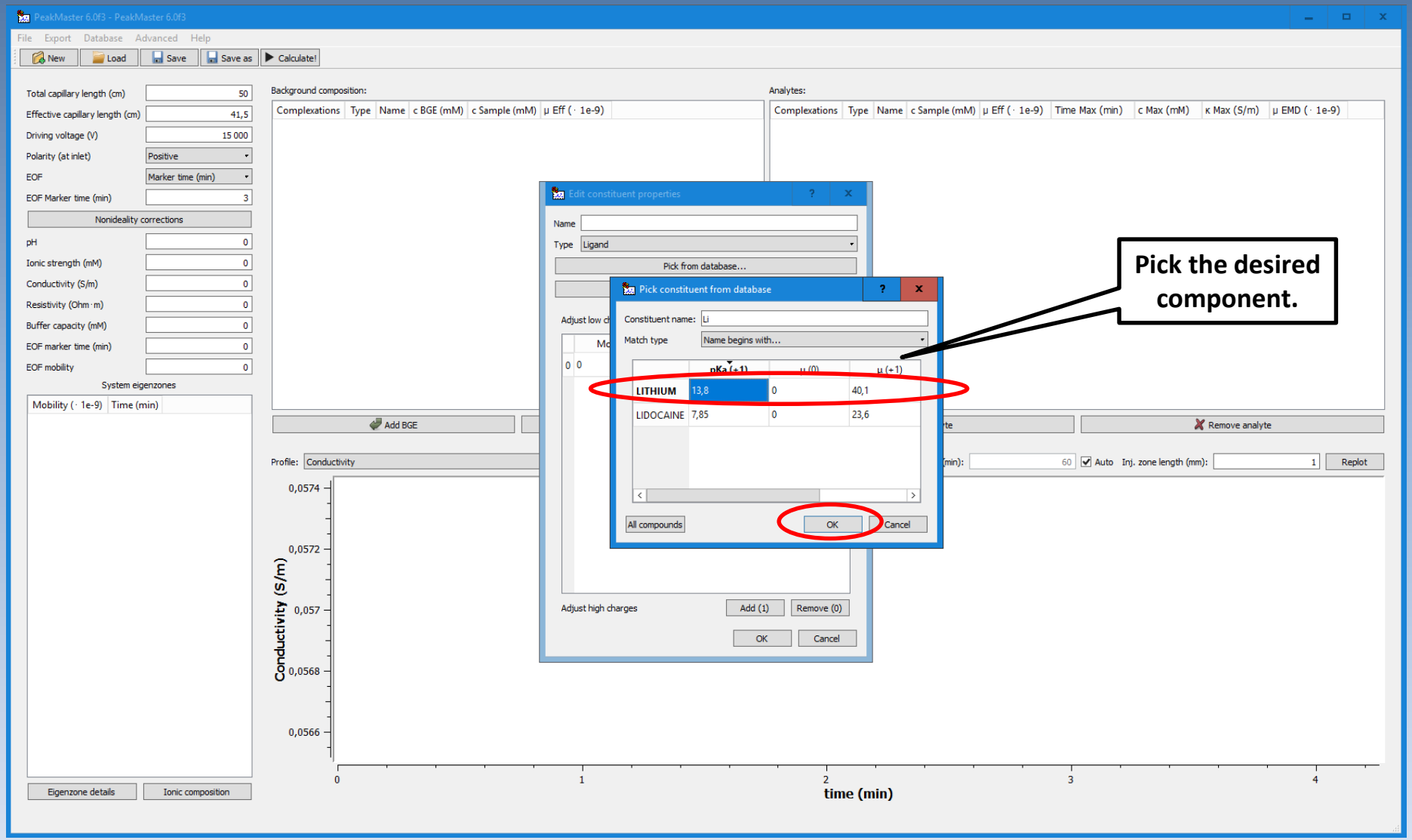
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
Add BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Remove analyte
Edit constituent properties
Name
Type Ligand
Pick from database...
Add to database
Adjust low charges
Mobility pKa
0 0 -
Adjust high charges
Add (1) Remove (0)
OK Cancel
Pick a component from the database.
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
Conductivity (S/m)
0,0574
0,0572
0,057
0,0568
0,0566
0 1 2 3 4
time (min)

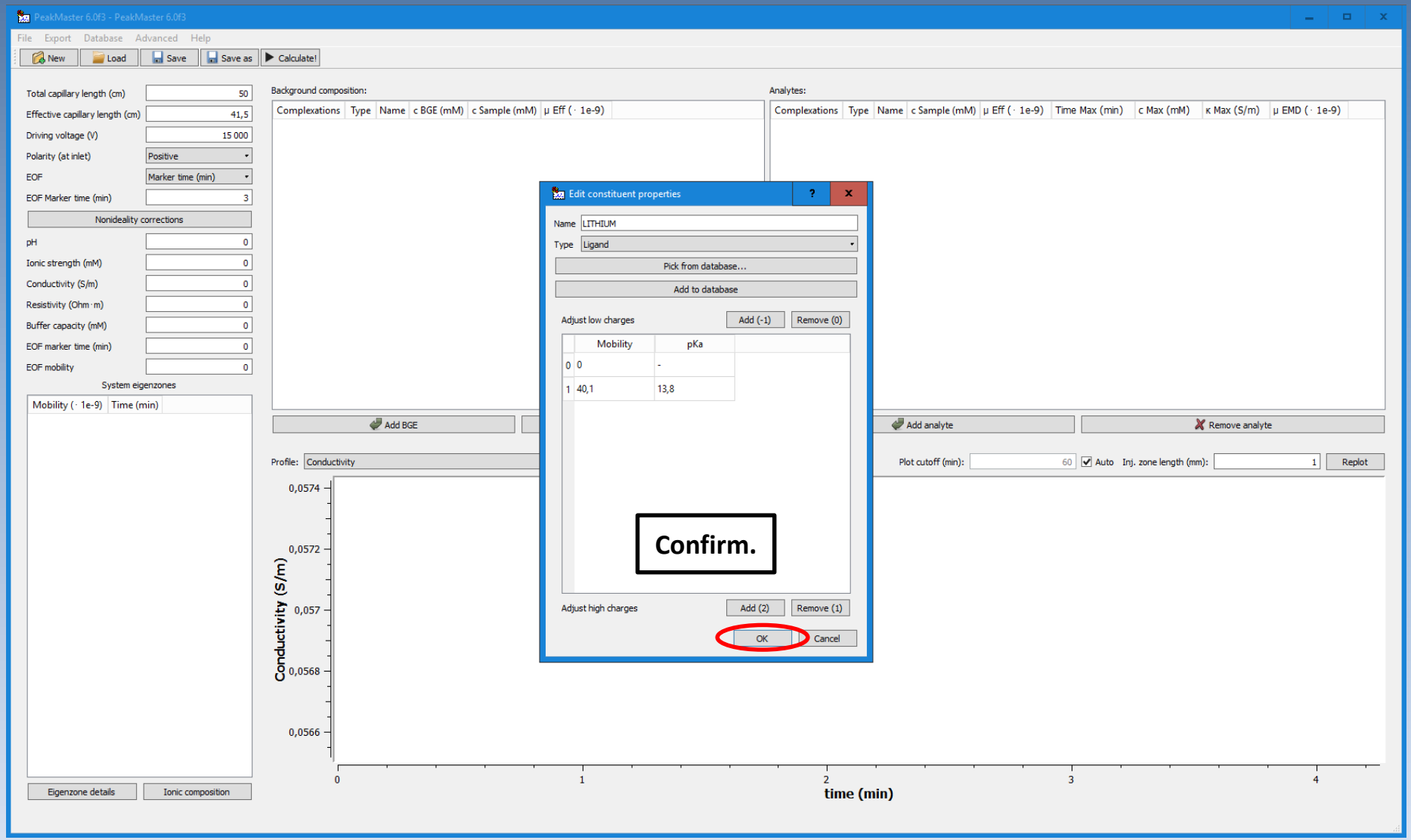
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Add BGE
Remove analyte
Profile: Conductivity
Auto Inj. zone length (mm): 1 Replot
Conductivity (S/m)
0,0574
0,0572
0,057
0,0568
0,0566
0 1 2 3 4
time (min)
Edit constituent properties
Name
Type Ligand
Pick from database...
Adjust high charges
Add (1) Remove (0)
OK Cancel
Pick constituent from database
Constituent name:
Match type Name begins with...
Type into the text box above to search or click "All compounds" to list the entire database.
All compounds
OK Cancel
Start typing ...

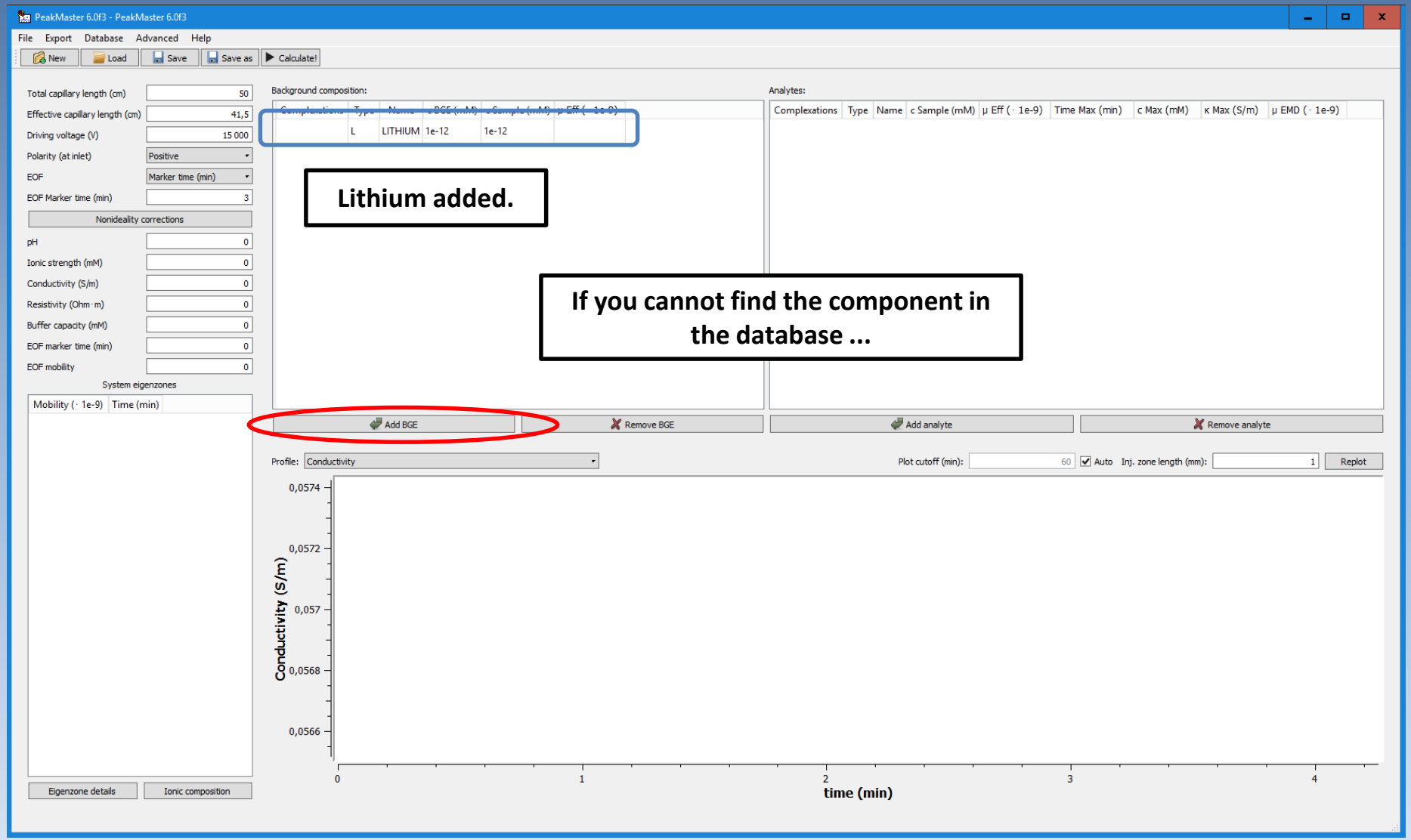
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Add BGE
Remove analyte
Profile: Conductivity
Auto Inj. zone length (mm): 1 Replot
Conductivity (S/m)
time (min)
Edit constituent properties
Name
Type Ligand
Pick from database...
Adjust high charges
Add (1) Remove (0)
OK Cancel
Pick constituent from database
Constituent name: Li
Match type Name begins with...
pKa (+1) μ (0) μ (+1)
LITHIUM 13,8 0 40,1
LIDOCAINE 7,85 0 23,6
All compounds
OK Cancel
Pick the desired component.

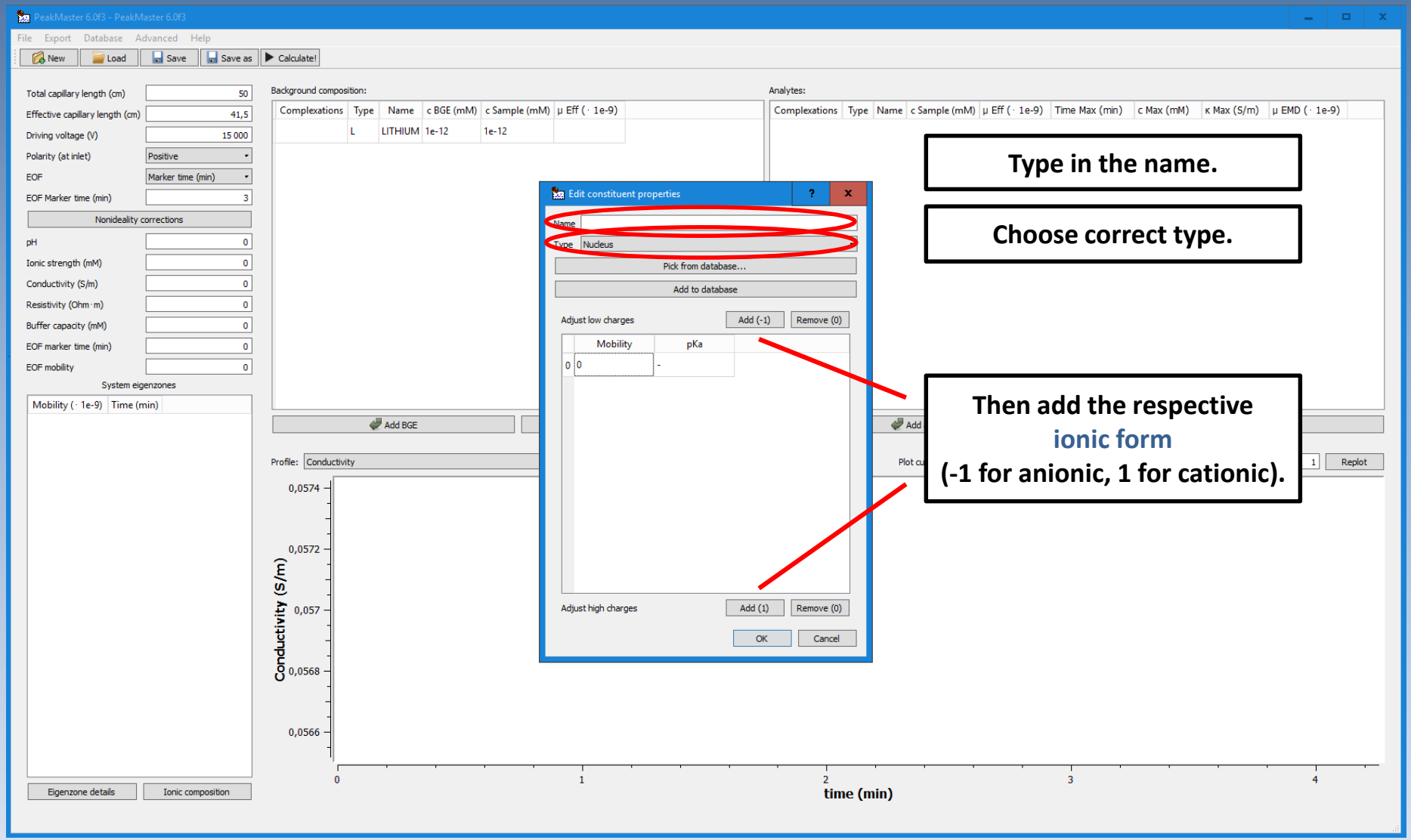
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Add BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
Edit constituent properties
Name LITHIUM
Type Ligand
Pick from database...
Add to database
Adjust low charges
Add (-1) Remove (0)
Mobility pKa
0 0 -
1 40,1 13,8
Confirm.
Adjust high charges
Add (2) Remove (1)
OK Cancel
Conductivity (S/m)
0,0574
0,0572
0,057
0,0568
0,0566
0 1 2 3 4
time (min)

Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 1e-12 1e-12
Lithium added.
If you cannot find the component in the database ...
Add BGE Remove BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Add analyte Remove analyte
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
Conductivity (S/m)
0,0574
0,0572
0,057
0,0568
0,0566
0 1 2 3 4
time (min)

Input Data

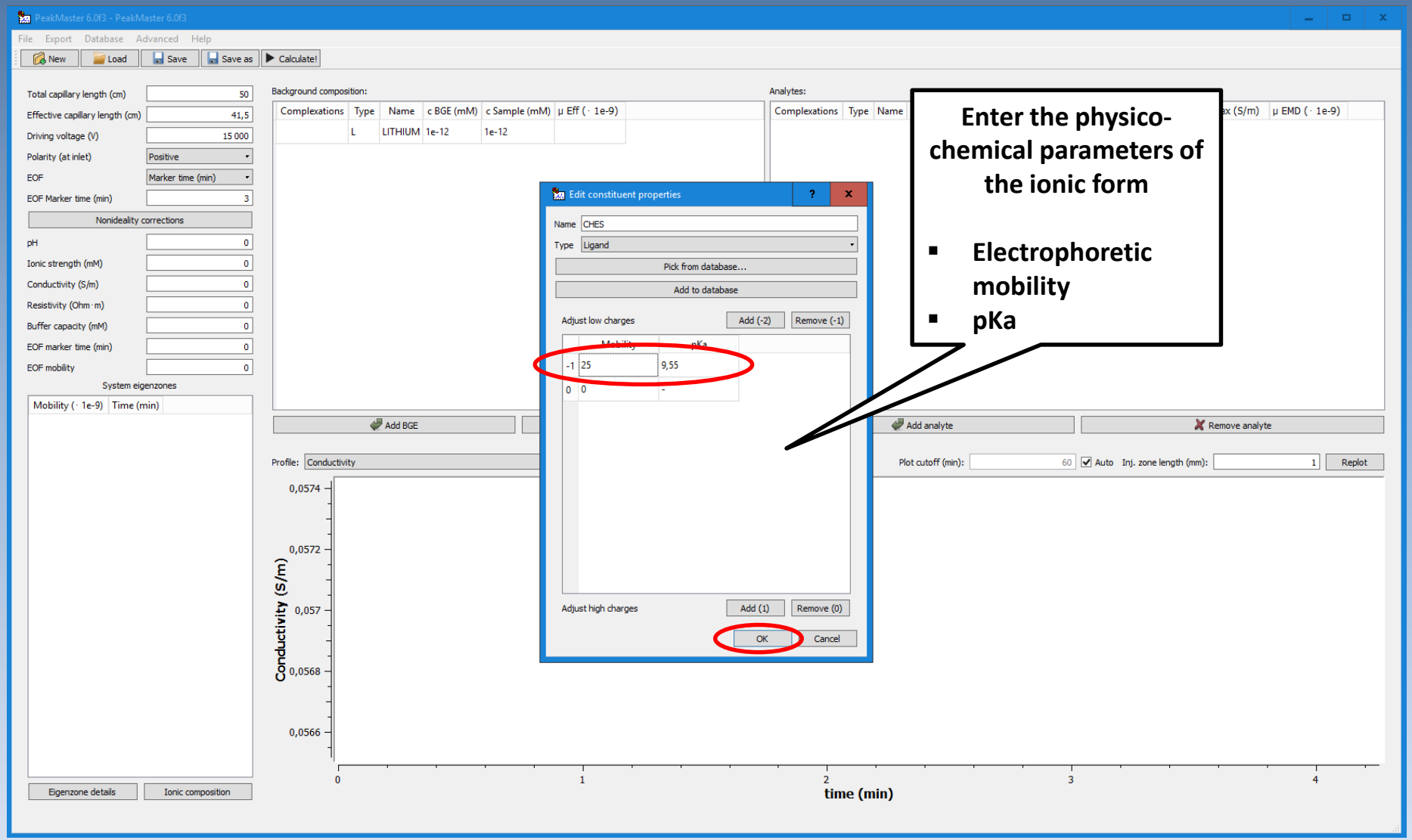


Type in the name.

Choose correct type.

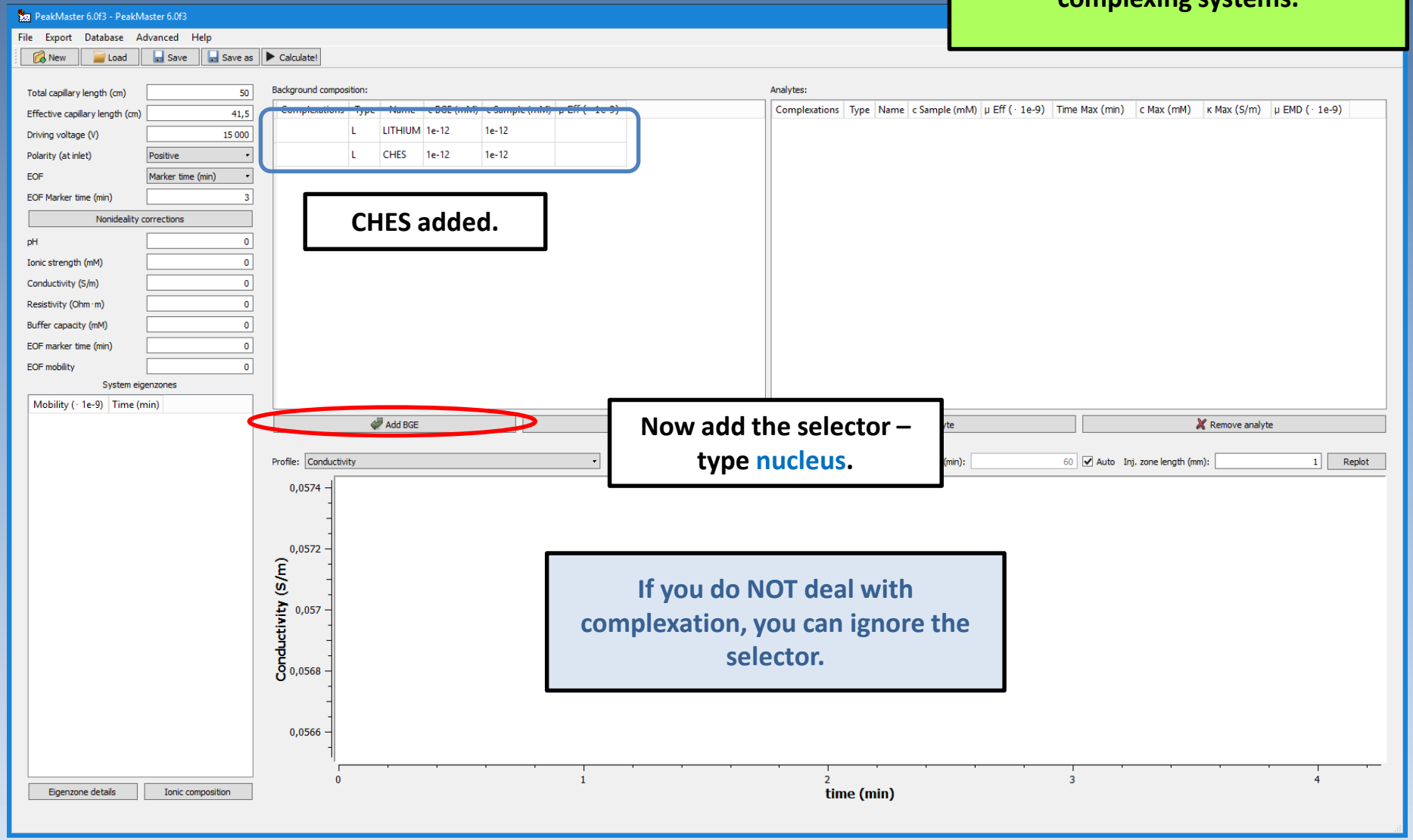
Then add the respective ionic form (-1 for anionic, 1 for cationic).

Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 1e-12 1e-12
Analytes:
Complexations Type Name
μ EMD (· 1e-9)
Add BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
Edit constituent properties
Name CHES
Type Ligand
Pick from database...
Add to database
Adjust low charges
Add (-2) Remove (-1)
-1 25 9,55
0 0 -
Adjust high charges
Add (1) Remove (0)
OK Cancel
Enter the physico-chemical parameters of the ionic form
Electrophoretic mobility
pKa
Conductivity (S/m)
0,0574
0,0572
0,057
0,0568
0,0566
0 1 2 3 4
time (min)

Input Data

This part is relevant only for complexing systems.



