Pirouette® Specifications
Version 5.0

Minimum System Requirements
3 GHz PC, 12 GB RAM
100+ MB free on hard disk
Pointing device
Windows Vista, 7, 8, 10, 11

Help
Full documentation as cross-referenced PDF
Link to Adobe® Acrobat® Reader

Data
Files
No size limitations
Read
Binary, ASCII, Lotus®, Excel®
Common Instrument Formats, AIA, JCAMP,
Galactic®, ChemStation®
Write
Files, Subsets, Calculated objects in
Binary, ASCII, Excel, SPC and AIA formats
Models
Read binary; Write binary, ASCII, Galactic,
Guided Wave
Merge
Single or Multiple files, drag and drop, by
Sample, by Variable
Subsets
Unlimited number
By exclusion or inclusion
Saved with file, Separate results maintained
Sample selection
Kennard & Stone, PCA Hypergrid, Leverage
Variable selection
Fisher or Variance weights, StDev rank
Output
Printers, via Print Manager
Clipboard, of graphics, data or results
Edit functions
Cell contents and ranges
Columns and/or Rows
Cut, Copy, Paste, & Clear; Insert & Delete
Spreadsheet
X-block, Y-block, & Category-block
Go To; Sort, by value or by name
Find missing values
Fill Missing Values
Zero, By value, Mean, Median, Interpolation,
PCA fill
Object Manager
Data and Results tree
Drag and drop into chart windows
Data object history
Note writing, saved with file

Pretreatments
Transforms
1st & 2nd Derivative (5 - 95 points)
Smoothing (5 - 95 points)
Log10, Multiply, Normalize
Subtract (value or variable)
Divide by (2-norm, 1-norm, max, range, value)
Baseline correction (linear, quadratic, cubic fit,
selected sample)
Multiplicative Scatter Correction
Standard Normal Variate
Preprocessing Options
Mean-centering, Variance scale
Autoscale, Pareto, Range scale

Multivariate Analysis
Hierarchical Cluster Analysis
Linking Methods
Single, Centroid, Complete, Incremental,
Median, Group Average, Flexible
Orientation
by Sample or by Variable
Results
Sample or Variable Dendrogram
Principal Components Analysis
Model Probability Control
Projection Model
Validation
Cross, Step
Any number of left out samples
Varimax Rotation
Raw, Normal, & Weighted
Results
Scores, Rotated Scores
Loadings, Rotated Loadings
Eigenvalues, Rotated Eigenvalues
Errors (PRESS)
Outlier Diagnostics, Contributions
Modeling Power
X Residuals, X Reconstructed
Prediction
Dynamic factor selector
Projected Scores
X Residuals, X Reconstructed
Outlier Diagnostics, Contributions
K Nearest Neighbors
Unlimited number of neighbors or classes
Classification Model
Results
Votes Matrix
Misses Vector
Misclassification Matrix
Prediction
Predicted Class
Class fit
Soft Independent Modeling of Class Analogy
Model Probability control
Prediction Probability control
Unlimited number of classes
Classification Model
Results
Scores
Loadings
Eigenvalues
X Residuals
Modeling Power
Outlier Diagnostics
Interclass Residual
Interclass Distance
Discrimination Power
Misclassification Matrix
Class Projections
Prediction
Projected Scores
X Residuals
Class Distances
Class Probabilities
Best & Next Best Predicted Class
Misclassification Matrix
Class Projections
Classical Least Squares
Prediction Model
Validation
Cross, Step, by Category
Any number of left out samples
Results
Pures and uncertainty bounds
Errors (PRESS, SEC, r)
Y Fit
Outlier Diagnostics
X Residuals
Regression Vector
Prediction
Predicted properties
Errors, slope, intercept
X Residuals
Probabilities

Y Fit

Principal Components Regression, Partial Least Squares Regression, and Partial Least Squares-Discriminant Analysis, Locally Weighted Regression
Unlimited number of dependent variables
Prediction Model
Validation
Cross, Step, by Category
Any number of left out samples
Orthogonal Signal Correction
Results
Scores
Loadings
Eigenvalues
Errors (PRESS, SEC, SEV)
Y Fit
Outlier Diagnostics, Contributions
X Residuals, X Reconstructed
Correlation spectrum
Regression Vector
Class Predicted, Misclassifications (PLS-DA)
Prediction
Dynamic factor selector
Predicted properties
Errors
Prediction scores
Outlier diagnostics, Contributions
Y Fit
X Residuals, X Reconstructed
Class Predicted, Misclassifications (PLS-DA)
Mixture Analysis
Multivariate Curve Resolution, Alternating
Least Squares
Prediction Model
Results
Eigenvalues, Scores, Loadings
Solution Select, Feasible Region, Source
Amounts & Profiles, X Residuals
Prediction
Feasible Regions
Source Amounts
Calibration Transfer
Algorithms supported
KNN, SIMCA, PLS, PCR
Transfer Functions
Direct standardization, Piecewise direct,
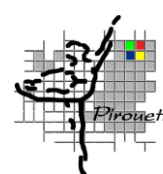Additive, Multiplicative

Graphics
Plots
2D Scatter, 3D Rotatable Scatter
Line
Multiple 2D Scatter
Plot arrays
Point labels, Cloaking
Interaction
Point Selection
Range Selection
Magnify
Point Labeling
3D Spinning
Linking selections across views
Color by category
Preferences
Custom interface colors, graphics, fonts
Custom plot symbol size, window size
User defined preference sets
English, Spanish, German, Japanese,
Portuguese, French, Italian