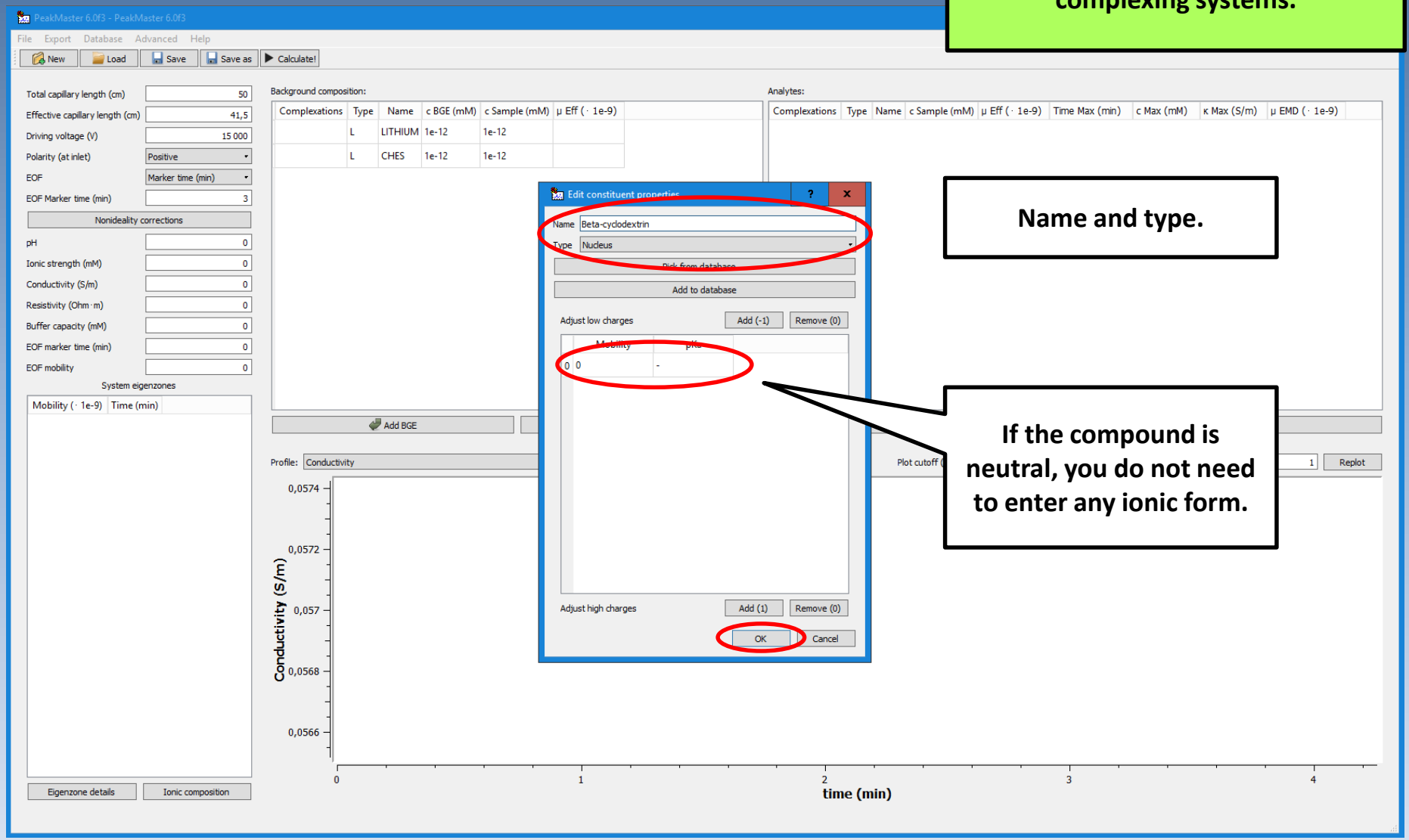
CHES added.

Now add the selector – type nucleus.

If you do NOT deal with complexation, you can ignore the selector.

Input Data

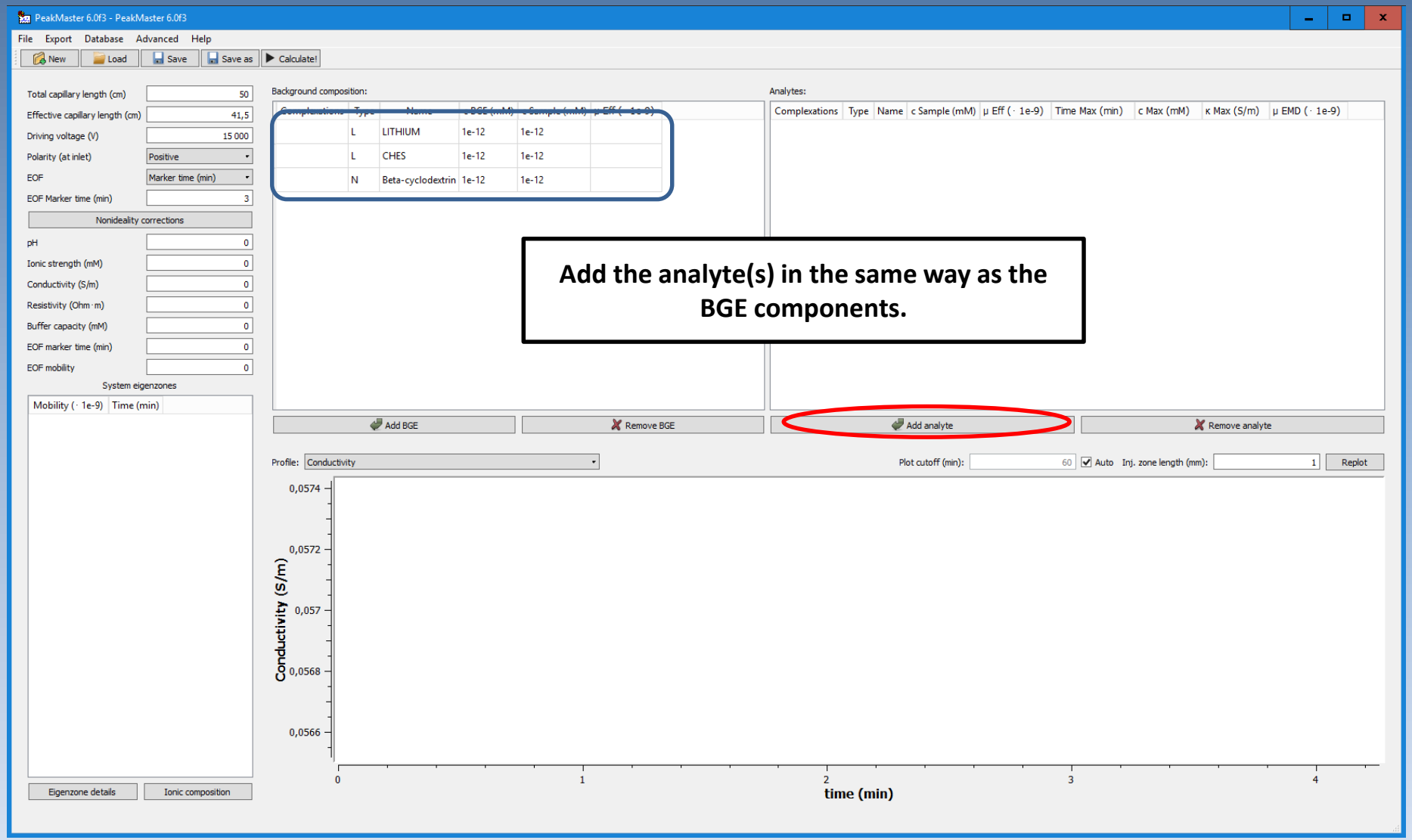
This part is relevant only for complexing systems.



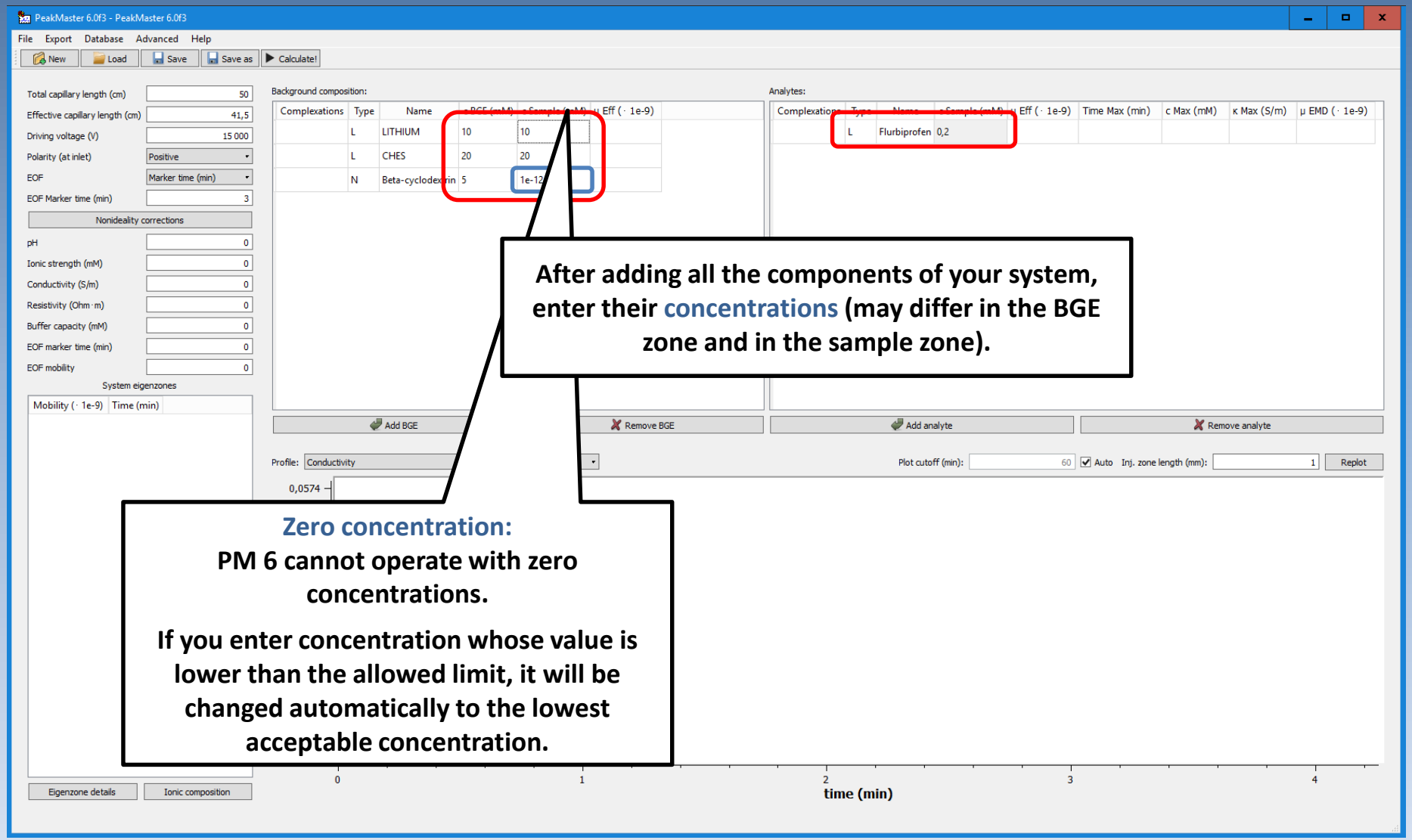
Name and type.

If the compound is neutral, you do not need to enter any ionic form.

Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 1e-12 1e-12
L CHES 1e-12 1e-12
N Beta-cyclodextrin 1e-12 1e-12
Add BGE Remove BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
Add analyte Remove analyte
Add the analyte(s) in the same way as the BGE components.
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
0,0574
0,0572
0,057
0,0568
0,0566
Conductivity (S/m)
0 1 2 3 4
time (min)

Input Data



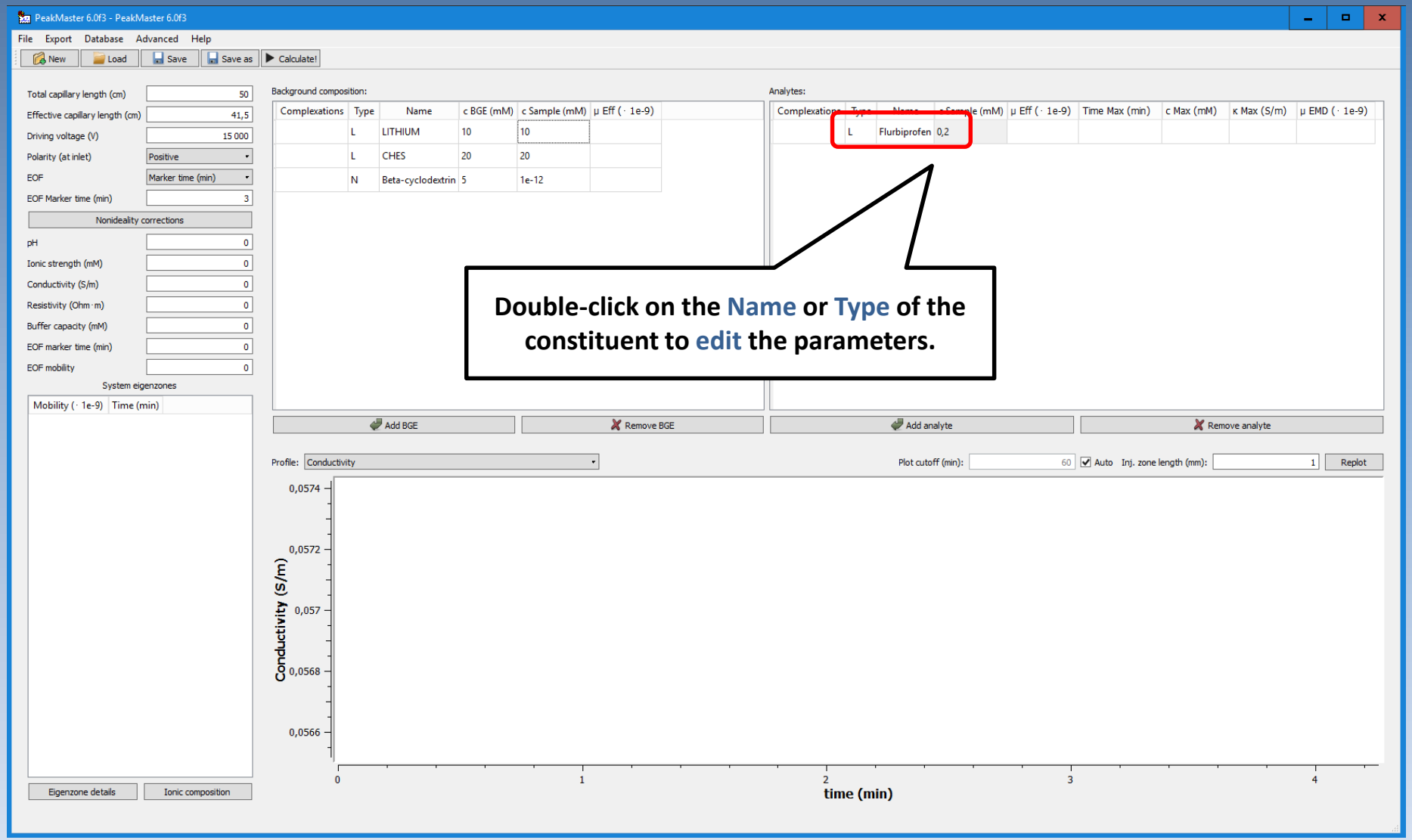
After adding all the components of your system, enter their concentrations (may differ in the BGE zone and in the sample zone).

Zero concentration:

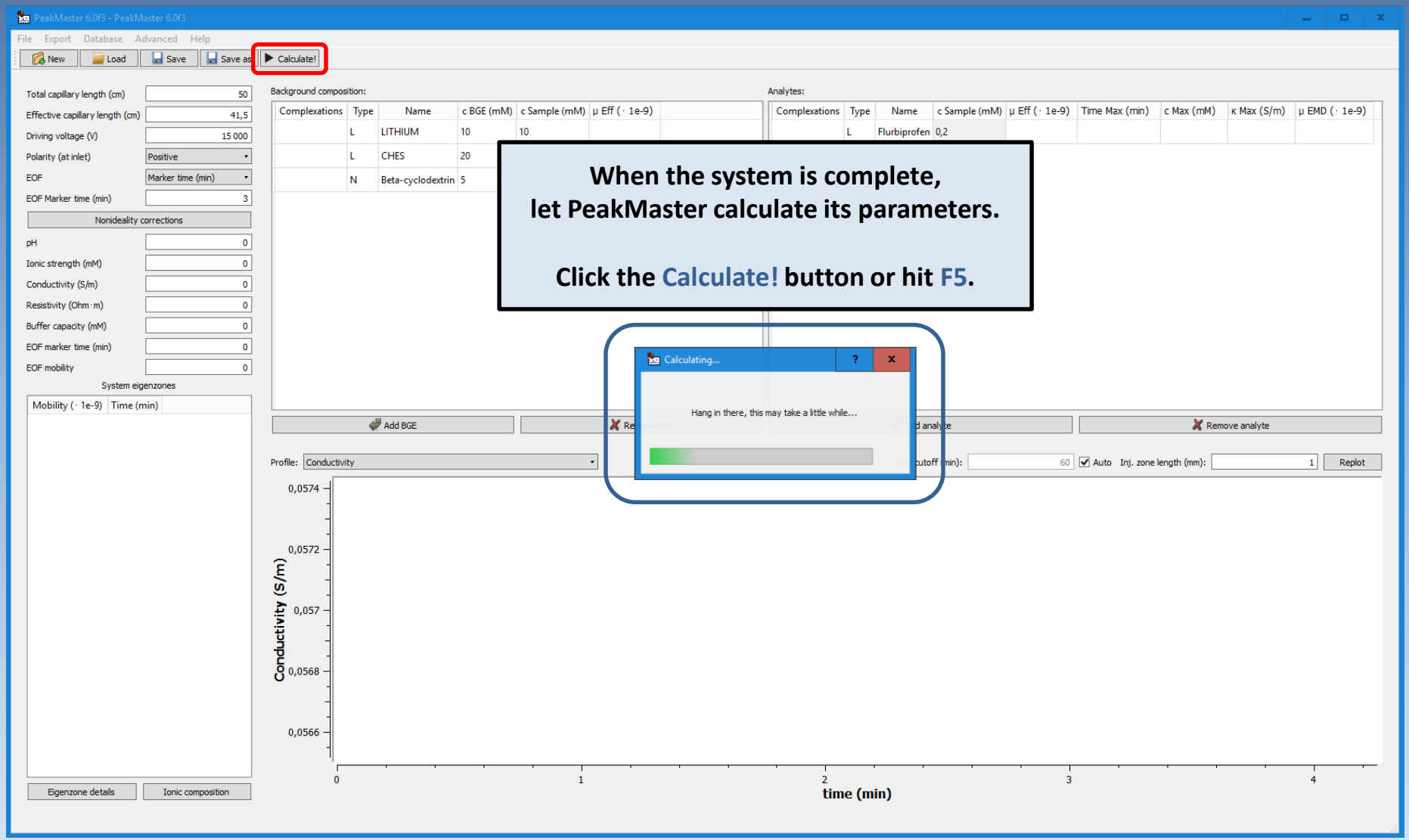
PM 6 cannot operate with zero concentrations.

If you enter concentration whose value is lower than the allowed limit, it will be changed automatically to the lowest acceptable concentration.

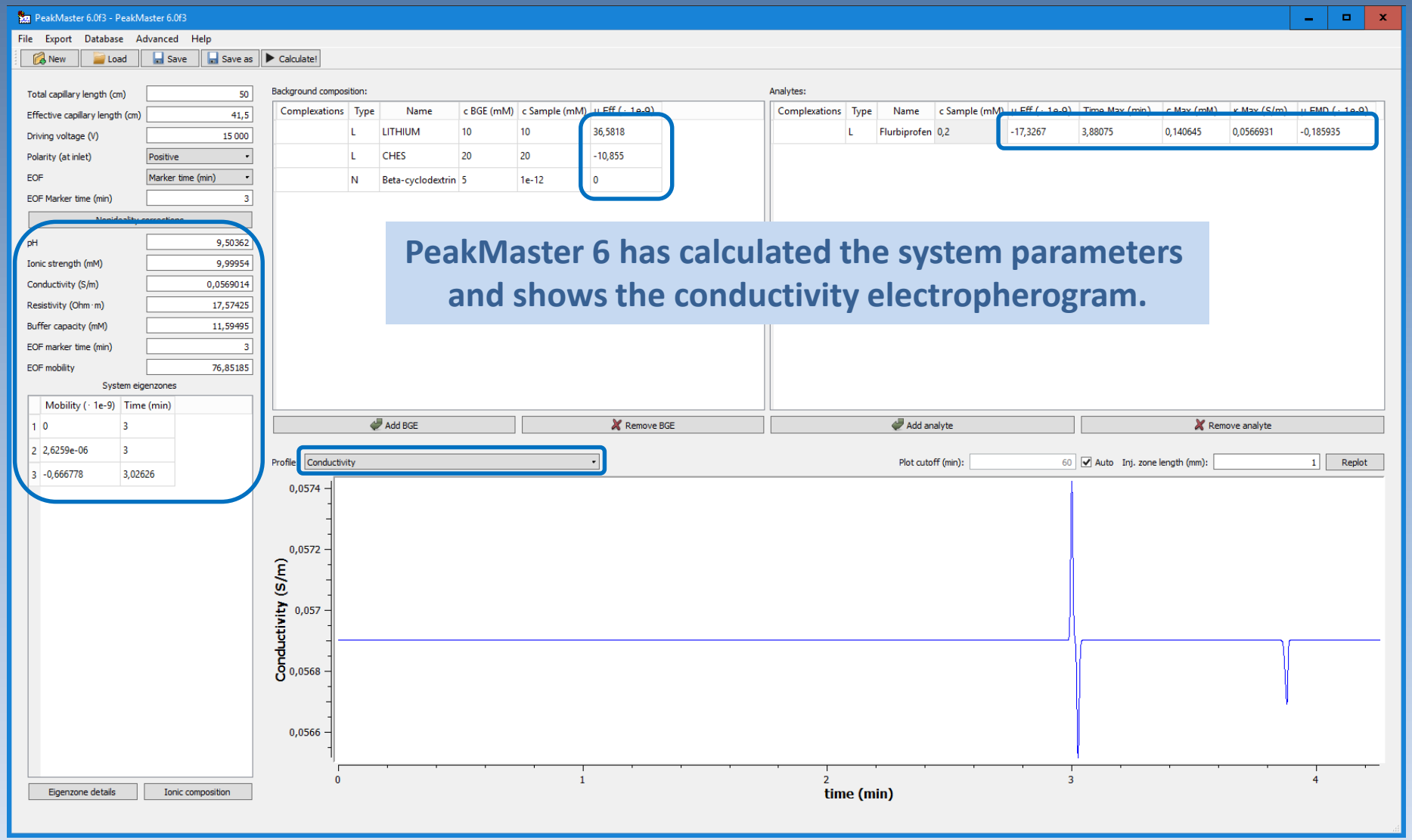
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 0
Ionic strength (mM) 0
Conductivity (S/m) 0
Resistivity (Ohm·m) 0
Buffer capacity (mM) 0
EOF marker time (min) 0
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
Eigenzone details Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10
L CHES 20 20
N Beta-cyclodextrin 5 1e-12
Add BGE Remove BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2
Add analyte Remove analyte
Double-click on the Name or Type of the constituent to edit the parameters.
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
0,0574
0,0572
0,057
0,0568
0,0566
Conductivity (S/m)
0 1 2 3 4
time (min)

Input Data

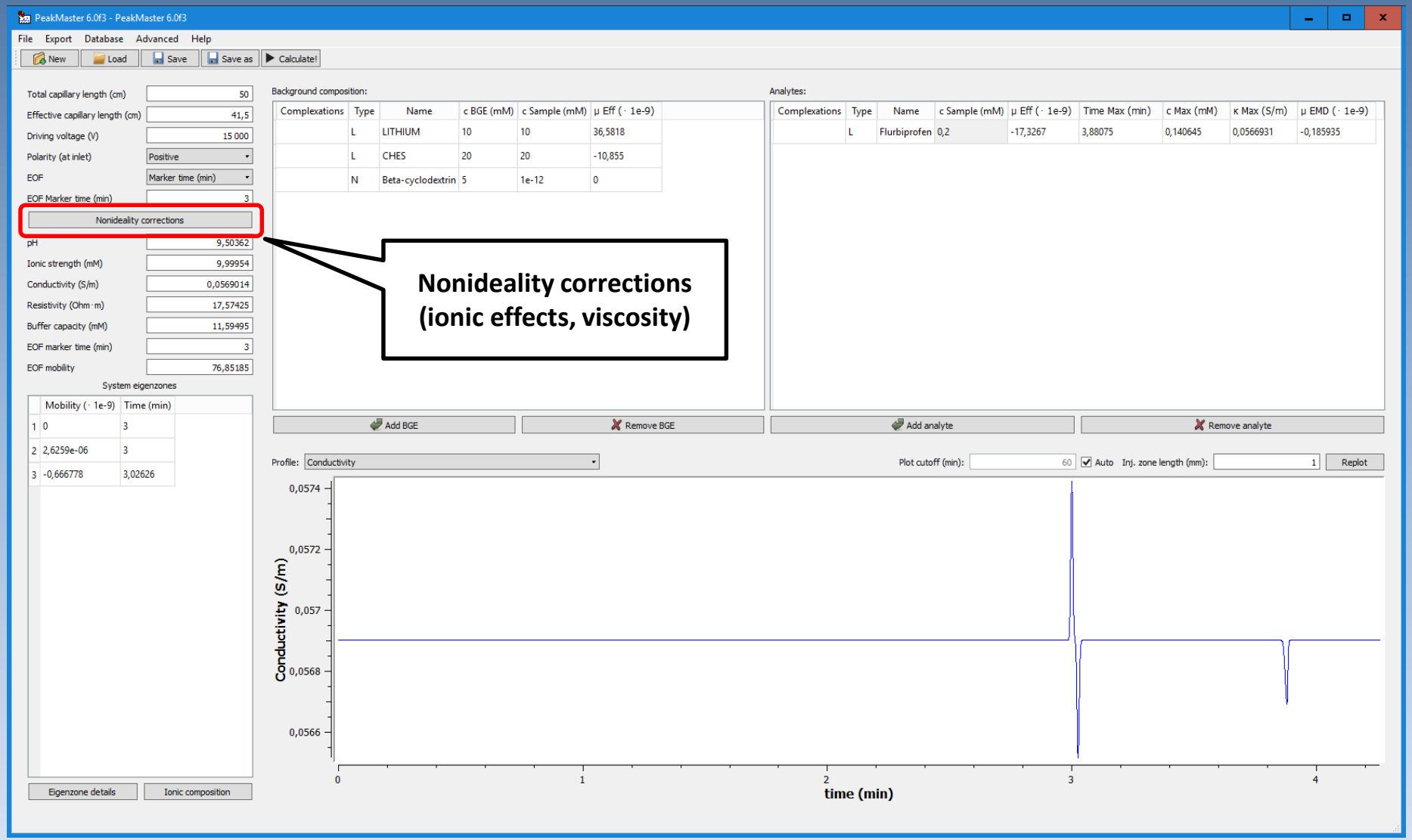

When the system is complete,
let PeakMaster calculate its parameters.
Click the Calculate! button or hit F5.
Calculating...
Hang in there, this may take a little while...
Conductivity (S/m)
time (min)

Input Data



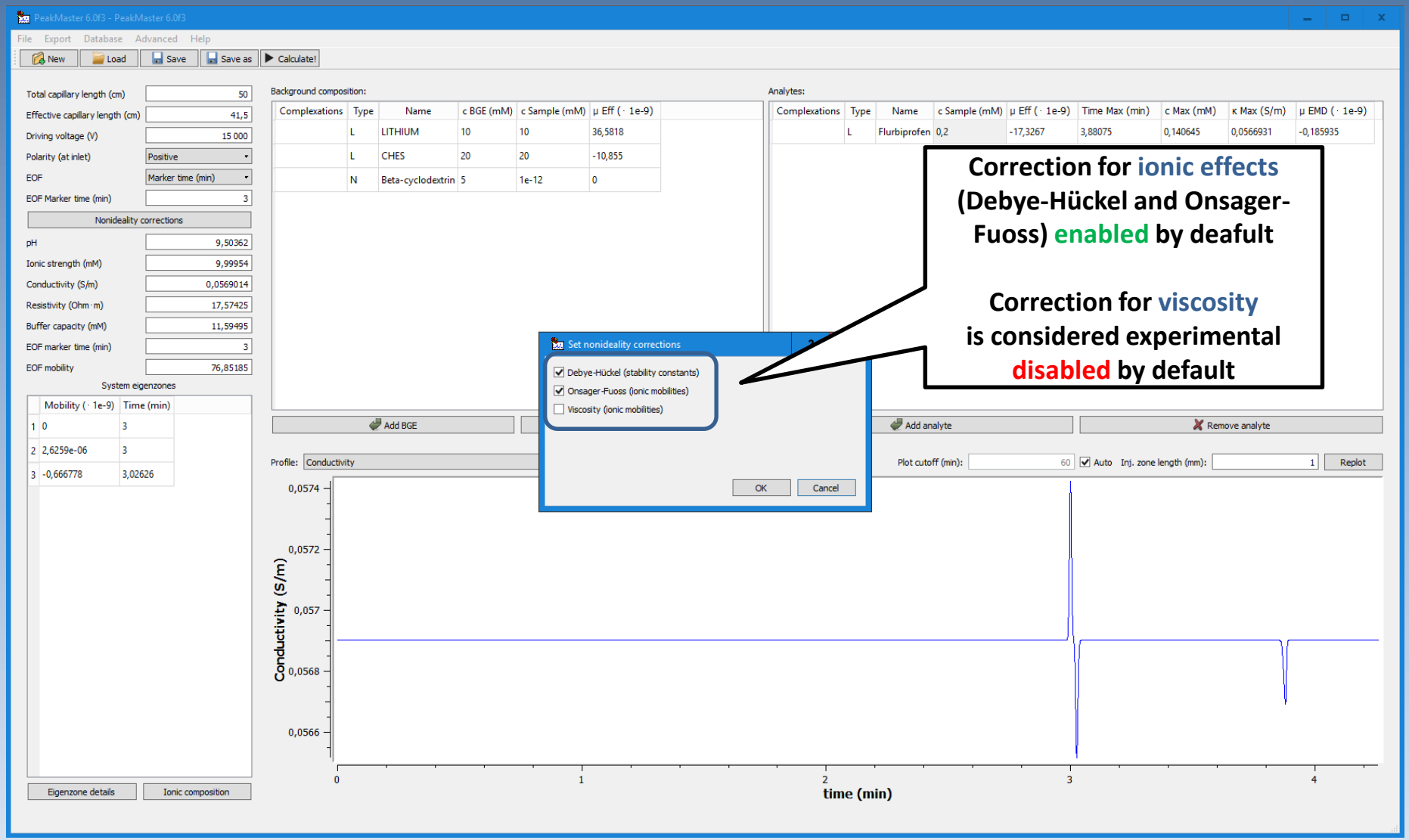
PeakMaster 6 has calculated the system parameters and shows the conductivity electropherogram.

Input Data



Nonideality corrections (ionic effects, viscosity)

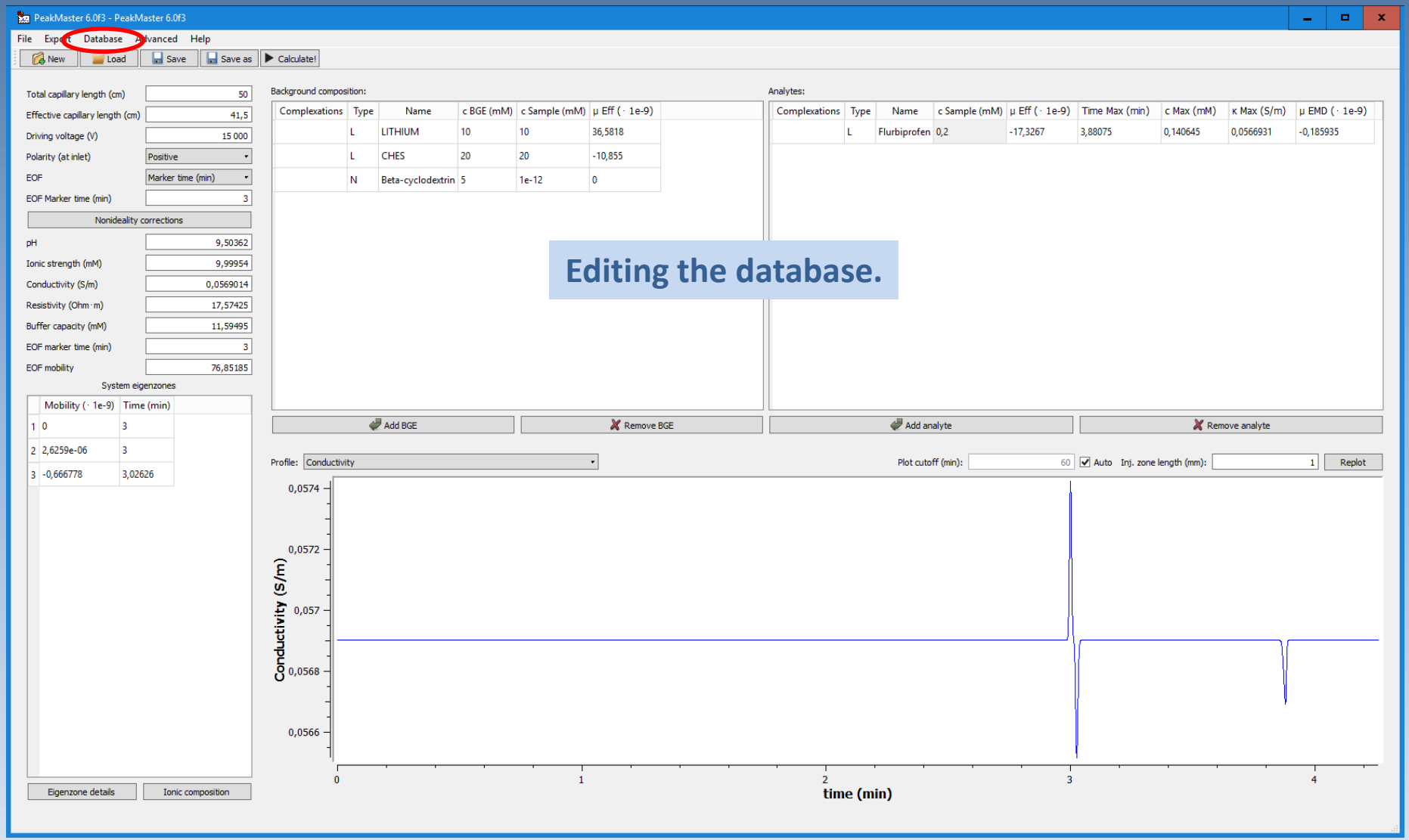
Input Data



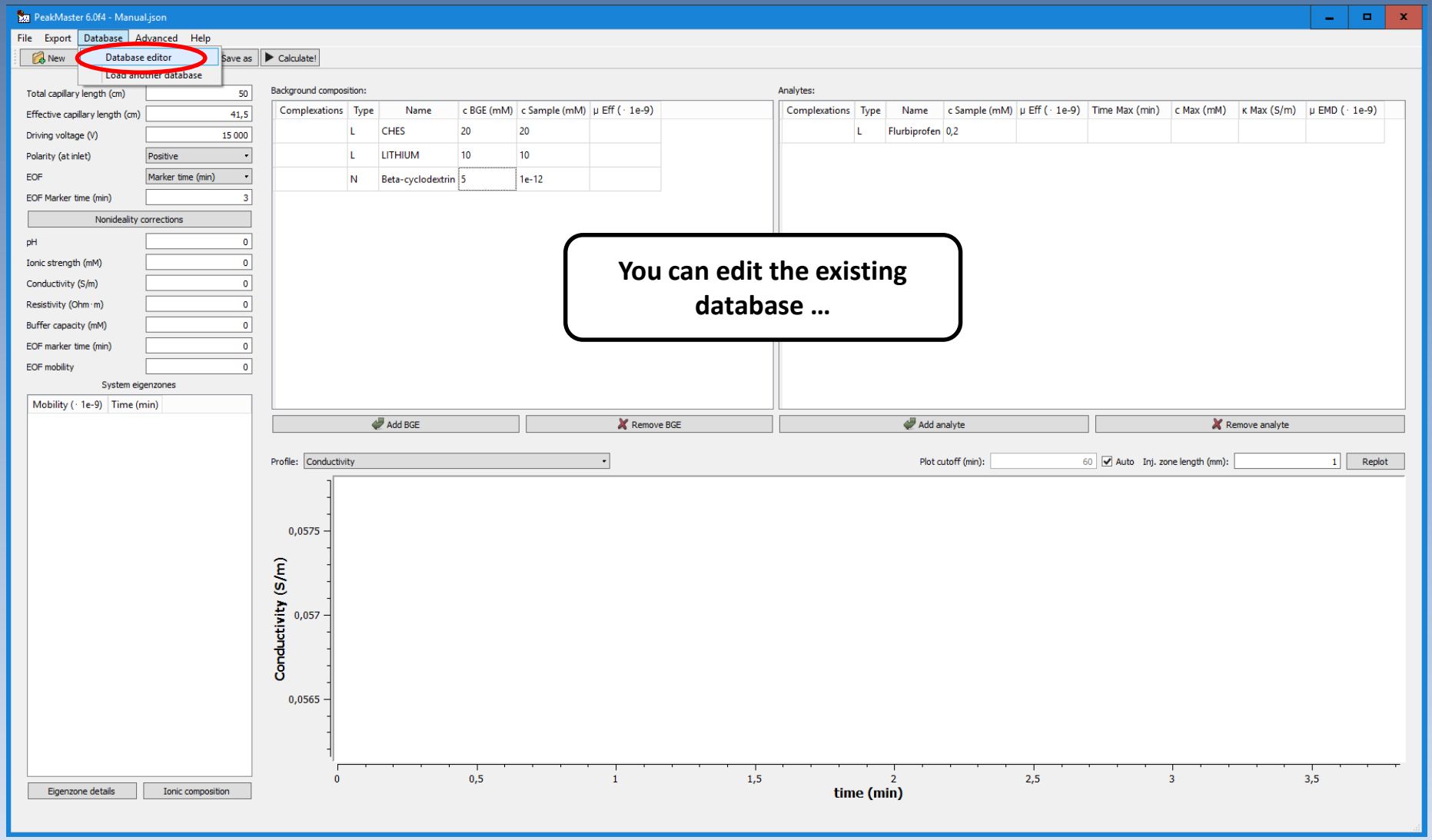
Correction for ionic effects (Debye-Hückel and Onsager-Fuoss) enabled by deafult

Correction for viscosity is considered experimental disabled by default

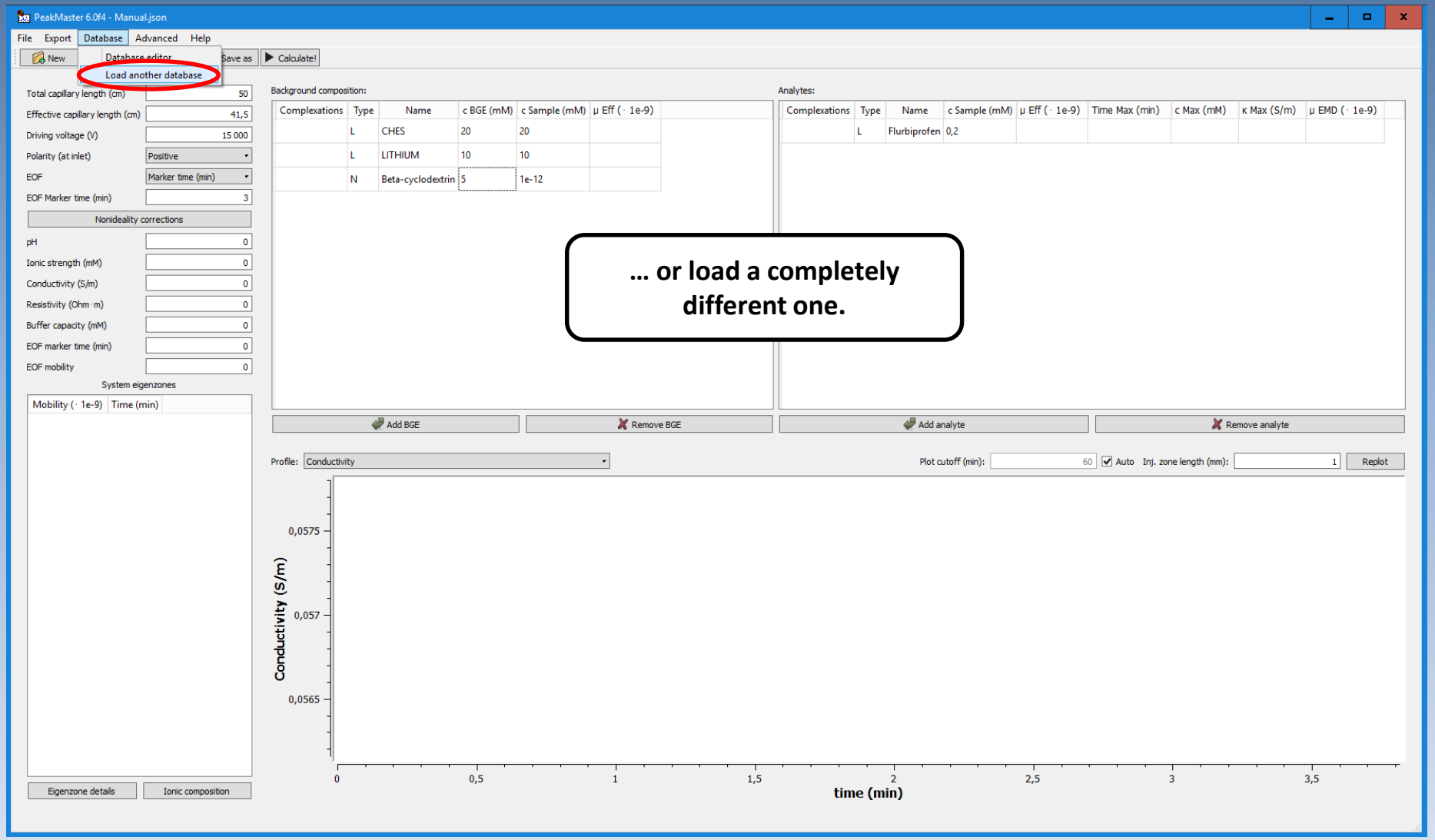
Input Data


PeakMaster 6.0f3 - PeakMaster 6.0f3
File
Export
Database
Advanced
Help
New
Load
Save
Save as
Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 0 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Add BGE
Remove BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -17,3267 3,88075 0,140645 0,0566931 -0,185935
Add analyte
Remove analyte
Editing the database.
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0,0574
0,0572
0,057
0,0568
0,0566
0
1
2
3
4
time (min)

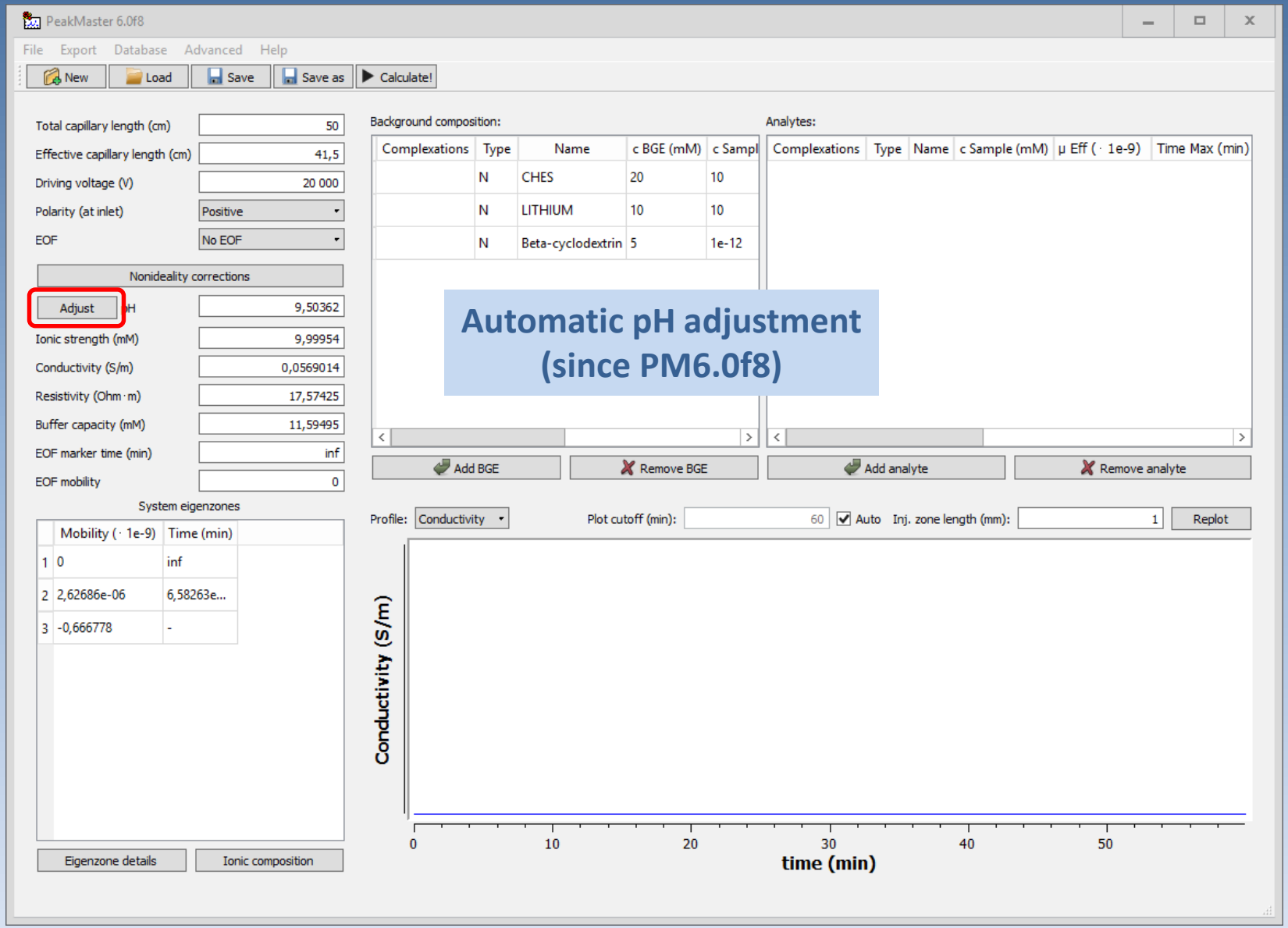
Input Data


PeakMaster 6.0f4 - Manual.json
File
Export
Database
Advanced
Help
New
Database editor
Load another database
Save as
Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF marker time (min) 3
Nonideality corrections
pH
Ionic strength (mM)
Conductivity (S/m)
Resistivity (Ohm·m)
Buffer capacity (mM)
EOF marker time (min)
EOF mobility
System eigenzones
Mobility (· 1e-9)
Time (min)
Eigenzone details
Ionic composition
Background composition:
Complexations
Type
Name
c BGE (mM)
c Sample (mM)
μ Eff (· 1e-9)
L CHES 20 20
L LITHIUM 10 10
N Beta-cyclodextrin 5 1e-12
Add BGE
Remove BGE
Analytes:
Complexations
Type
Name
c Sample (mM)
μ Eff (· 1e-9)
Time Max (min)
c Max (mM)
κ Max (S/m)
μ EMD (· 1e-9)
L Flurbiprofen 0,2
Add analyte
Remove analyte
You can edit the existing database …
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

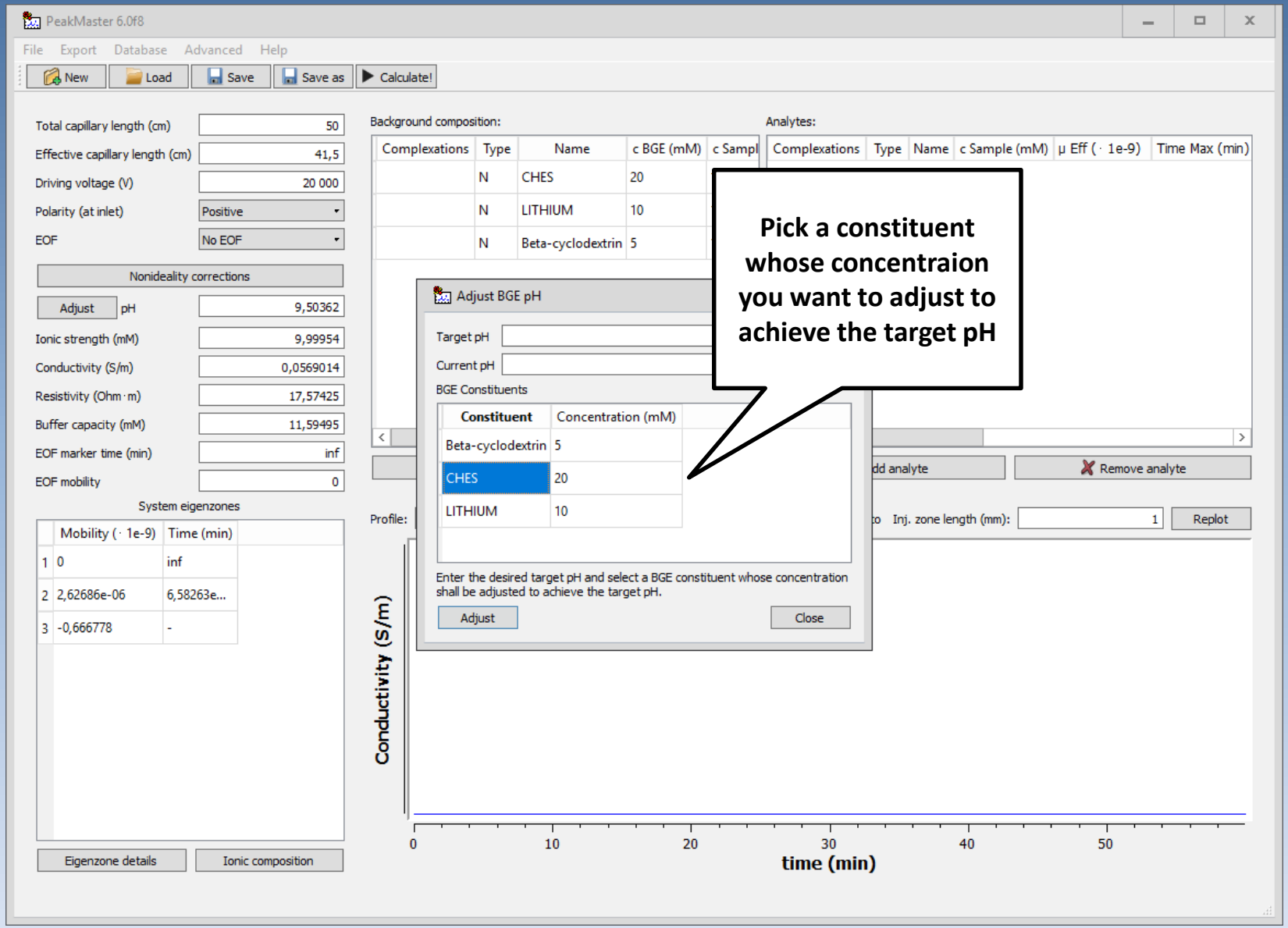
Input Data


PeakMaster 6.0f4 - Manual.json
File
Export
Database
Advanced
Help
New
Database editor
Load another database
Save as
Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
Nonideality corrections
pH
Ionic strength (mM)
Conductivity (S/m)
Resistivity (Ohm·m)
Buffer capacity (mM)
EOF marker time (min)
EOF mobility
System eigenzones
Mobility (· 1e-9)
Time (min)
Eigenzone details
Ionic composition
Background composition:
Complexations
Type
Name
c BGE (mM)
c Sample (mM)
μ Eff (· 1e-9)
L CHES 20 20
L LITHIUM 10 10
N Beta-cyclodextrin 5 1e-12
Analytes:
Complexations
Type
Name
c Sample (mM)
μ Eff (· 1e-9)
Time Max (min)
c Max (mM)
κ Max (S/m)
μ EMD (· 1e-9)
L Flurbiprofen 0,2
Add BGE
Remove BGE
Add analyte
Remove analyte
… or load a completely different one.
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

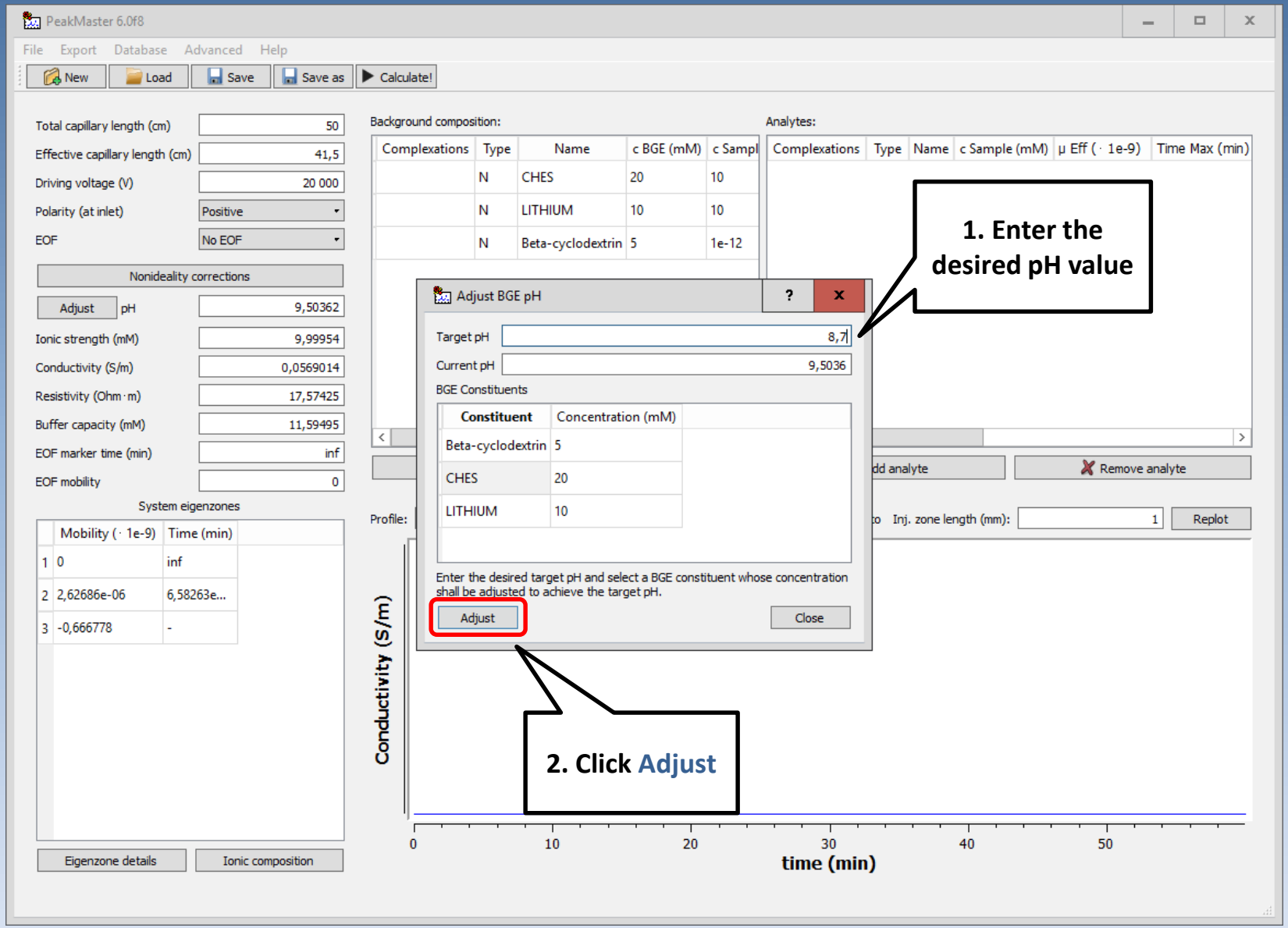
Input Data


PeakMaster 6.0f8
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 20 000
Polarity (at inlet) Positive
EOF No EOF
Nonideality corrections
Adjust pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) inf
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
1 0 inf
2 2,62686e-06 6,58263e...
3 -0,666778 -
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sampl
N CHES 20 10
N LITHIUM 10 10
N Beta-cyclodextrin 5 1e-12
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min)
Add BGE
Remove BGE
Add analyte
Remove analyte
Automatic pH adjustment
(since PM6.0f8)
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0
10
20
30
40
50
time (min)

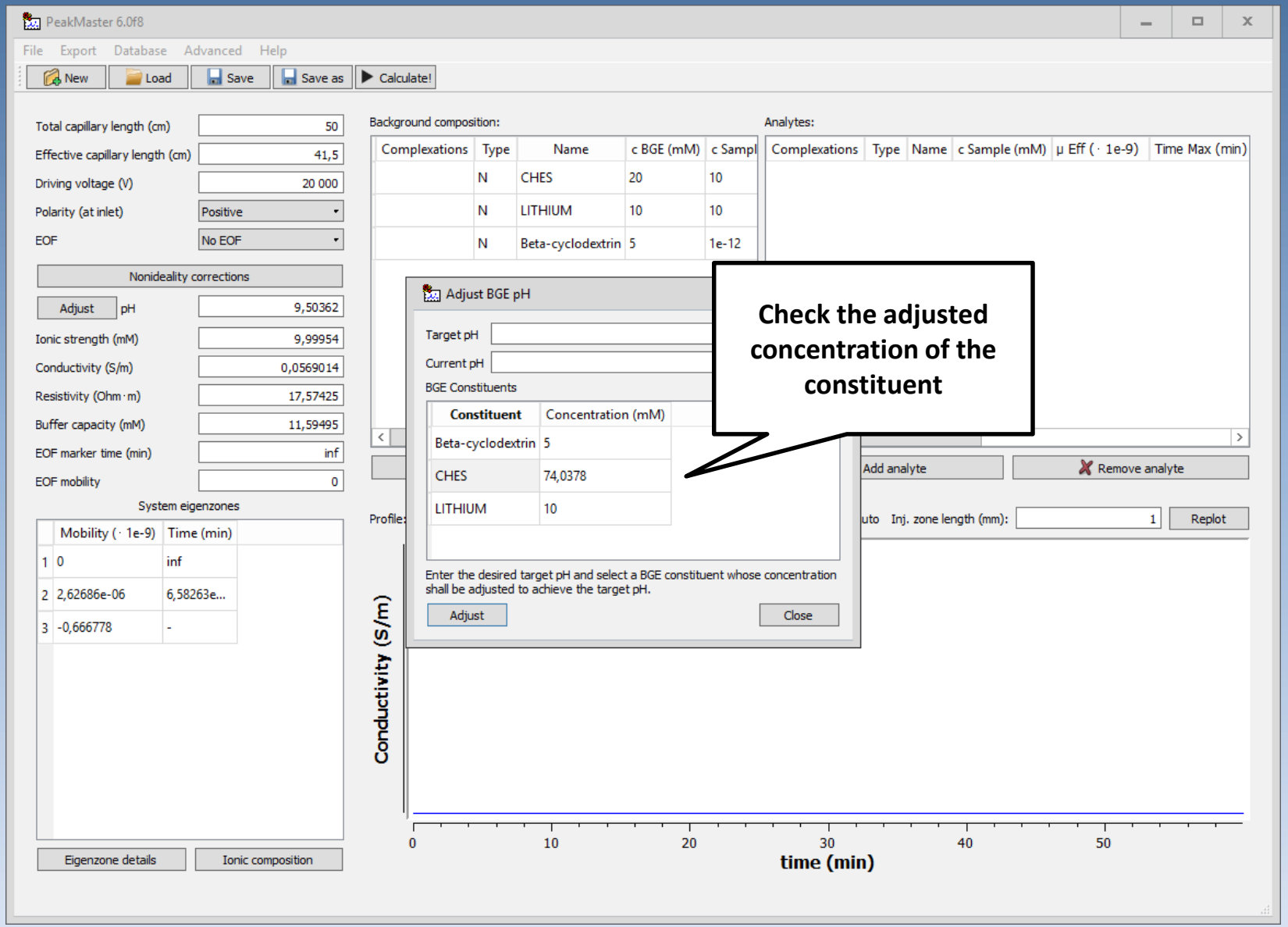
Input Data


PeakMaster 6.0f8
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 20 000
Polarity (at inlet) Positive
EOF No EOF
Nonideality corrections
Adjust pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) inf
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
1 0 inf
2 2,62686e-06 6,58263e...
3 -0,666778 -
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sampl
N CHES 20
N LITHIUM 10
N Beta-cyclodextrin 5
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min)
Adjust BGE pH
Target pH
Current pH
BGE Constituents
Constituent Concentration (mM)
Beta-cyclodextrin 5
CHES 20
LITHIUM 10
Enter the desired target pH and select a BGE constituent whose concentration shall be adjusted to achieve the target pH.
Adjust
Close
Pick a constituent whose concentraion you want to adjust to achieve the target pH
dd analyte
Remove analyte
Profile:
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0
10
20
30
40
50
time (min)

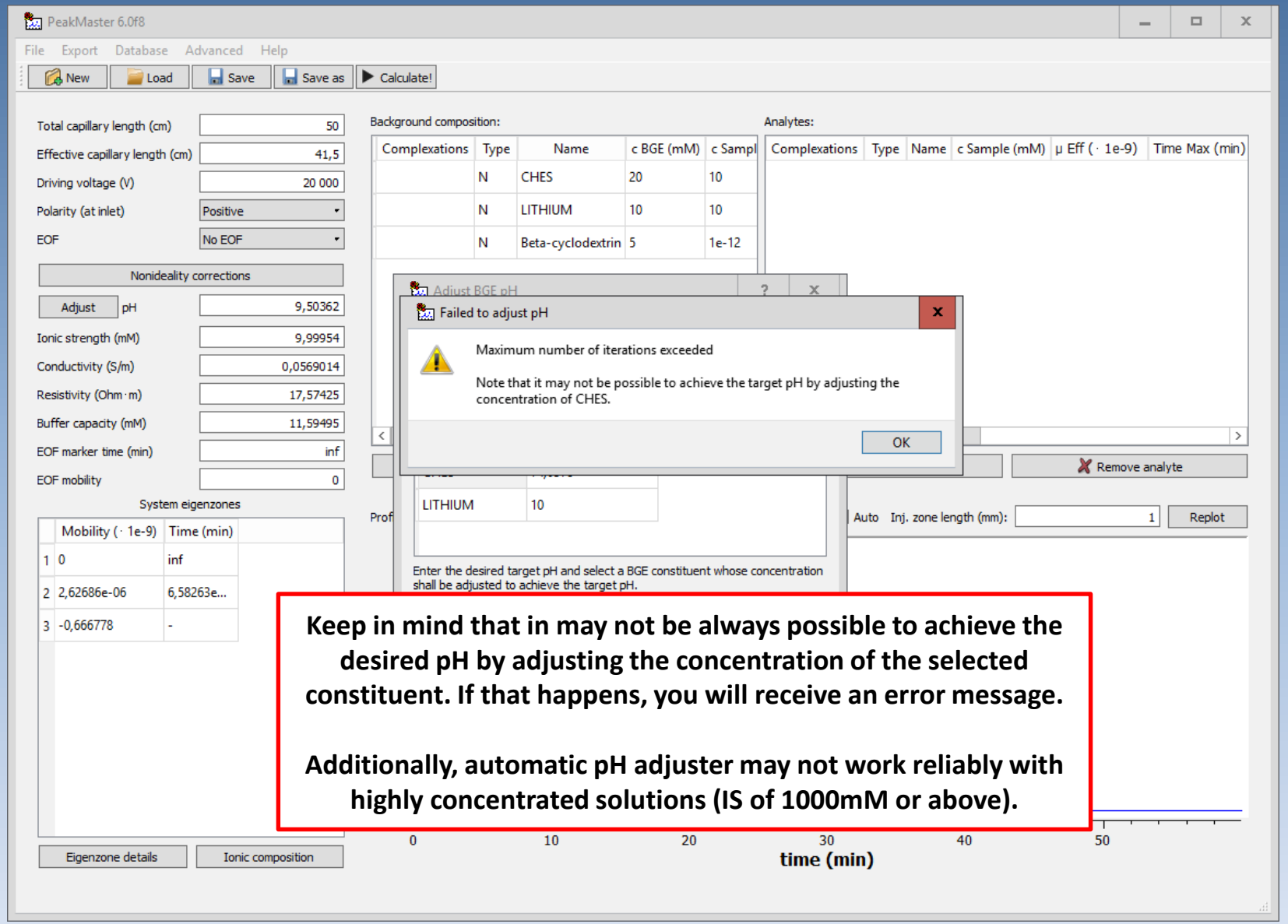
Input Data


PeakMaster 6.0f8
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 20 000
Polarity (at inlet) Positive
EOF No EOF
Nonideality corrections
Adjust pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) inf
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
1 0 inf
2 2,62686e-06 6,58263e...
3 -0,666778 -
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sampl
N CHES 20 10
N LITHIUM 10 10
N Beta-cyclodextrin 5 1e-12
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min)
Adjust BGE pH
Target pH 8,7
Current pH 9,5036
BGE Constituents
Constituent Concentration (mM)
Beta-cyclodextrin 5
CHES 20
LITHIUM 10
Enter the desired target pH and select a BGE constituent whose concentration shall be adjusted to achieve the target pH.
Adjust
Close
1. Enter the desired pH value
2. Click Adjust
Remove analyte
Profile:
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
time (min)
0 10 20 30 40 50

Input Data


PeakMaster 6.0f8
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 20 000
Polarity (at inlet) Positive
EOF No EOF
Nonideality corrections
Adjust pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) inf
EOF mobility 0
System eigenzones
Mobility (· 1e-9) Time (min)
1 0 inf
2 2,62686e-06 6,58263e...
3 -0,666778 -
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sampl
N CHES 20 10
N LITHIUM 10 10
N Beta-cyclodextrin 5 1e-12
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min)
Add analyte
Remove analyte
Profile:
uto Inj. zone length (mm): 1
Replot
Adjust BGE pH
Target pH
Current pH
BGE Constituents
Constituent Concentration (mM)
Beta-cyclodextrin 5
CHES 74,0378
LITHIUM 10
Enter the desired target pH and select a BGE constituent whose concentration shall be adjusted to achieve the target pH.
Adjust
Close
Check the adjusted concentration of the constituent
Conductivity (S/m)
0
10
20
30
40
50
time (min)

Input Data



Keep in mind that in may not be always possible to achieve the desired pH by adjusting the concentration of the selected constituent. If that happens, you will receive an error message.

Additionally, automatic pH adjuster may not work reliably with highly concentrated solutions (IS of 1000mM or above).

Complexation

Complexation

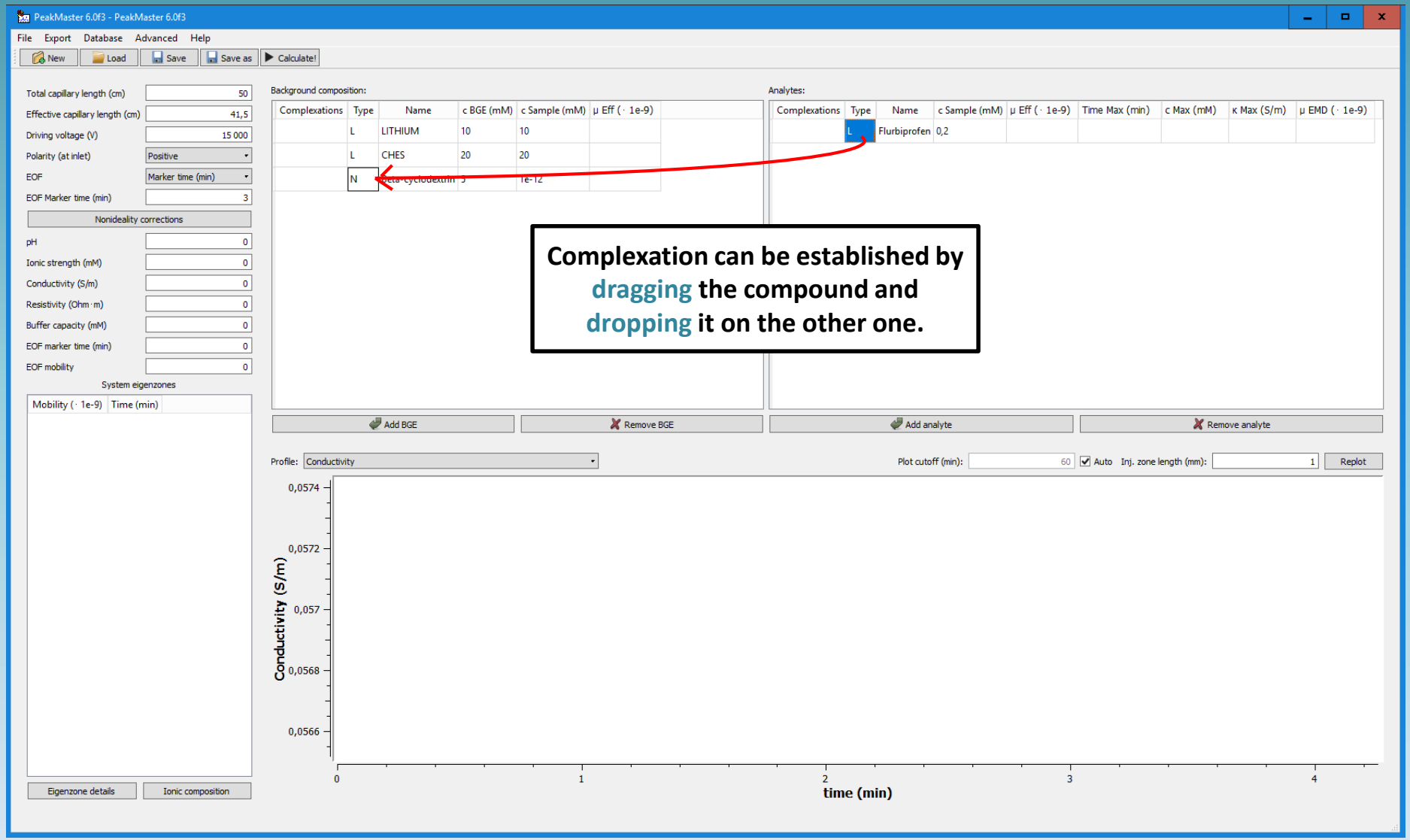
There are few basic rules for describing complexation in the PeakMaster 6.

- **NUCLEUS – any ionic form of a nucleus can interact with an arbitrary number of ionic forms of ligands**
  – each complex MUST contain ONE AND ONLY ONE nucleus
- **LIGAND – any ionic form of a ligand can interact with any ionic form of nuclei**
- **Ligands can NOT interact with other ligands and the same goes for nuclei.**

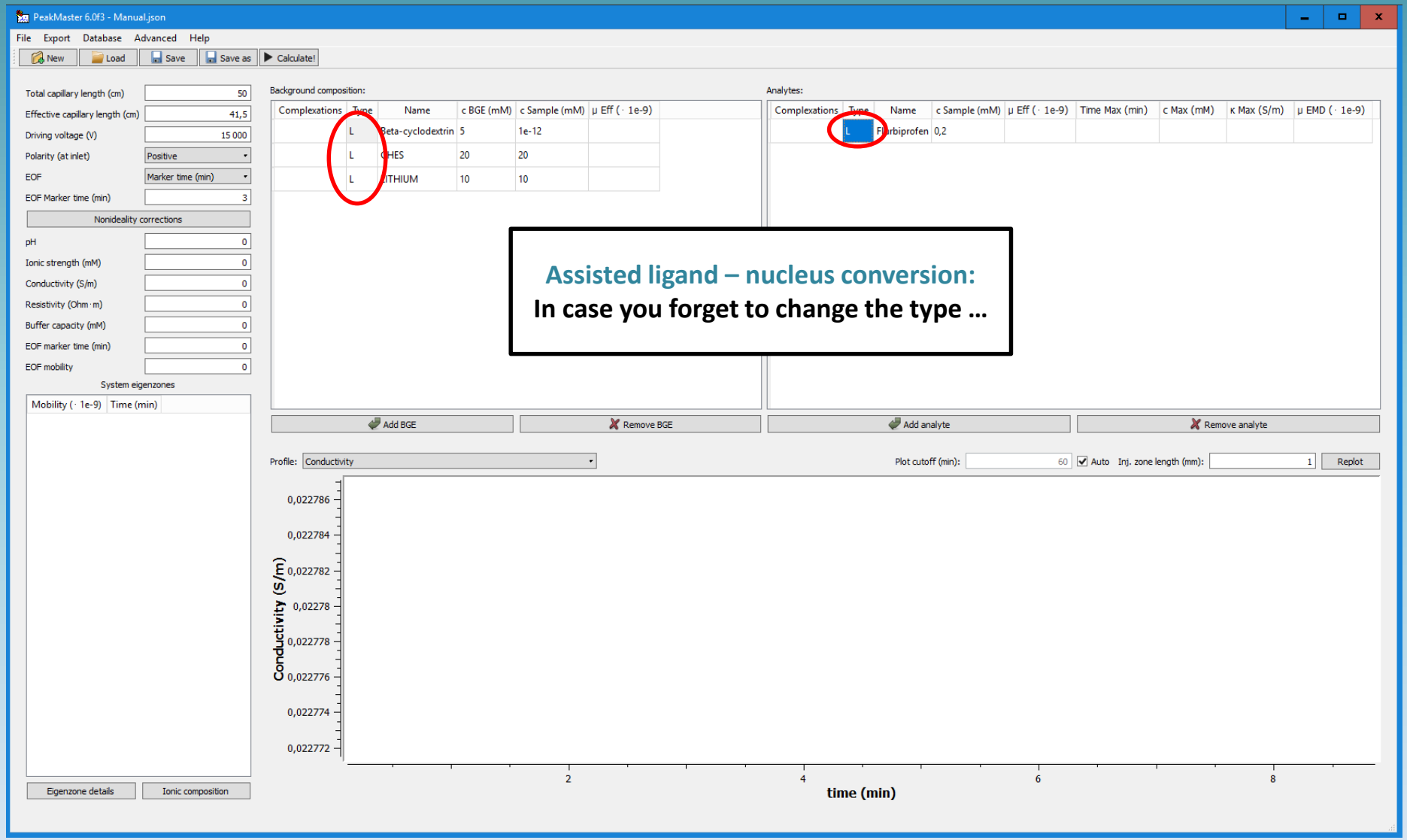
- **A FEW EXAMPLES:**
  (*N – nucleus, L – ligand, K – ligand*)

✓ Allowed	! Not allowed
• NL_2	• N_2L
• NL_3K	• N_4K
• NLK_4	• LK

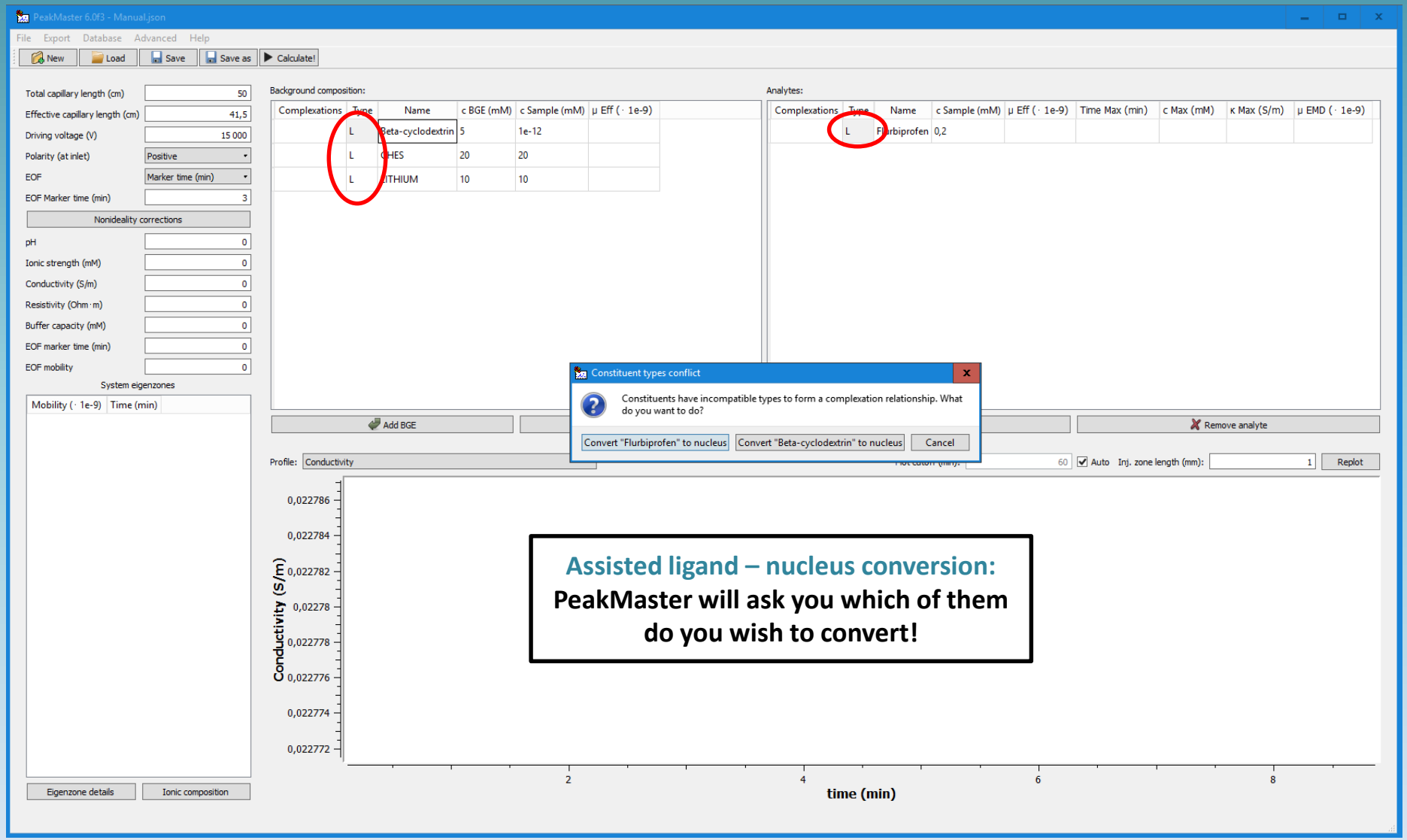
Complexation



Complexation

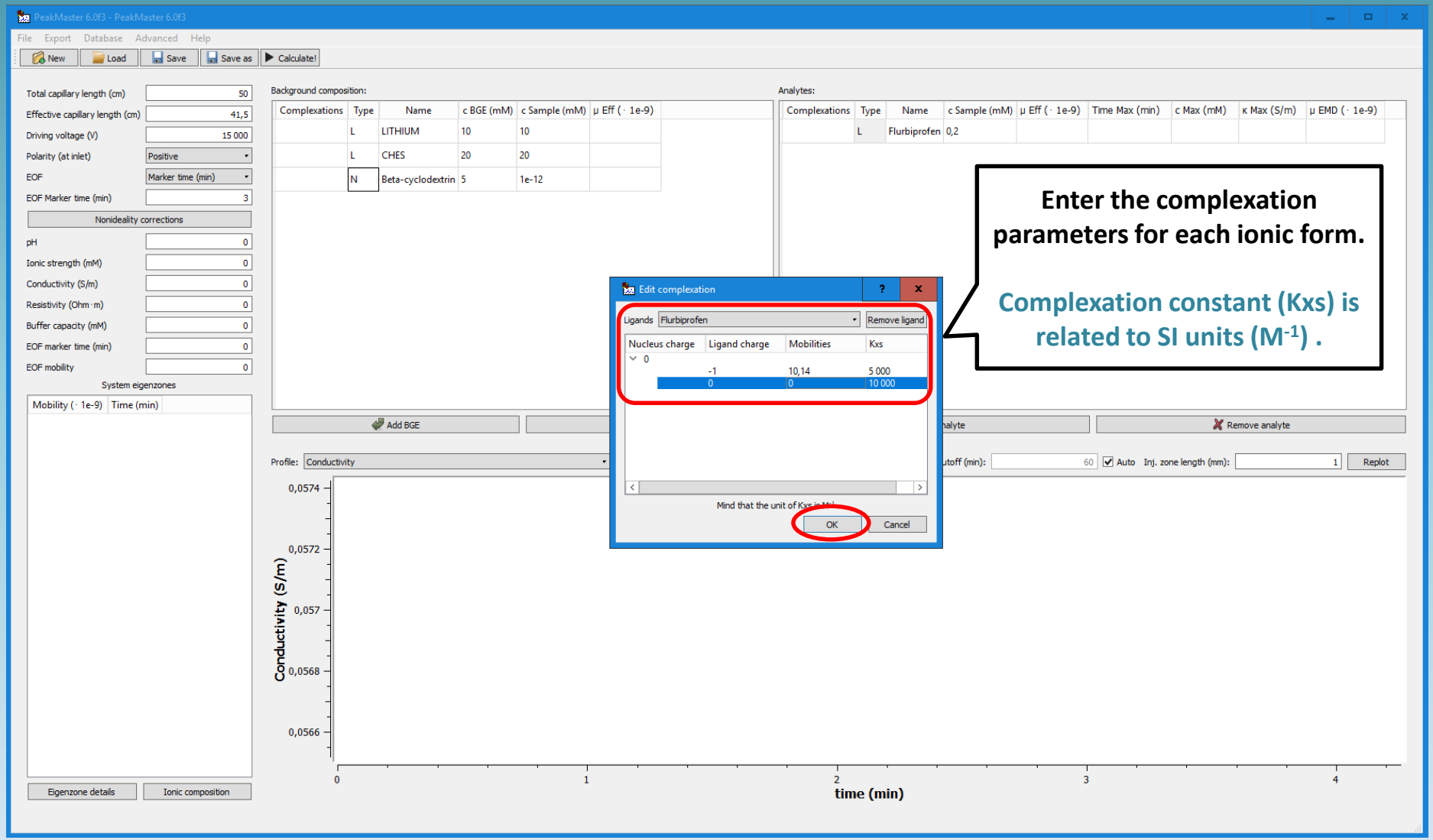


Complexation

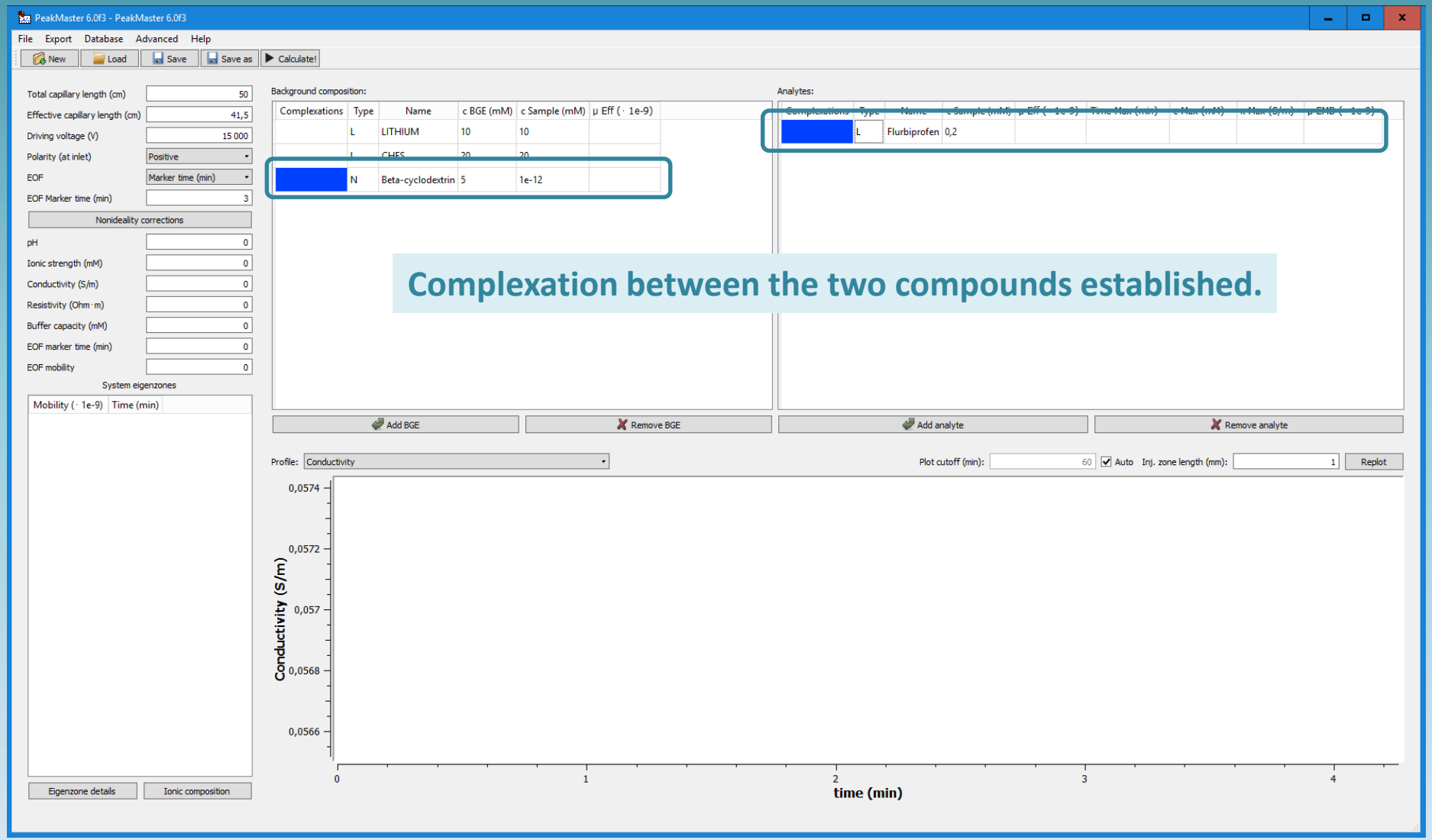


Assisted ligand – nucleus conversion:
PeakMaster will ask you which of them do you wish to convert!

Complexation

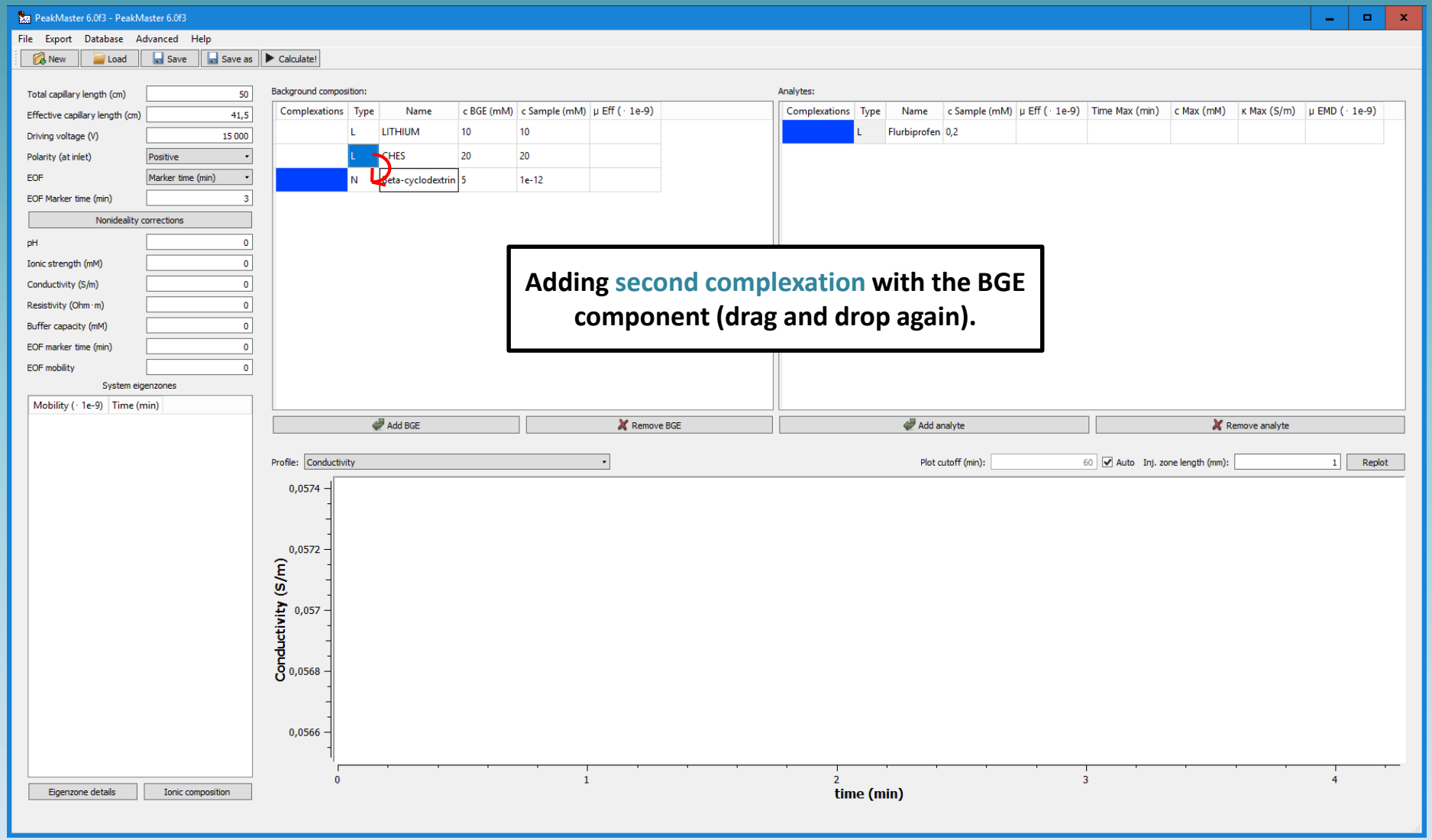


Complexation

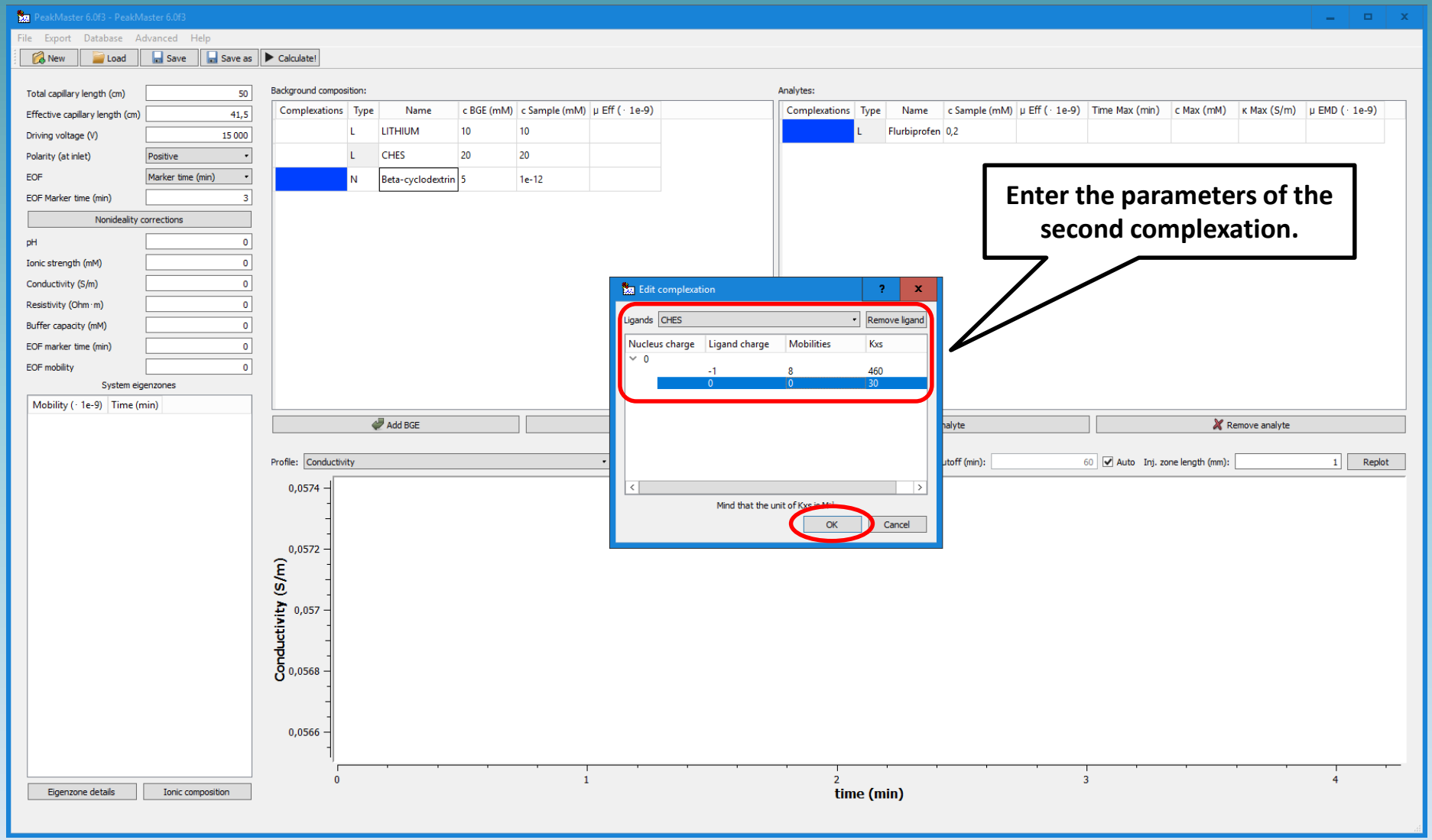


Complexation between the two compounds established.

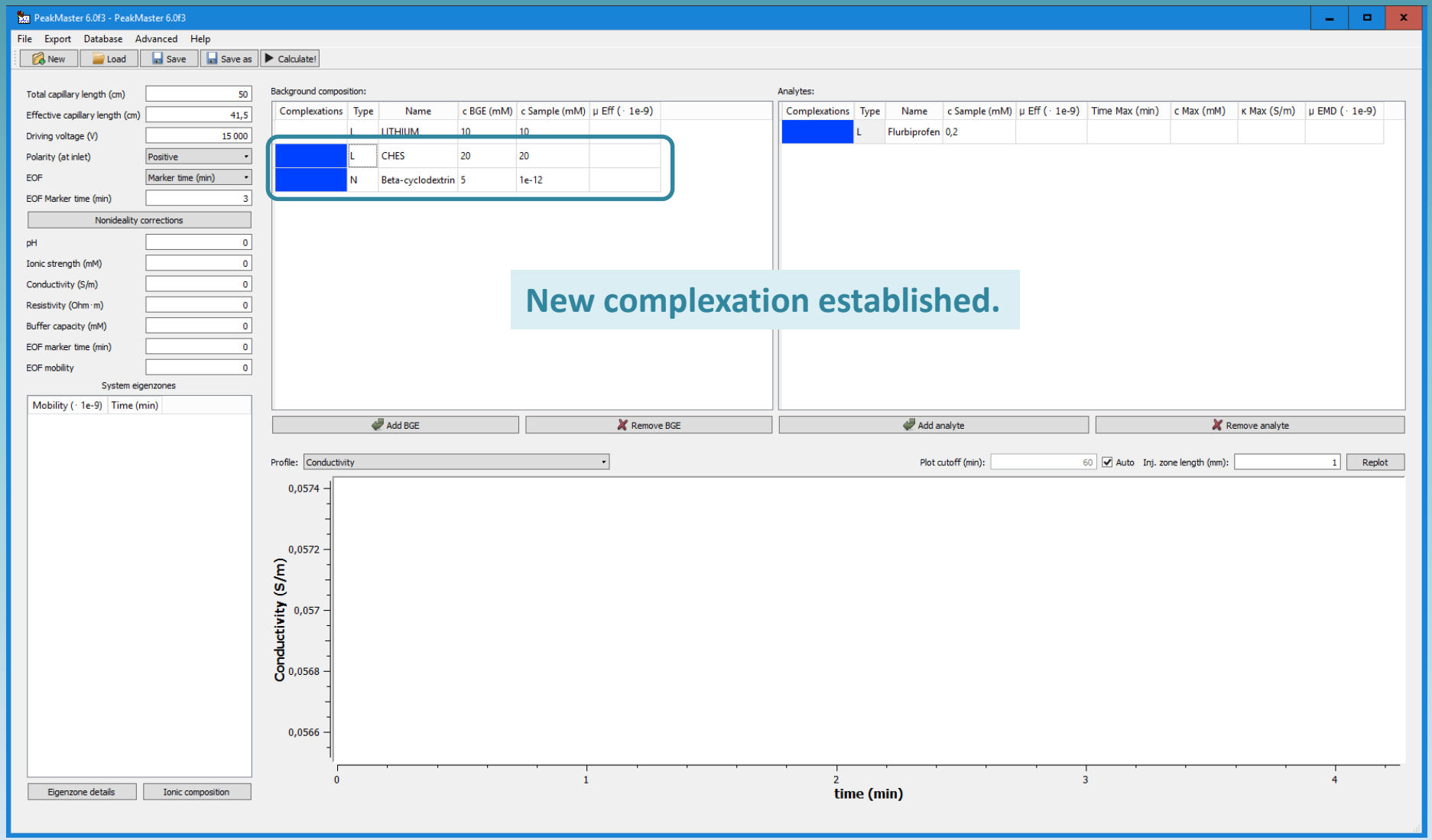
Complexation



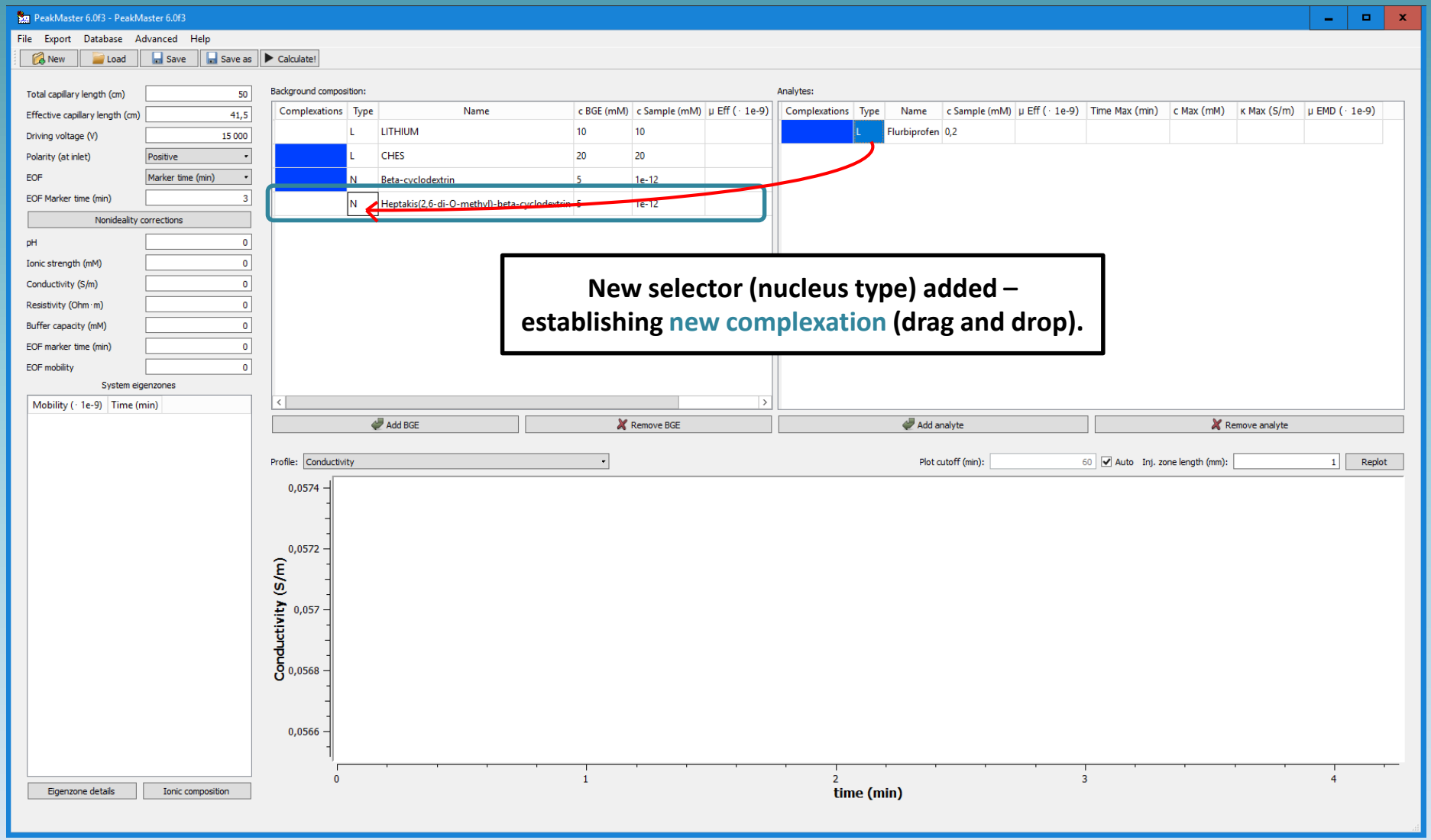
Complexation



Complexation

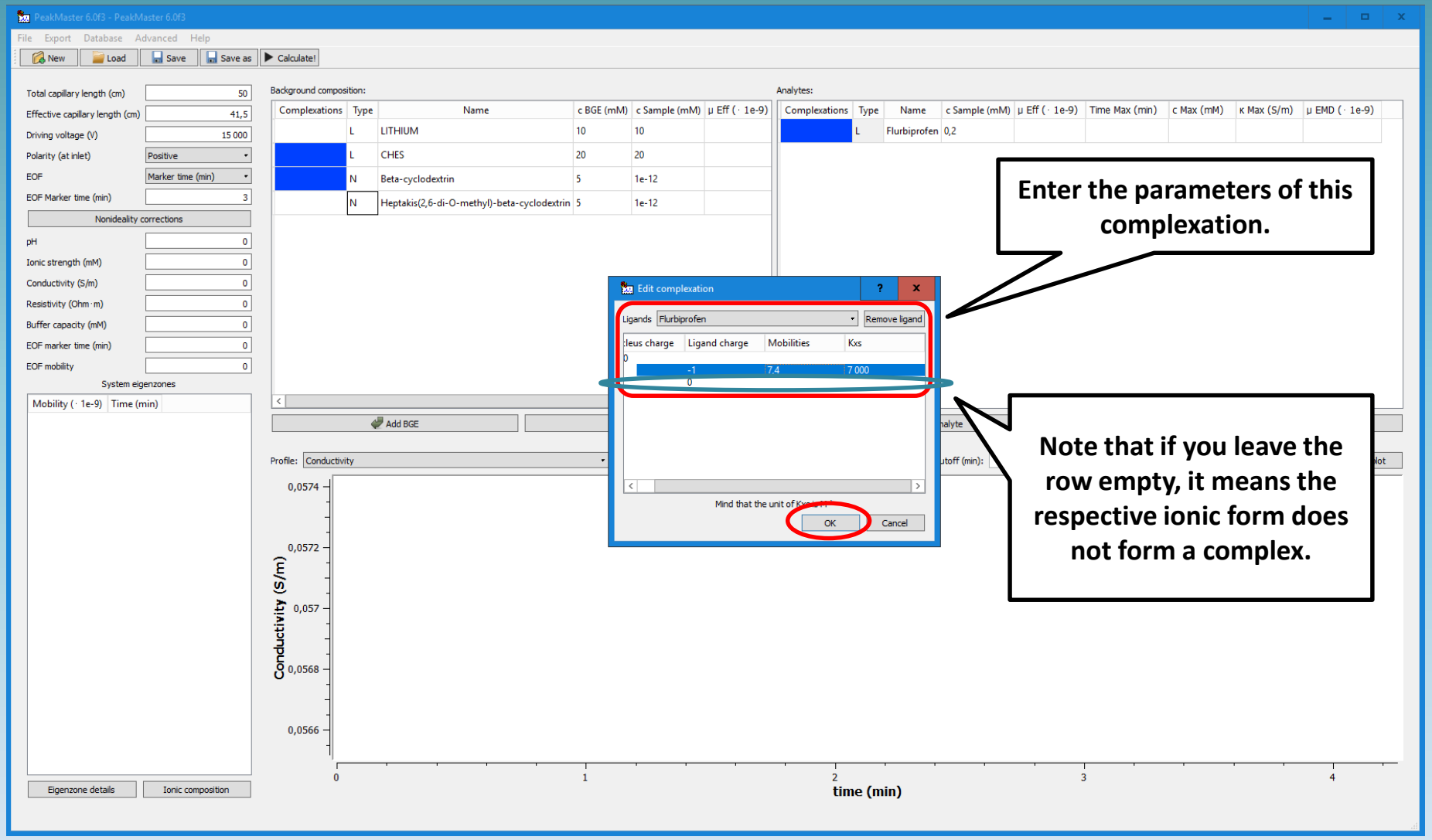


Complexation

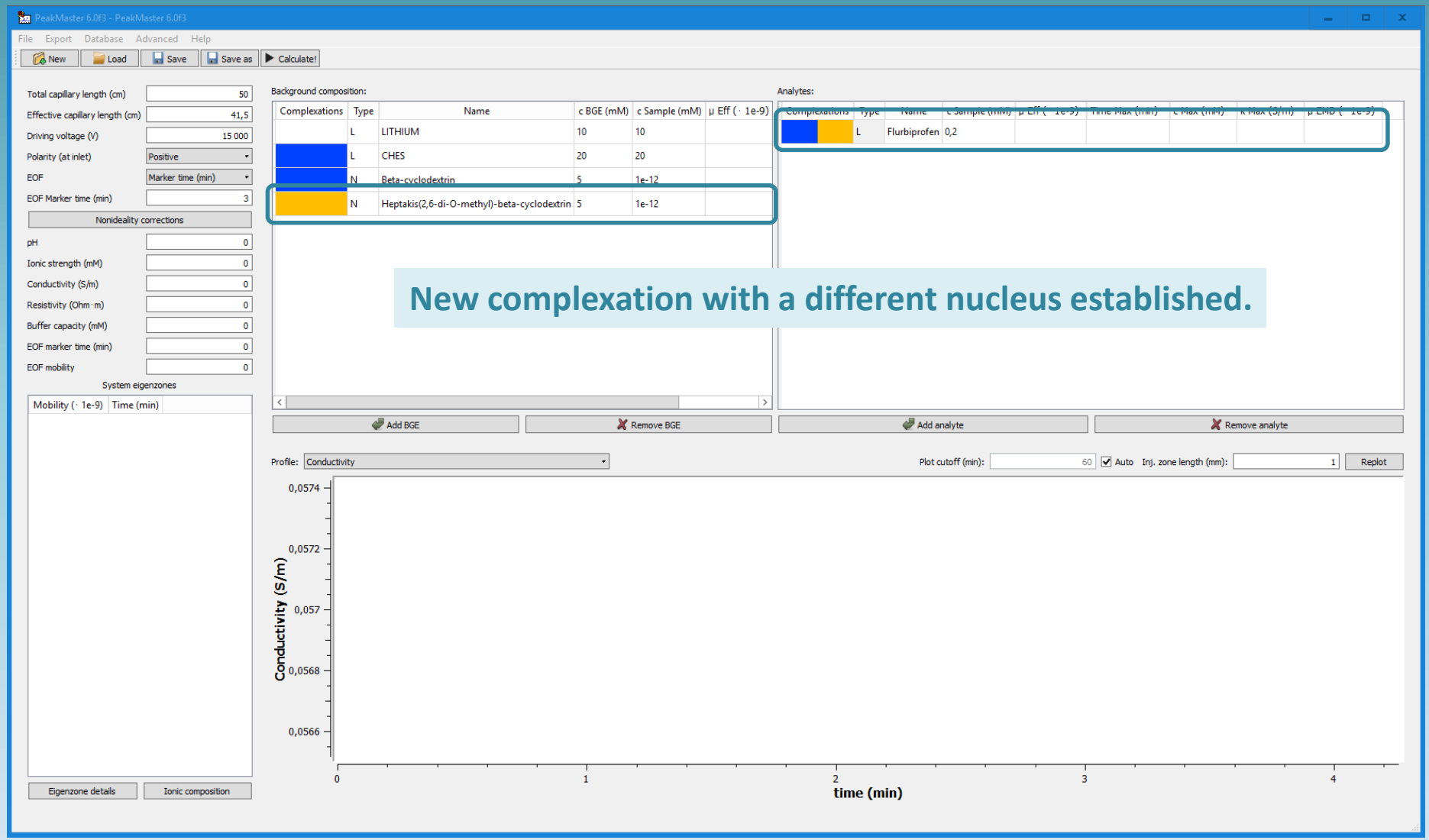


New selector (nucleus type) added – establishing new complexation (drag and drop).

Complexation

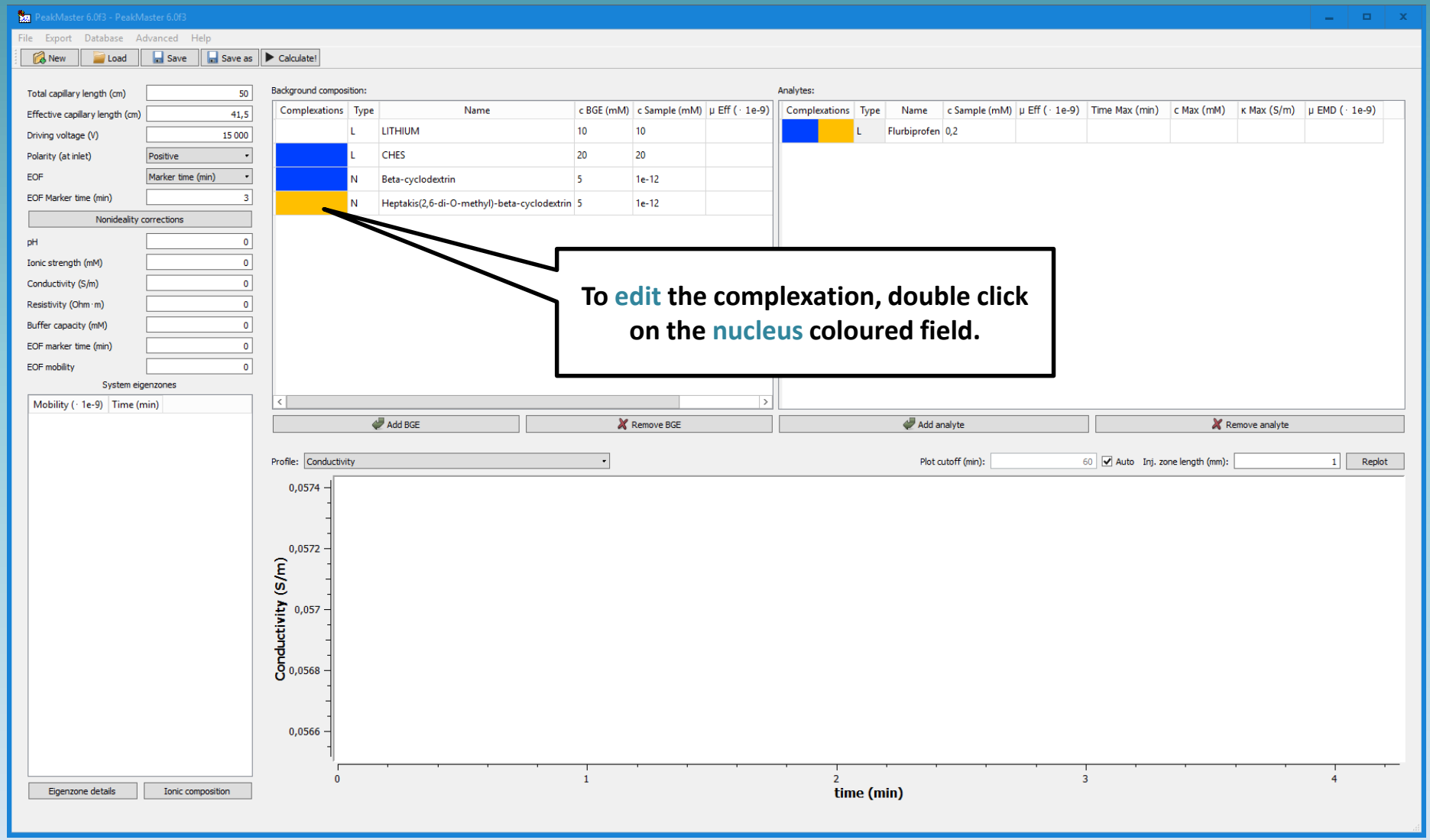


Complexation

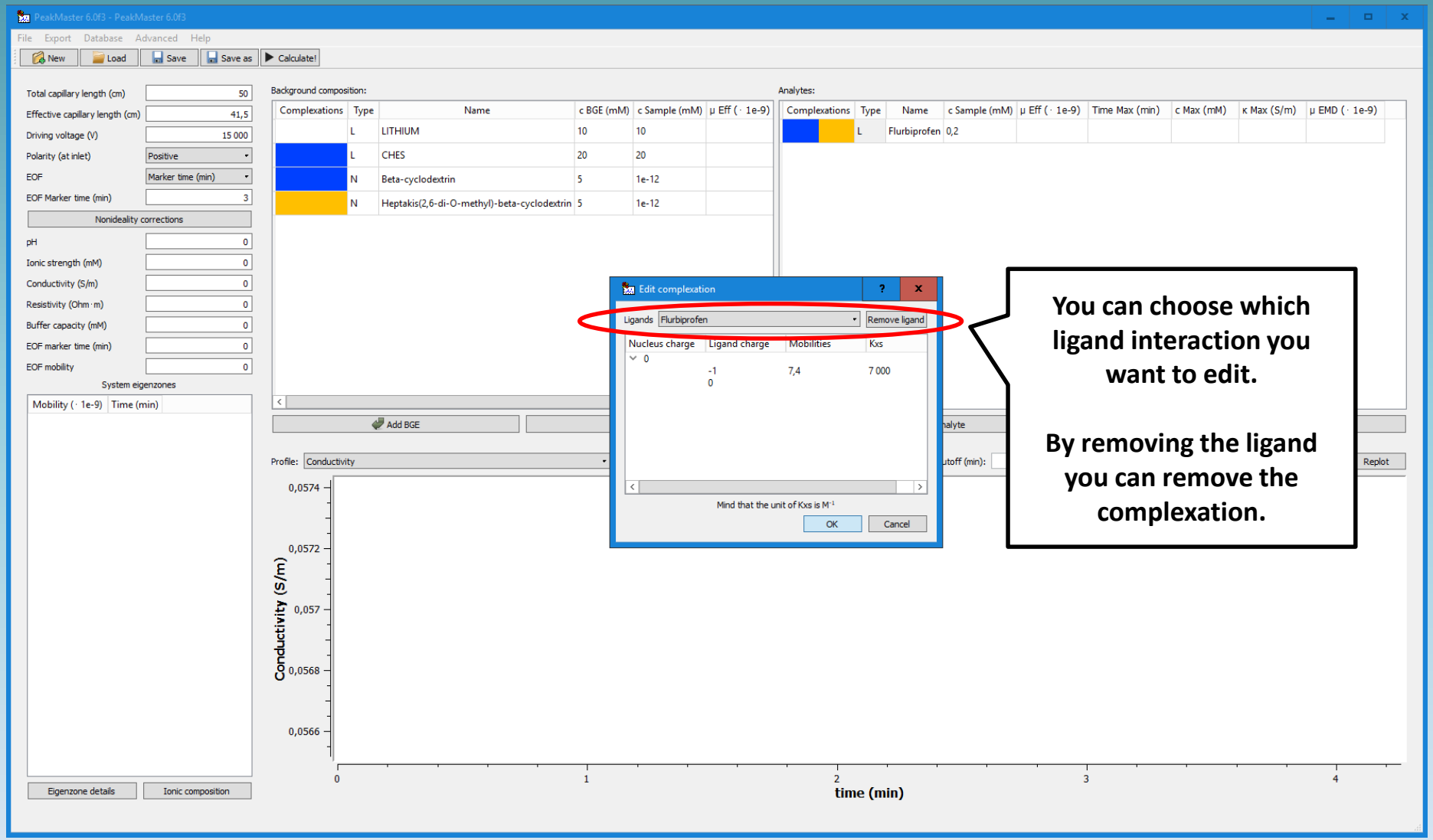


New complexation with a different nucleus established.

Complexation



Complexation

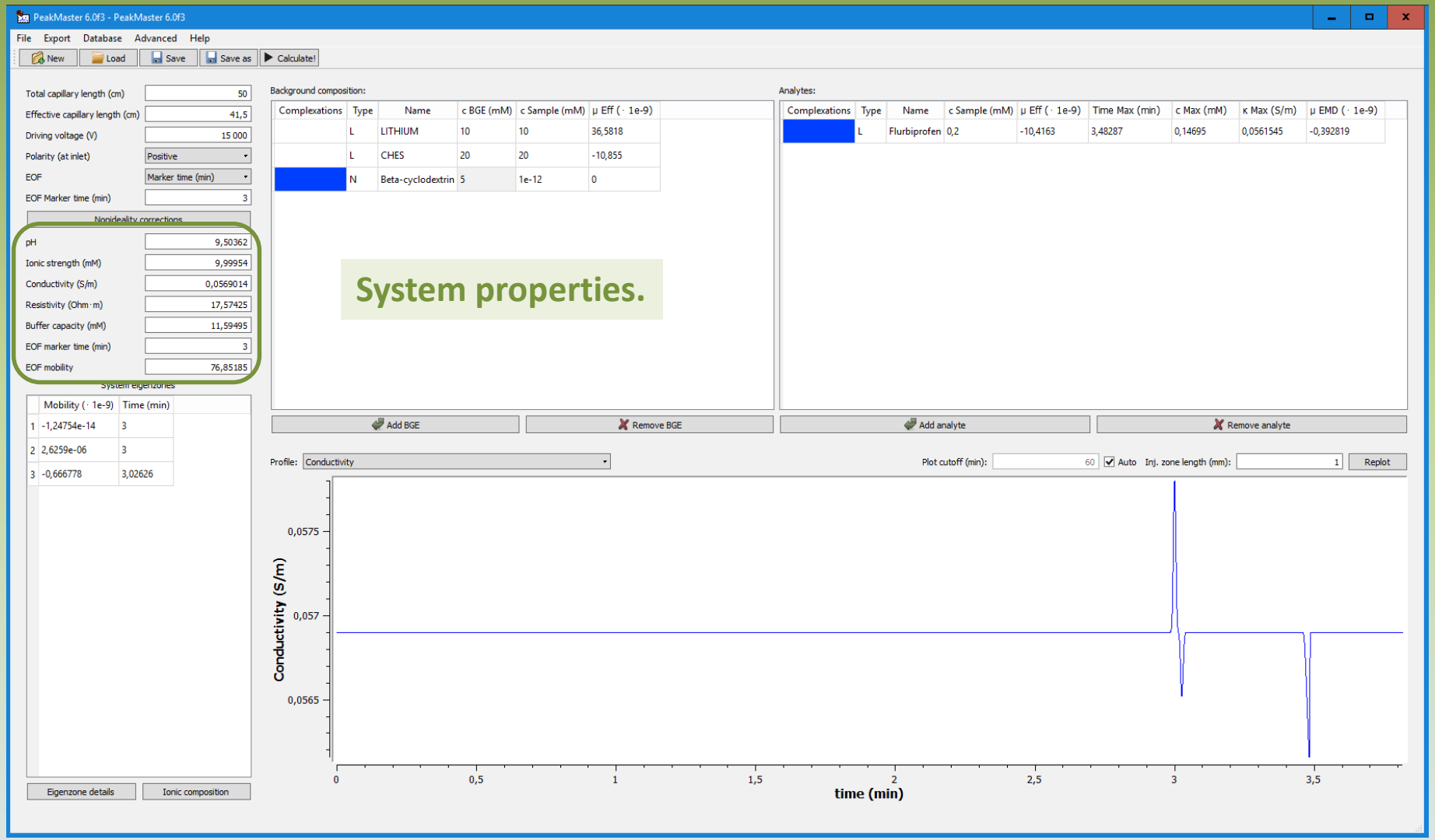


You can choose which ligand interaction you want to edit.

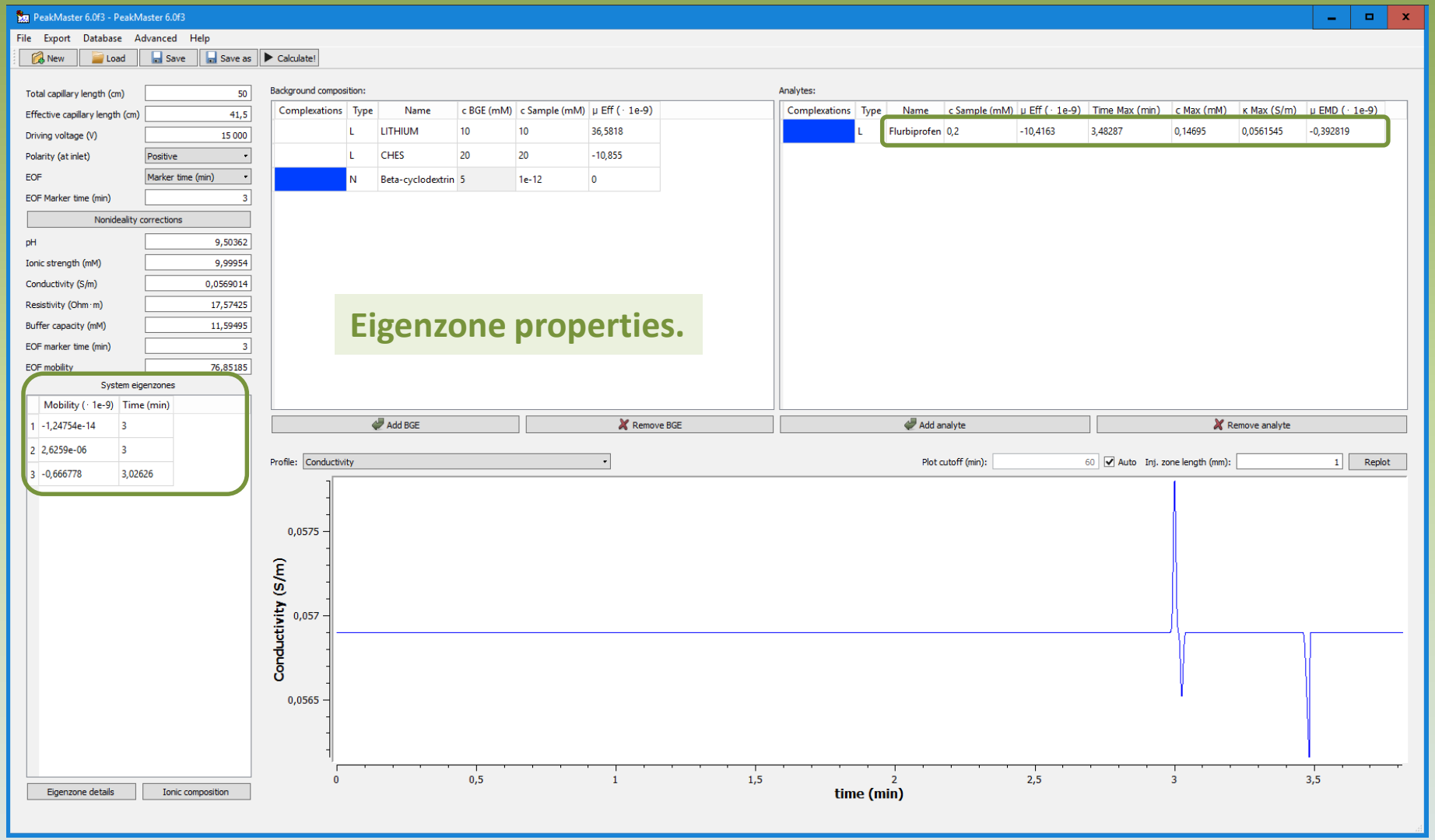
By removing the ligand you can remove the complexation.

Results

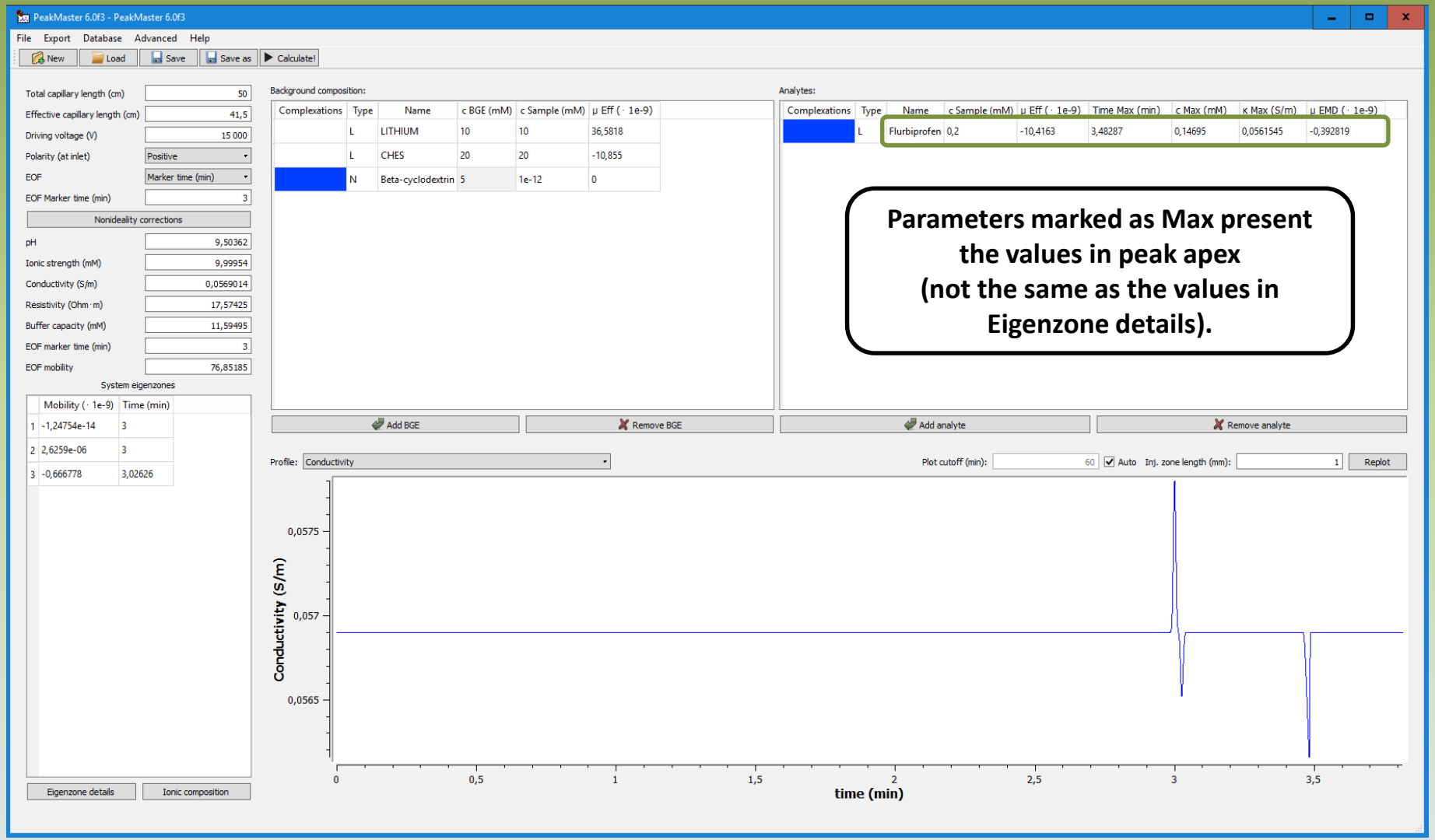
Results


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
System properties.
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

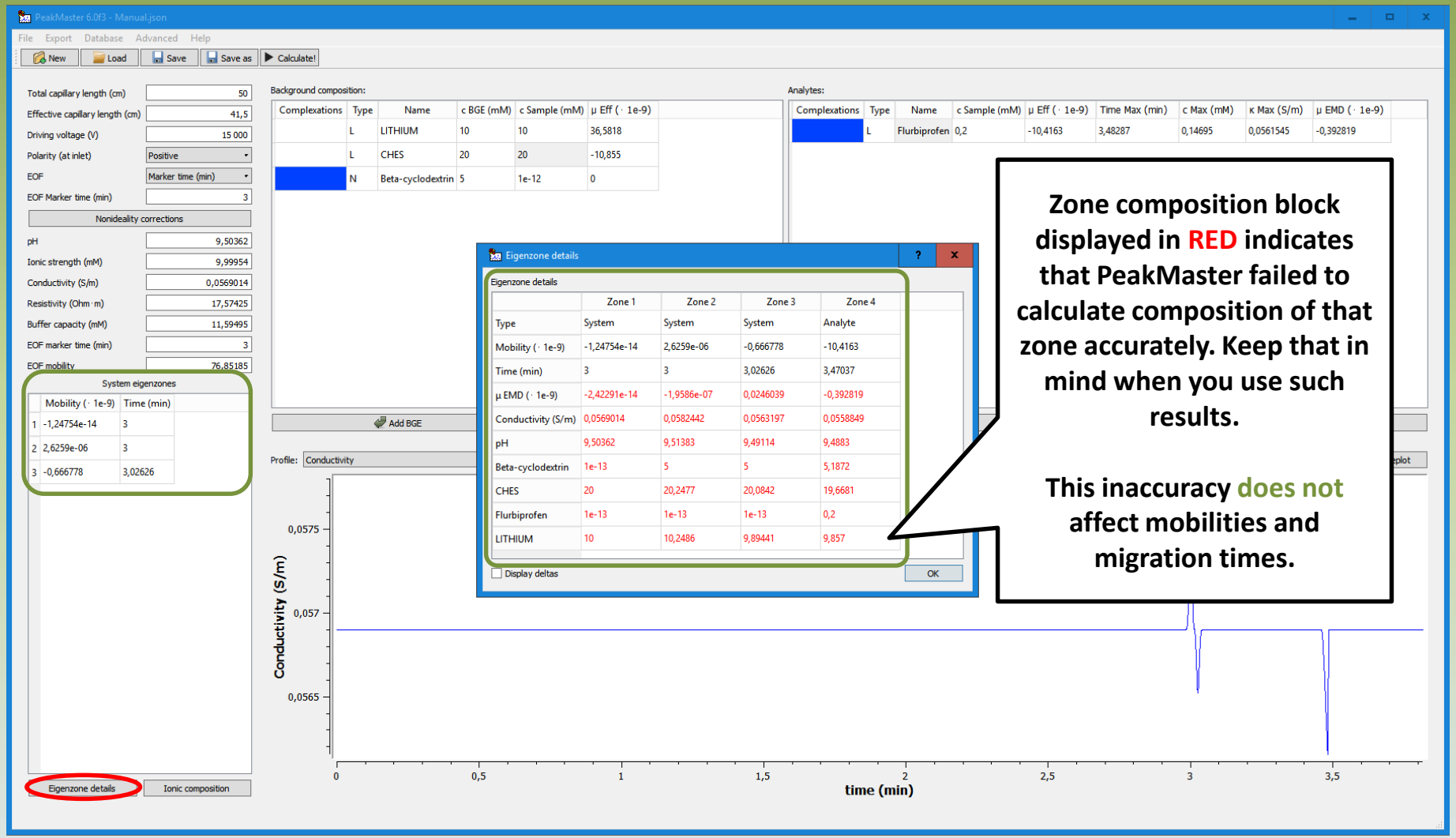
Results


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Eigenzone properties.
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

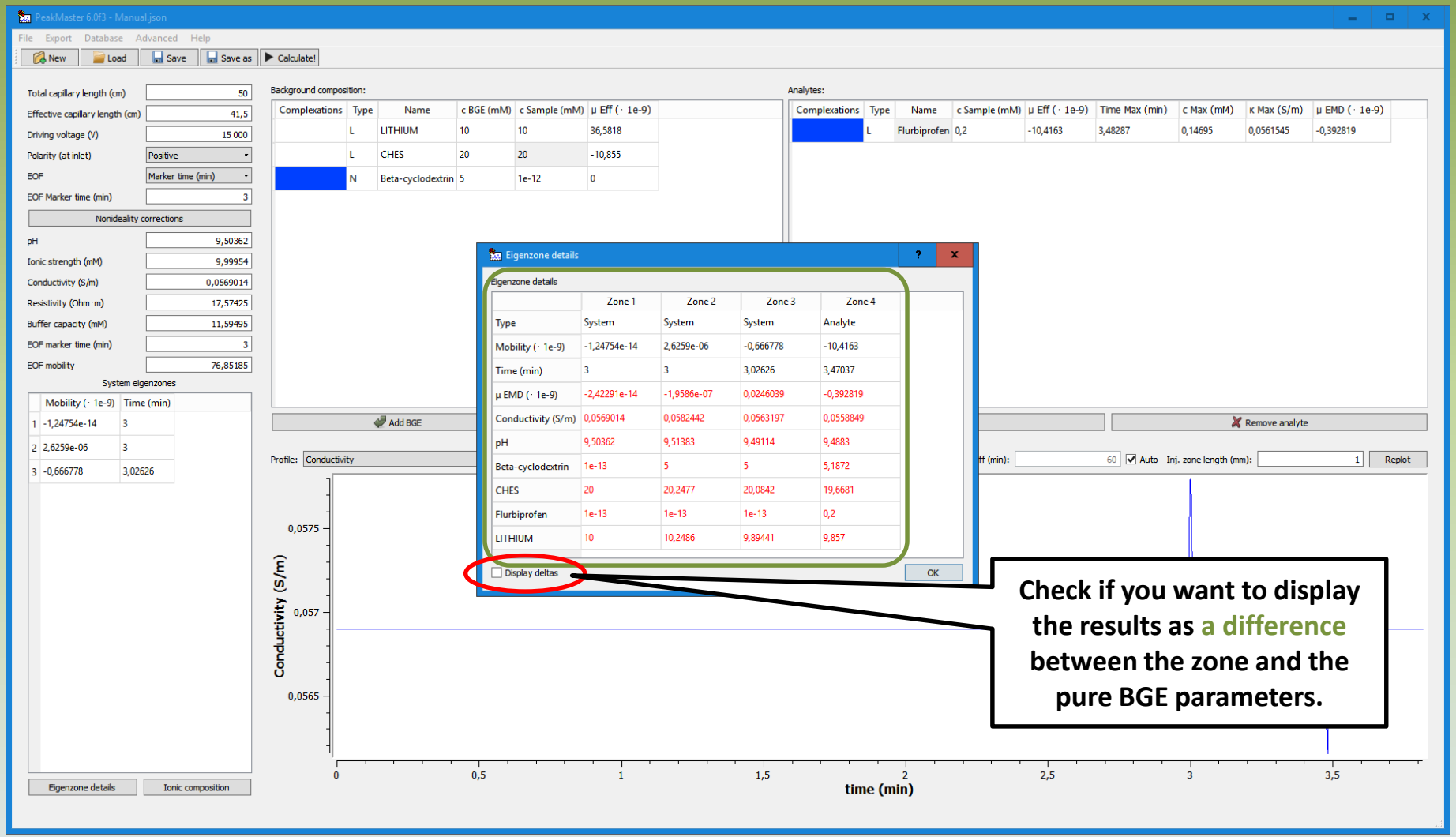
Results


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Add BGE
Remove BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
Add analyte
Remove analyte
Parameters marked as Max present the values in peak apex (not the same as the values in Eigenzone details).
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

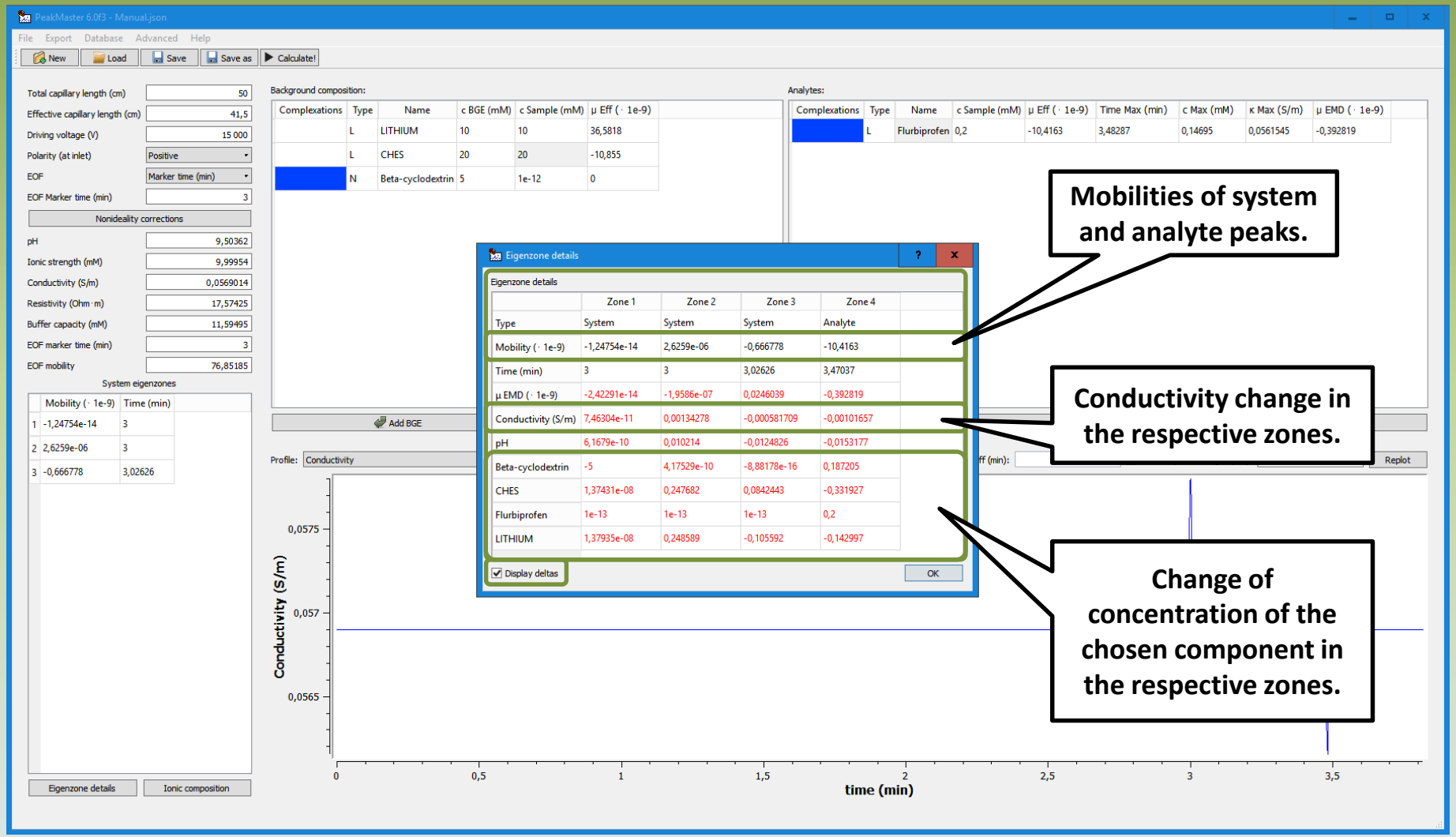
Results


PeakMaster 6.0f3 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Add BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
Eigenzone details
Eigenzone details
Zone 1 Zone 2 Zone 3 Zone 4
Type System System System Analyte
Mobility (· 1e-9) -1,24754e-14 2,6259e-06 -0,666778 -10,4163
Time (min) 3 3 3,02626 3,47037
μ EMD (· 1e-9) -2,42291e-14 -1,9586e-07 0,0246039 -0,392819
Conductivity (S/m) 0,0569014 0,0582442 0,0563197 0,0558849
pH 9,50362 9,51383 9,49114 9,4883
Beta-cyclodextrin 1e-13 5 5 5,1872
CHES 20 20,2477 20,0842 19,6681
Flurbiprofen 1e-13 1e-13 1e-13 0,2
LITHIUM 10 10,2486 9,89441 9,857
Display deltas
OK
Profile: Conductivity
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)
Zone composition block displayed in RED indicates that PeakMaster failed to calculate composition of that zone accurately. Keep that in mind when you use such results.
This inaccuracy does not affect mobilities and migration times.

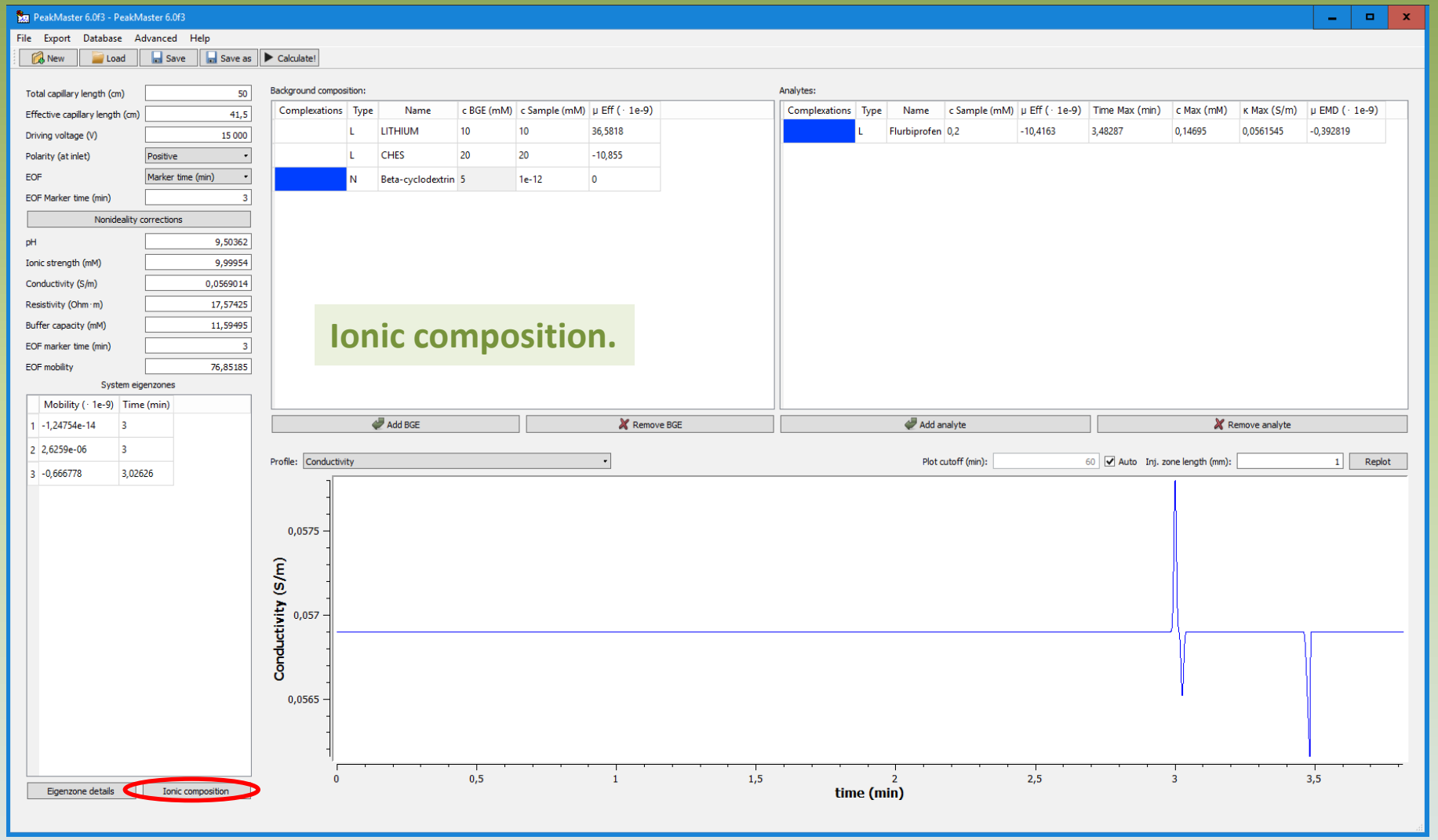
Results


PeakMaster 6.0f3 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Eigenzone details
Ionic composition
Background composition:
Analytes:
Add BGE
Remove analyte
Profile: Conductivity
Auto
Inj. zone length (mm):
Replot
Conductivity (S/m)
time (min)
Eigenzone details
Display deltas
OK
Check if you want to display the results as a difference between the zone and the pure BGE parameters.

Results

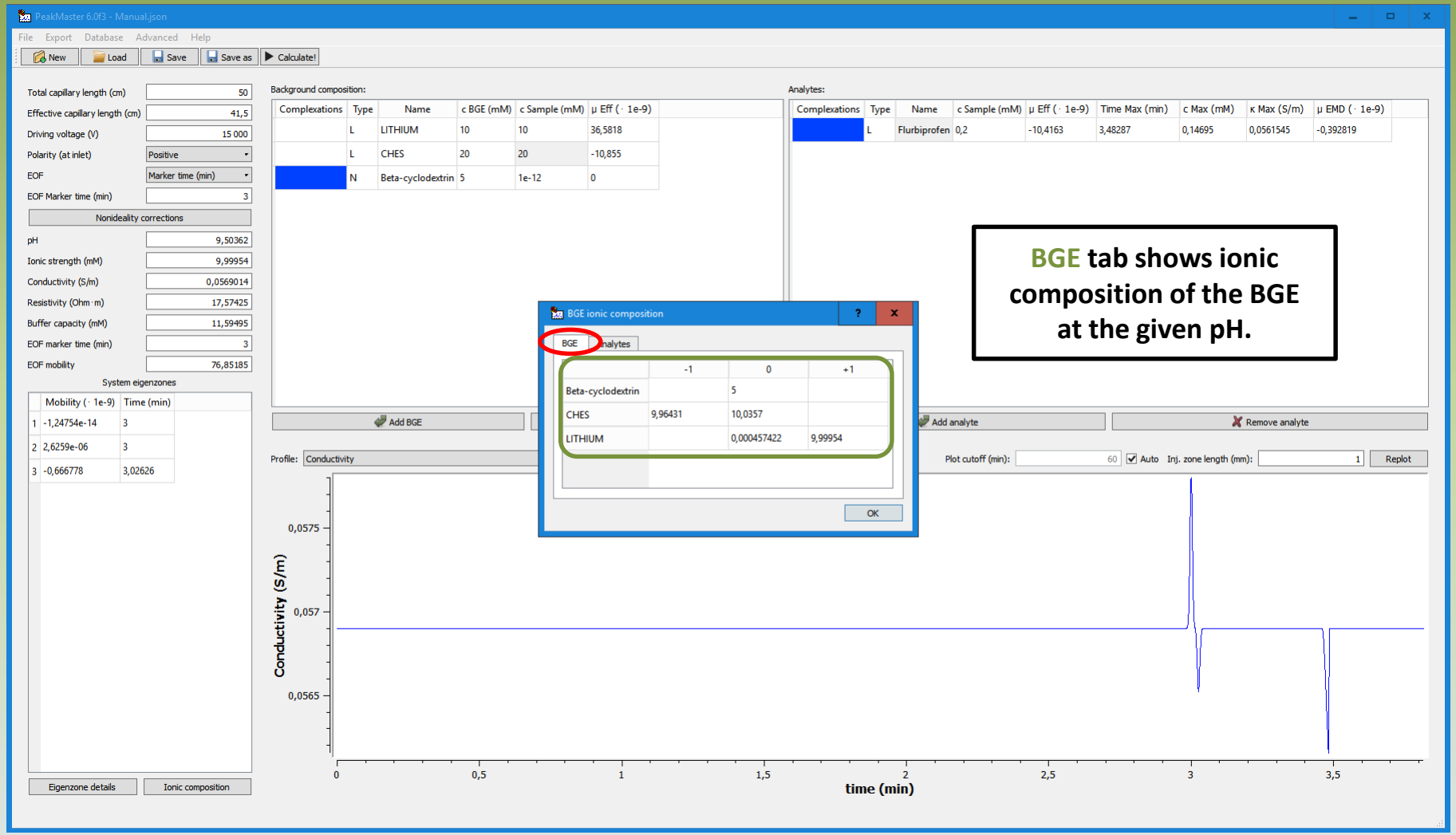

PeakMaster 6.0f3 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Eigenzone details
Ionic composition
Background composition:
Analytes:
Add BGE
Profile: Conductivity
Replot
Eigenzone details
Display deltas
OK
Mobilities of system and analyte peaks.
Conductivity change in the respective zones.
Change of concentration of the chosen component in the respective zones.
Conductivity (S/m)
time (min)

Results



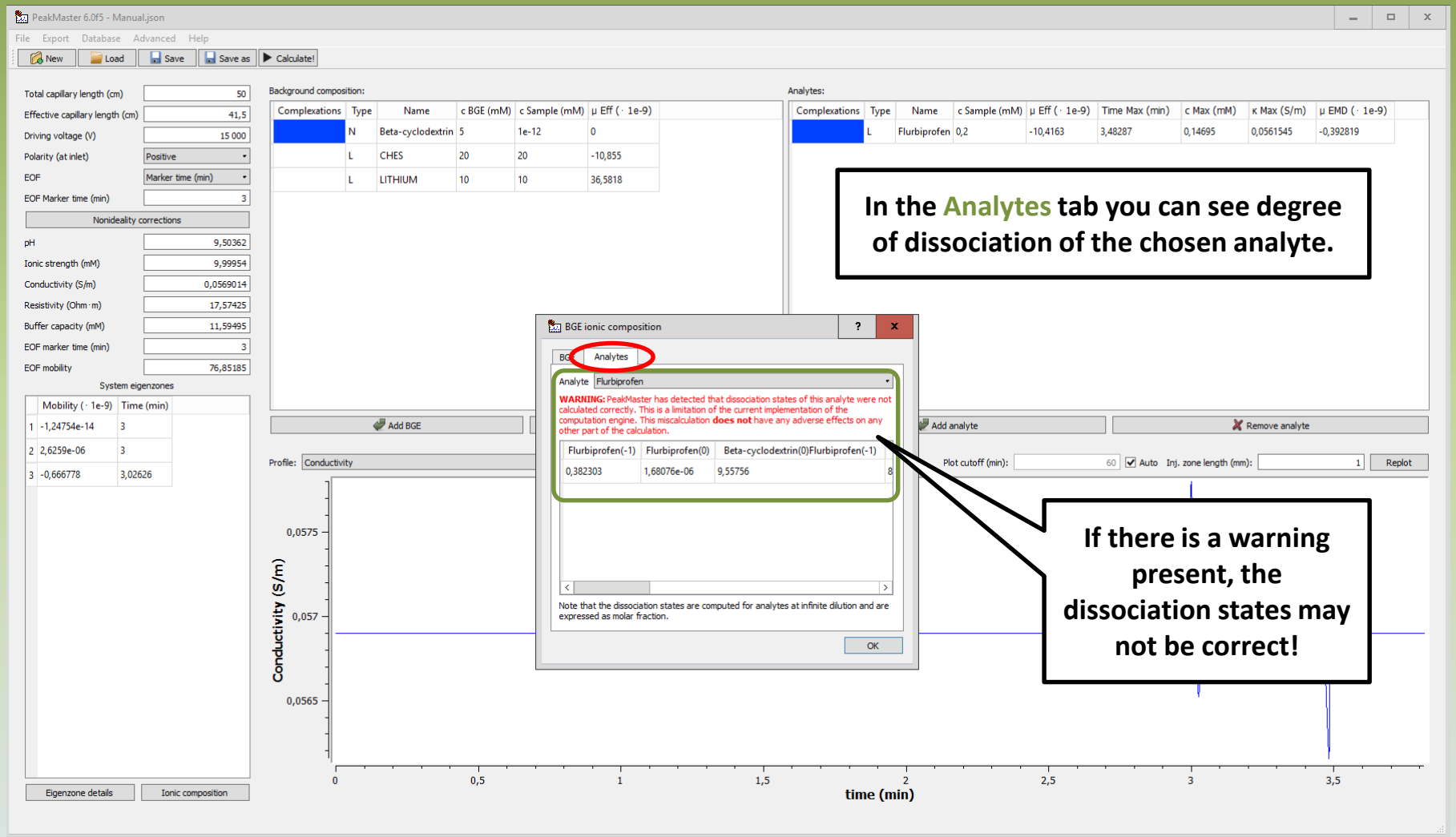
Ionic composition.

Results

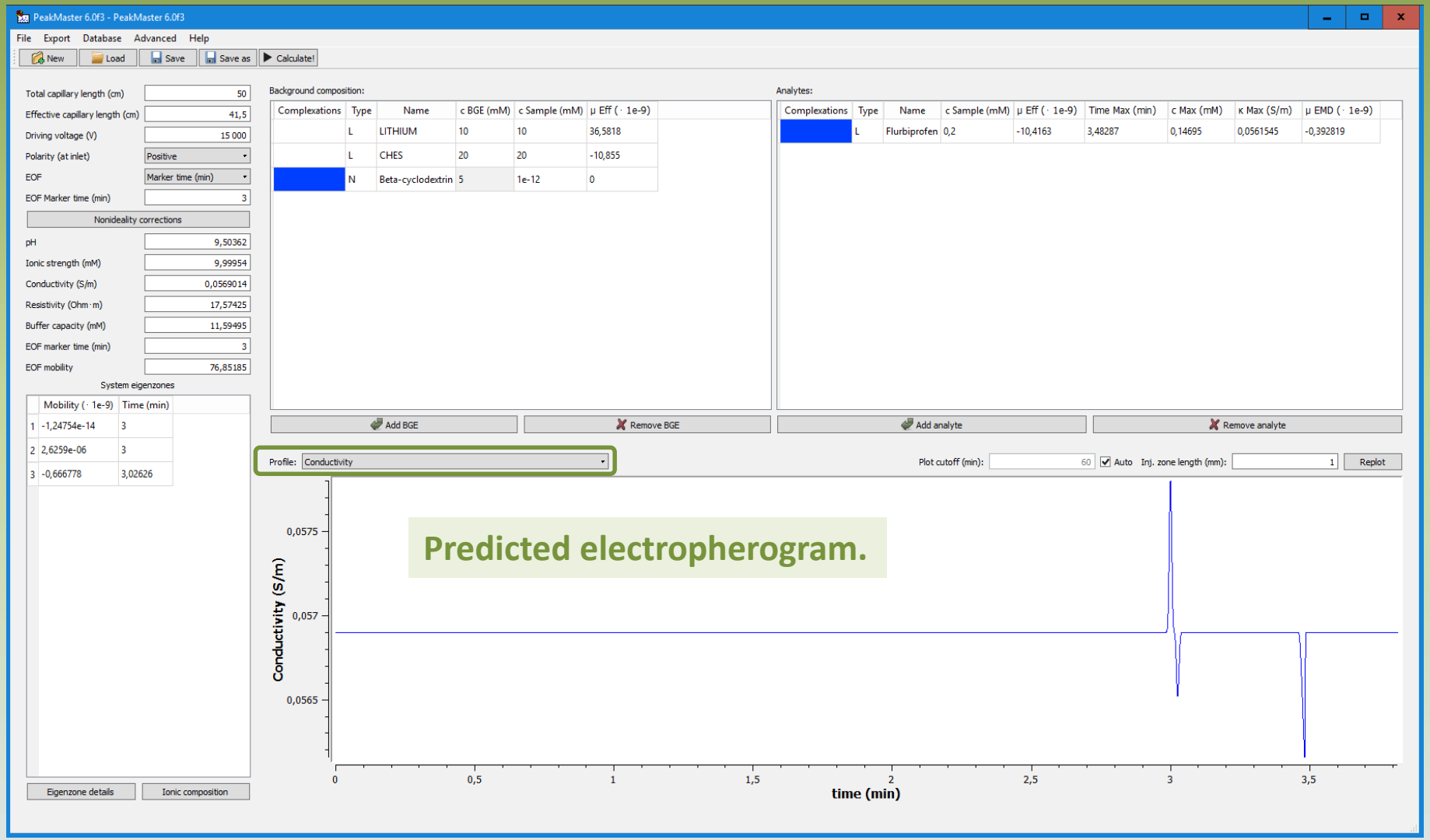


BGE tab shows ionic composition of the BGE at the given pH.

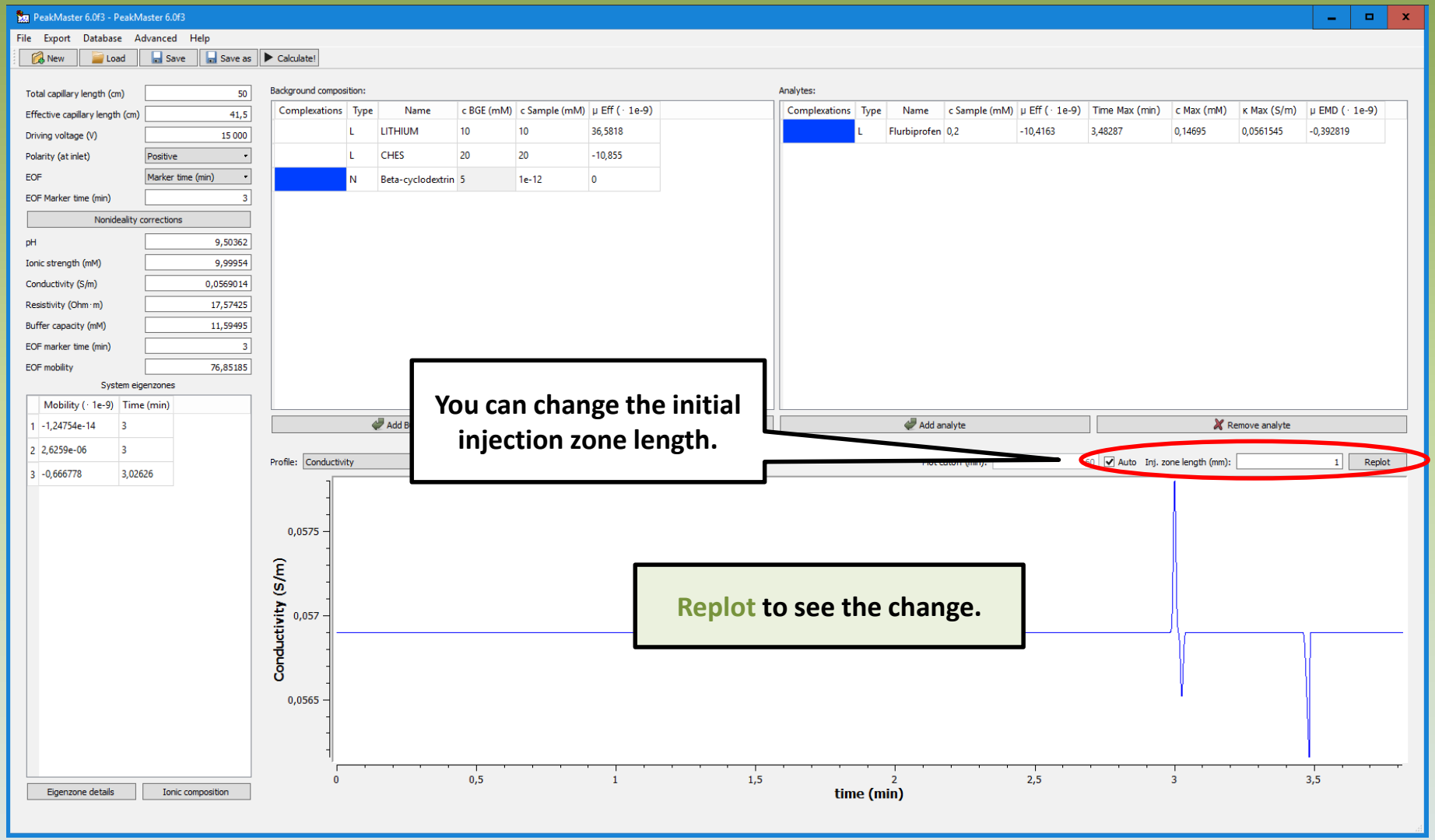
Results


PeakMaster 6.0f5 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
N Beta-cyclodextrin 5 1e-12 0
L CHES 20 20 -10,855
L LITHIUM 10 10 36,5818
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
In the Analytes tab you can see degree of dissociation of the chosen analyte.
BGE ionic composition
BG Analytes
Analyte Flurbiprofen
WARNING: PeakMaster has detected that dissociation states of this analyte were not calculated correctly. This is a limitation of the current implementation of the computation engine. This miscalculation does not have any adverse effects on any other part of the calculation.
Flurbiprofen(-1) Flurbiprofen(0) Beta-cyclodextrin(0)Flurbiprofen(-1)
0,382303 1,68076e-06 9,55756
Note that the dissociation states are computed for analytes at infinite dilution and are expressed as molar fraction.
OK
Add BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60 Auto Inj. zone length (mm): 1 Replot
If there is a warning present, the dissociation states may not be correct!
Conductivity (S/m)
0,0575
0,057
0,0565
0 0,5 1 1,5 2 2,5 3 3,5
time (min)

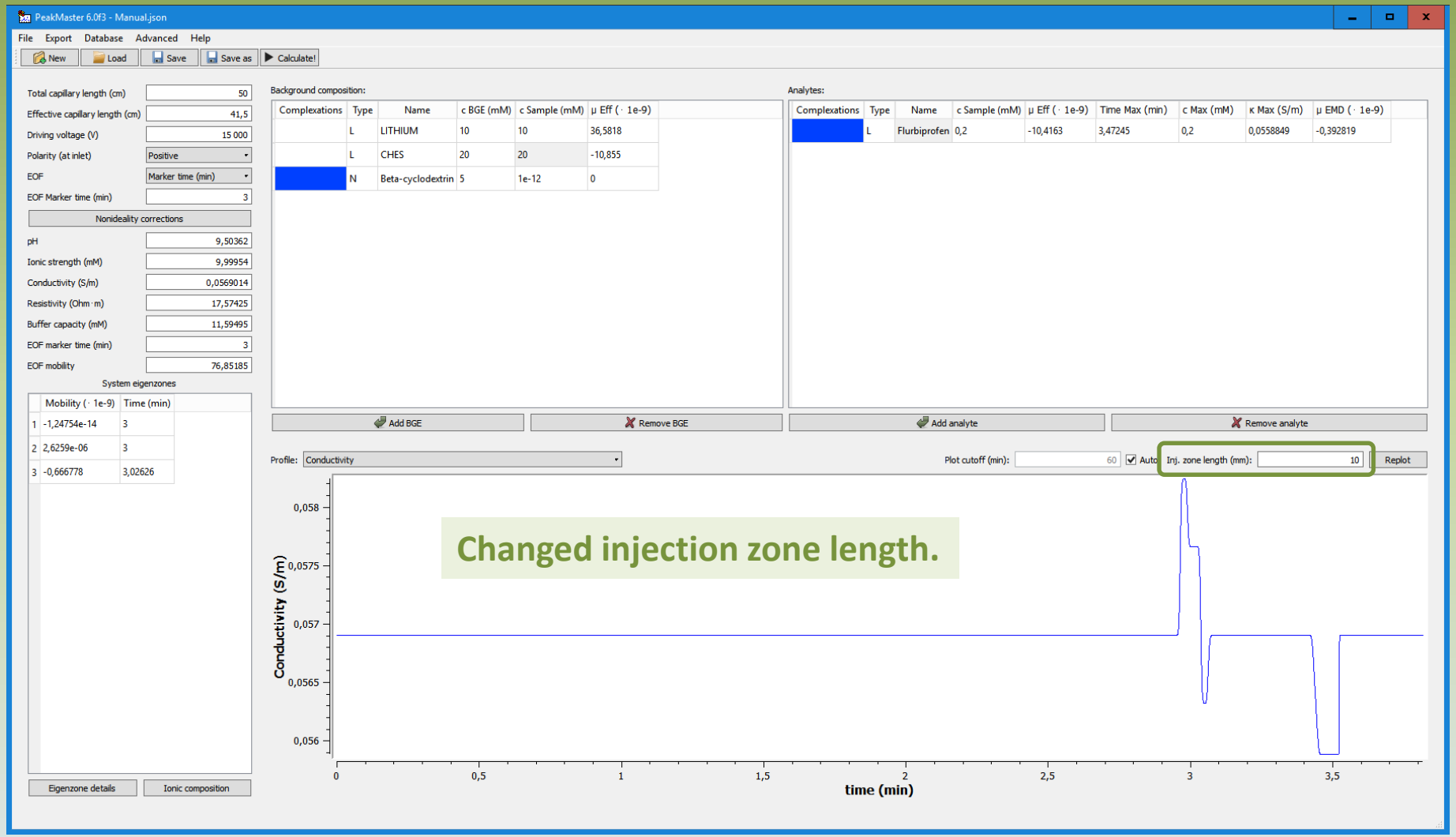
Results


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF Marker time (min) 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Add BGE
Remove BGE
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 1
Replot
Predicted electropherogram.
Conductivity (S/m)
0,0575
0,057
0,0565
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

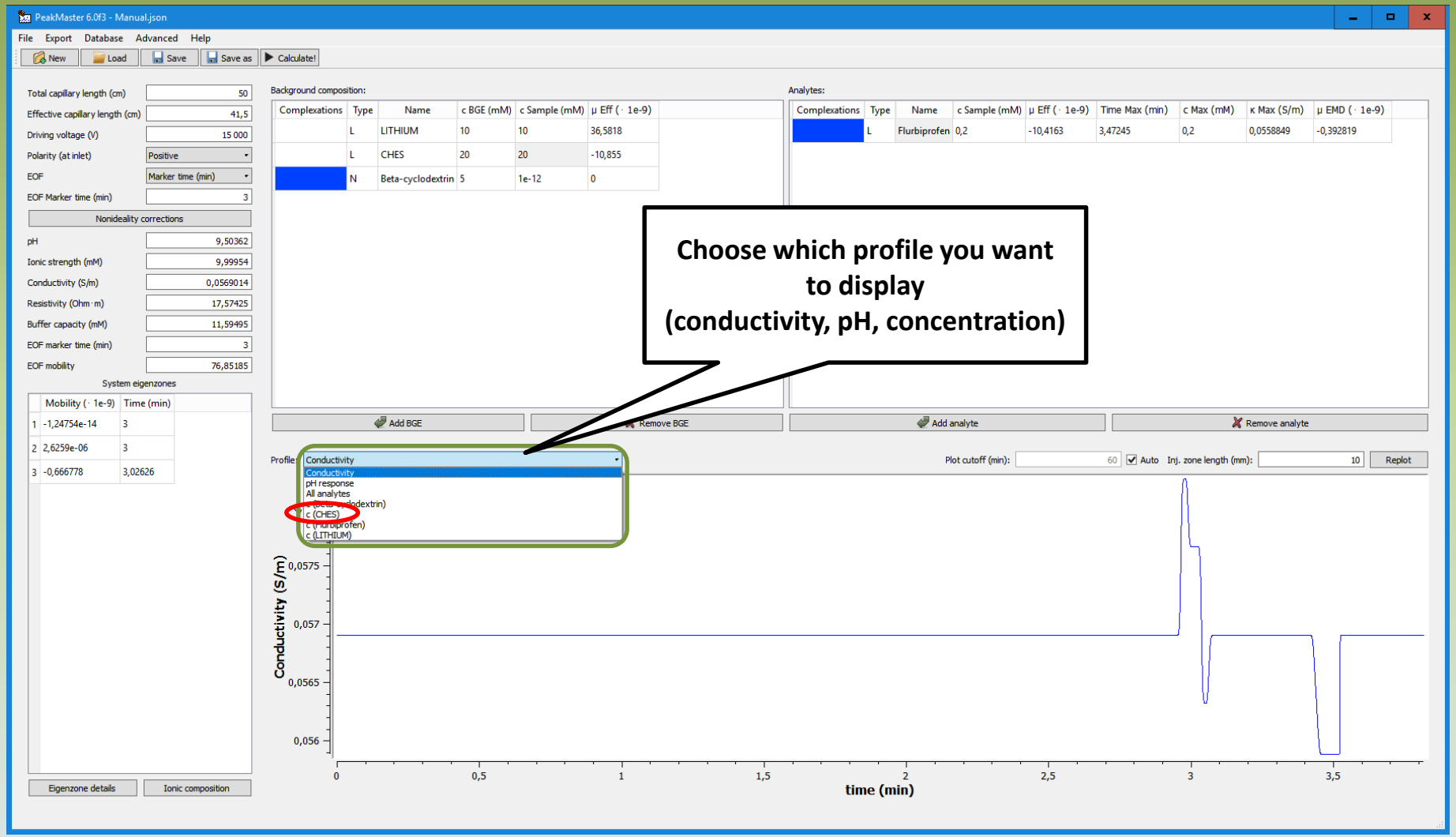
Results


PeakMaster 6.0f3 - PeakMaster 6.0f3
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF marker time (min) 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,48287 0,14695 0,0561545 -0,392819
Add analyte
Remove analyte
You can change the initial injection zone length.
Profile: Conductivity
Auto Inj. zone length (mm): 1
Replot
Replot to see the change.
Conductivity (S/m)
time (min)

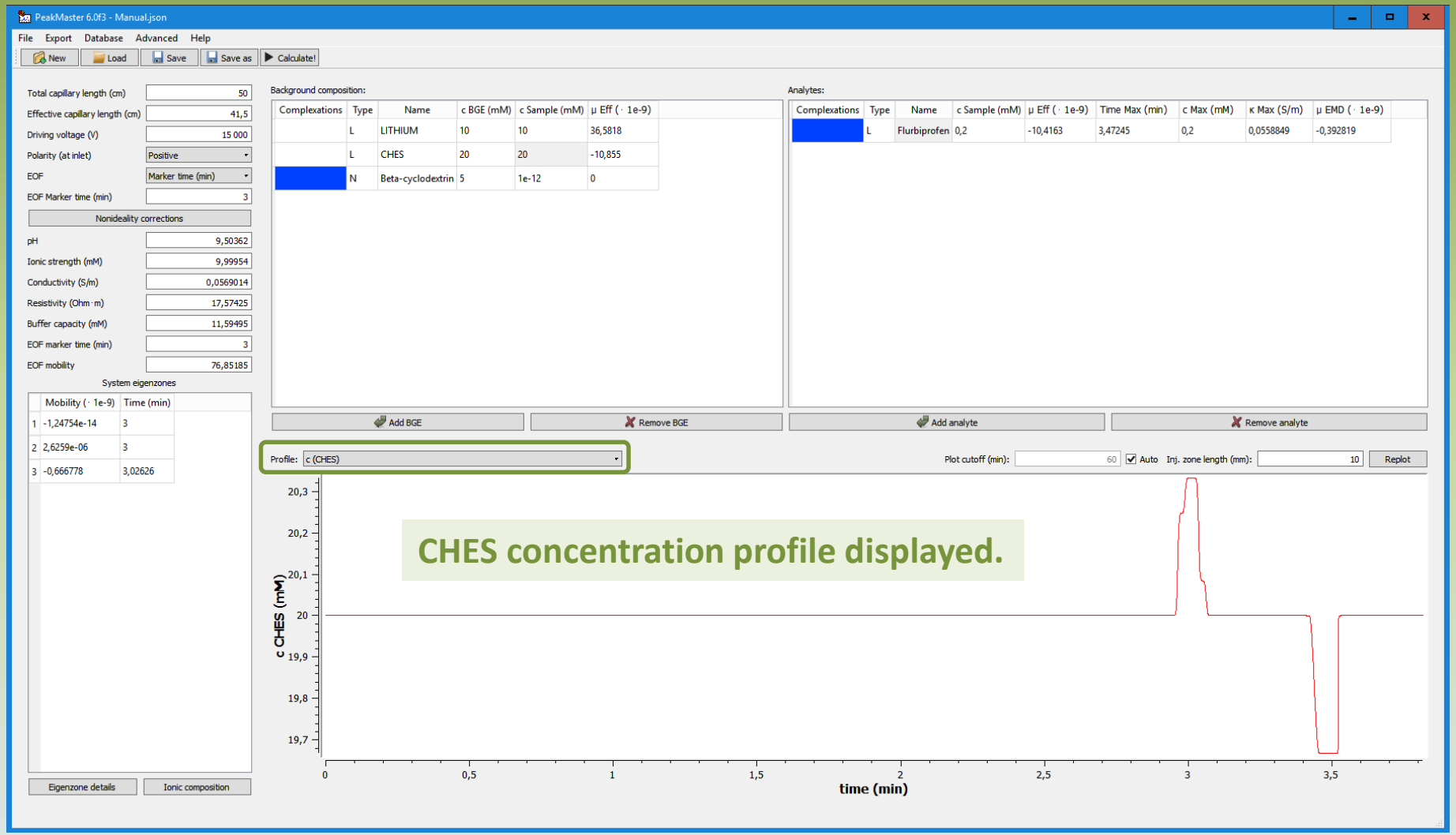
Results


PeakMaster 6.0f3 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,47245 0,2 0,0558849 -0,392819
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: Conductivity
Plot cutoff (min): 60 Auto
Inj. zone length (mm): 10
Replot
Changed injection zone length.
Conductivity (S/m)
0,058
0,0575
0,057
0,0565
0,056
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

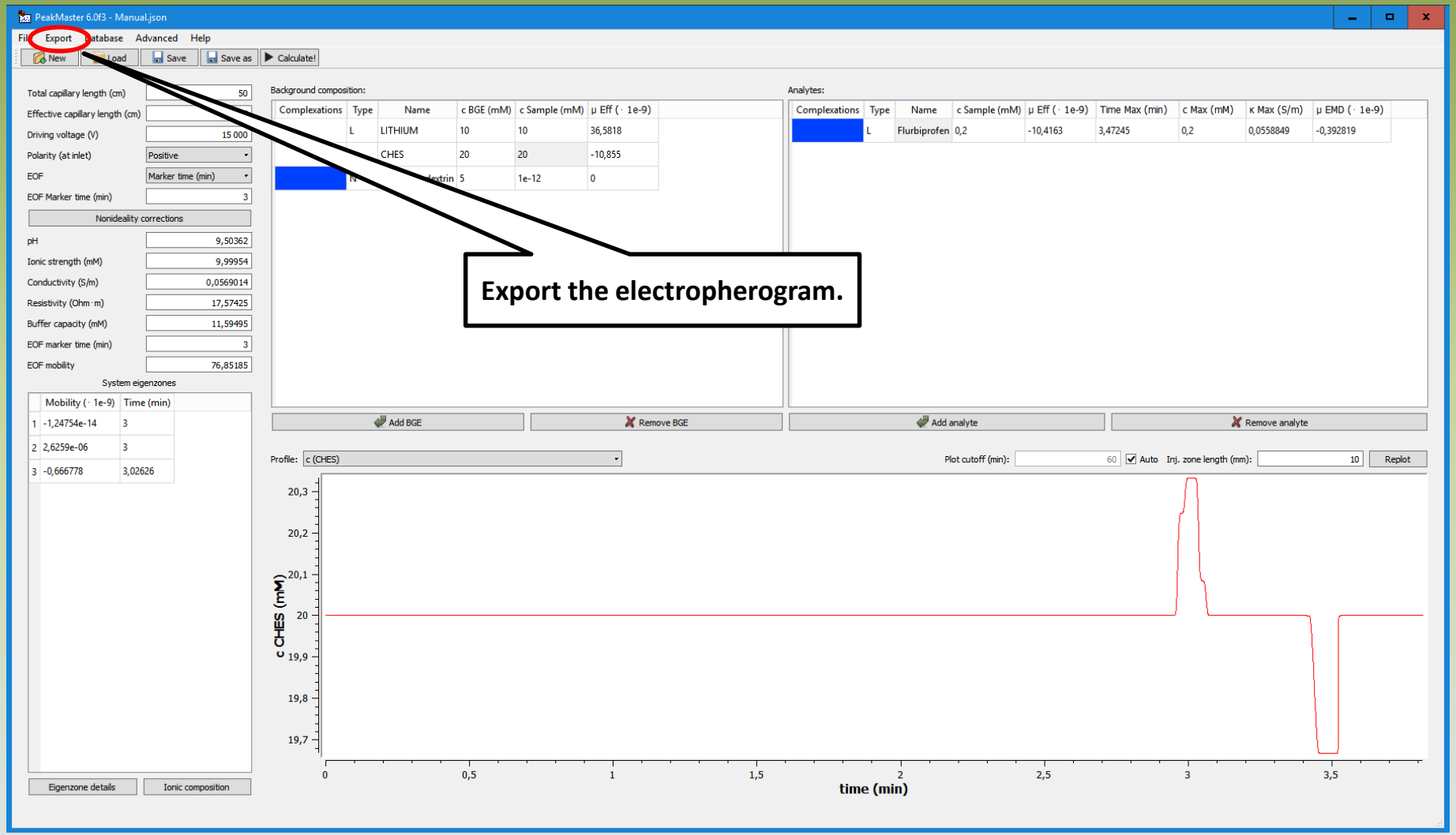
Results


PeakMaster 6.0f3 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,47245 0,2 0,0558849 -0,392819
Add BGE
Remove BGE
Add analyte
Remove analyte
Choose which profile you want to display (conductivity, pH, concentration)
Profile: Conductivity
Conductivity
pH response
All analytes
c (Beta-cyclodextrin)
c (CHES)
c (Flurbiprofen)
c (LITHIUM)
Plot cutoff (min): 60 Auto Inj. zone length (mm): 10 Replot
Conductivity (S/m)
0,0575
0,057
0,0565
0,056
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

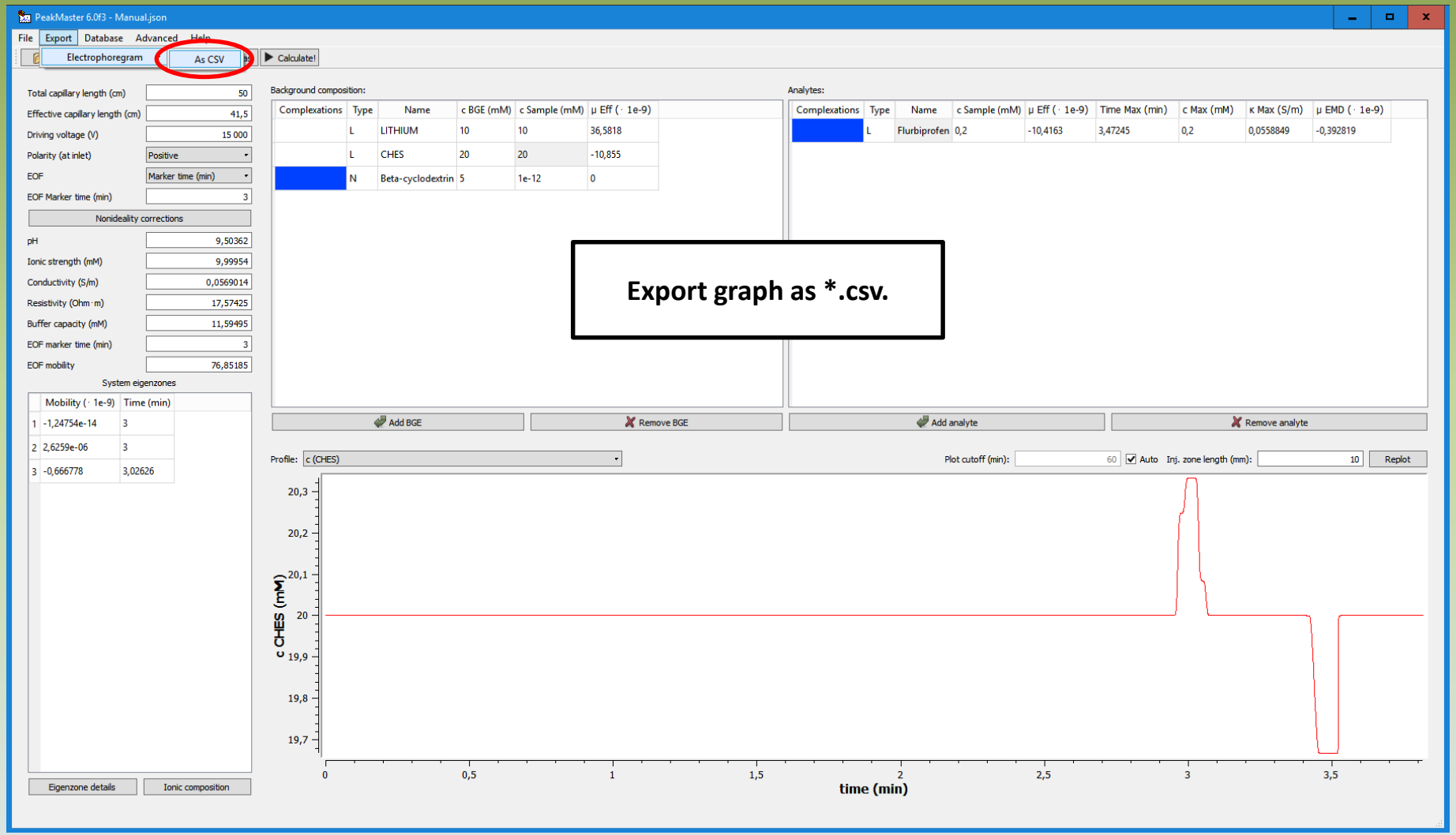
Results


PeakMaster 6.0f3 - Manual.json
File Export Database Advanced Help
New Load Save Save as Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min) 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,47245 0,2 0,0558849 -0,392819
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: c (CHES)
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 10
Replot
CHES concentration profile displayed.
c CHES (mM)
20,3
20,2
20,1
20
19,9
19,8
19,7
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

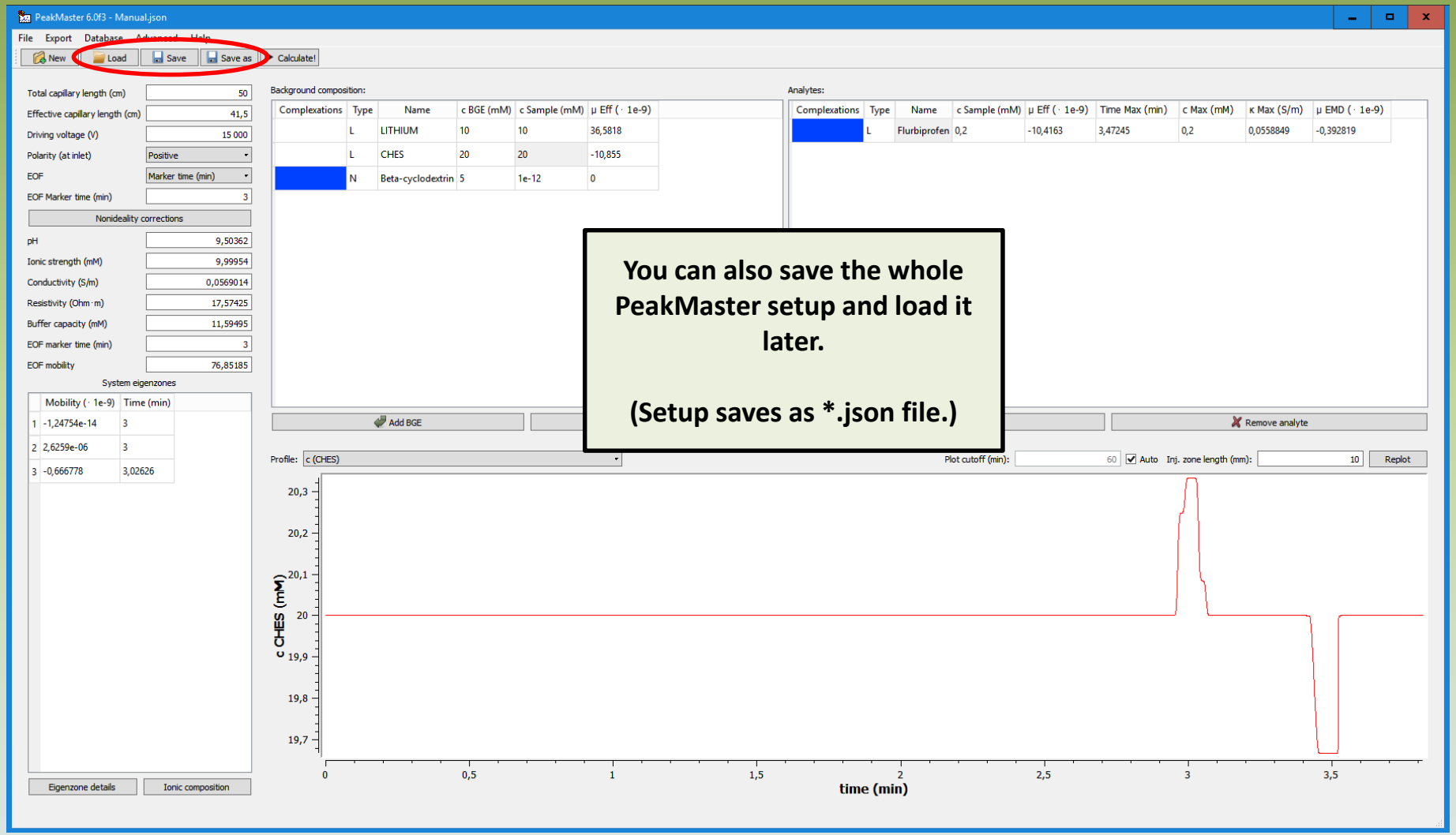
Results


PeakMaster 6.0f3 - Manual.json
File
Export
Database
Advanced
Help
New
Load
Save
Save as
Calculate!
Total capillary length (cm) 50
Effective capillary length (cm)
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
CHES 20 20 -10,855
5 1e-12 0
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,47245 0,2 0,0558849 -0,392819
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: c (CHES)
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 10
Replot
c CHES (mM)
20,3
20,2
20,1
20
19,9
19,8
19,7
0
0,5
1
1,5
2
2,5
3
3,5
time (min)
Export the electropherogram.

Results


PeakMaster 6.0f3 - Manual.json
File
Export
Database
Advanced
Help
Electrophoregram
As CSV
Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
EOF 3
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9) Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations Type Name c BGE (mM) c Sample (mM) μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Analytes:
Complexations Type Name c Sample (mM) μ Eff (· 1e-9) Time Max (min) c Max (mM) κ Max (S/m) μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,47245 0,2 0,0558849 -0,392819
Export graph as *.csv.
Add BGE
Remove BGE
Add analyte
Remove analyte
Profile: c (CHES)
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 10
Replot
c CHES (mM)
20,3
20,2
20,1
20
19,9
19,8
19,7
0
0,5
1
1,5
2
2,5
3
3,5
time (min)

Results


PeakMaster 6.0f3 - Manual.json
File
Export
Database
Advanced
Help
New
Load
Save
Save as
Calculate!
Total capillary length (cm) 50
Effective capillary length (cm) 41,5
Driving voltage (V) 15 000
Polarity (at inlet) Positive
EOF Marker time (min)
Nonideality corrections
pH 9,50362
Ionic strength (mM) 9,99954
Conductivity (S/m) 0,0569014
Resistivity (Ohm·m) 17,57425
Buffer capacity (mM) 11,59495
EOF marker time (min) 3
EOF mobility 76,85185
System eigenzones
Mobility (· 1e-9)
Time (min)
1 -1,24754e-14 3
2 2,6259e-06 3
3 -0,666778 3,02626
Eigenzone details
Ionic composition
Background composition:
Complexations
Type
Name
c BGE (mM)
c Sample (mM)
μ Eff (· 1e-9)
L LITHIUM 10 10 36,5818
L CHES 20 20 -10,855
N Beta-cyclodextrin 5 1e-12 0
Analytes:
Complexations
Type
Name
c Sample (mM)
μ Eff (· 1e-9)
Time Max (min)
c Max (mM)
κ Max (S/m)
μ EMD (· 1e-9)
L Flurbiprofen 0,2 -10,4163 3,47245 0,2 0,0558849 -0,392819
Add BGE
Remove analyte
You can also save the whole PeakMaster setup and load it later.
(Setup saves as *.json file.)
Profile: c (CHES)
Plot cutoff (min): 60
Auto
Inj. zone length (mm): 10
Replot
c CHES (mM)
20,3
20,2
20,1
20
19,9
19,8
19,7
0
0,5
1
1,5
2
2,5
3
3,5
time (min)