JMP Discovery Summit 2012
SAS Headquarters, Cary, Illinois

Customized JMP Analytics: Kraft Foods' Consumer Test Evaluation Package

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Workflow for presentation

This presentation will demonstrate 'live' specific features of Kraft Foods' Consumer Test Evaluation (KICS) package on a real case study

The illustration of features and analysis workflow to be shown is captured in this presentation but may not follow exactly what is shown

Order of 'play'

- Case Study Overview
- KICS package introduction
- Case study analysis
- Benefits of KICS package
- Q&A

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Case Study

Business Objective

Launch a new chocolate tablet product as a line extension that is clearly differentiated from current product in market and well liked.

Technical approach

- Use new/different process technology to give points of difference
- Generate product set using Design of Experiments (DoE); four factors; 2 levels for each factor

	Current	Point of difference'
Center Fill	Firm	Fluffy
Piece type	Single	Finger
Tablet Shape	2x6	3x5
Coating	Single	Double

- Execute a consumer test to acquire consumer acceptability of products and use JMP KICS package to analyze
  - Recommend new product design for line extension.
  - Estimate importance of each factor

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The Product Set

The products described in this presentation are *filled chocolate tablets* in a variety of different formats, incorporating either a *firm* or a *fluffy* interior filling. Four of the combinations are shown below.

Single Piece/ 2x6

Single Piece/ 3x5

Finger/ 2x6

Finger/ 3x5

The Product Set

JMP customized DoE was used to generate a structured design of 12 products

		DOE Factor			
Product	Product Code	Filling Texture	Portion	Tablet Format	Double Coating
347_Fluffy_SP_2x6_DC	**347**	Fluffy	Single Piece	2x6	Yes
774_Firm_F_3x5_DC	**774**	Firm	Finger	3x5	Yes
676_Firm_F_2x6_nDC	**676**	Firm	Finger	2x6	No
256_Fluffy_F_3x5_nDC	**256**	Fluffy	Finger	3x5	No
559_Firm_SP_3x5_nDC	**559**	Firm	Single Piece	3x5	No
815_Fluffy_F_3x5_DC	**815**	Fluffy	Finger	3x5	Yes
693_Fluffy_SP_2x6_nDC	**693**	Fluffy	Single Piece	2x6	No
430_Fluffy_F_2x6_nDC	**430**	Fluffy	Finger	2x6	No
725_Firm_SP_3x5_DC	**725**	Firm	Single Piece	3x5	Yes
237_Firm_SP_2x6_nDC	**237**	Firm	Single Piece	2x6	No
268_Firm_F_2x6_DC	**268**	Firm	Finger	2x6	Yes
758_Fluffy_SP_3x5_nDC	**758**	Fluffy	Single Piece	3x5	No

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Case Study Design

Consumer Test Design

- Central location test (CLT)
- 153 consumers
- 12 products (DoE)
- Each consumer evaluates all the products
- 2 sessions, 6 products per session
- Overall & attribute liking questions (scale 1-9)
- Just about right (JAR) attribute ratings
- Managed by external market research agency

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The Data

The consumer test data is read into JMP from an Excel File and stored for analysis by KICS package

Wafer tablets RGT - Product - JMP Pro

File Edit Tables Rows Cols DOE Analyze Graph Tools Add-Ins KICS View Window Help

Wafer tablets RGT - Product

Notes y:\PM Projects\AQS ToolBox\Con

Columns (34/0)

- Respondent
- Product
- Product Code
- Overall Liking ✱
- Shape Liking ✱
- Chocolate taste JAR ✱
- Hazelnut taste Int JAR ✱
- Balance filling / wafer JAR ✱
- Balance filling-choc coating JAR ✱

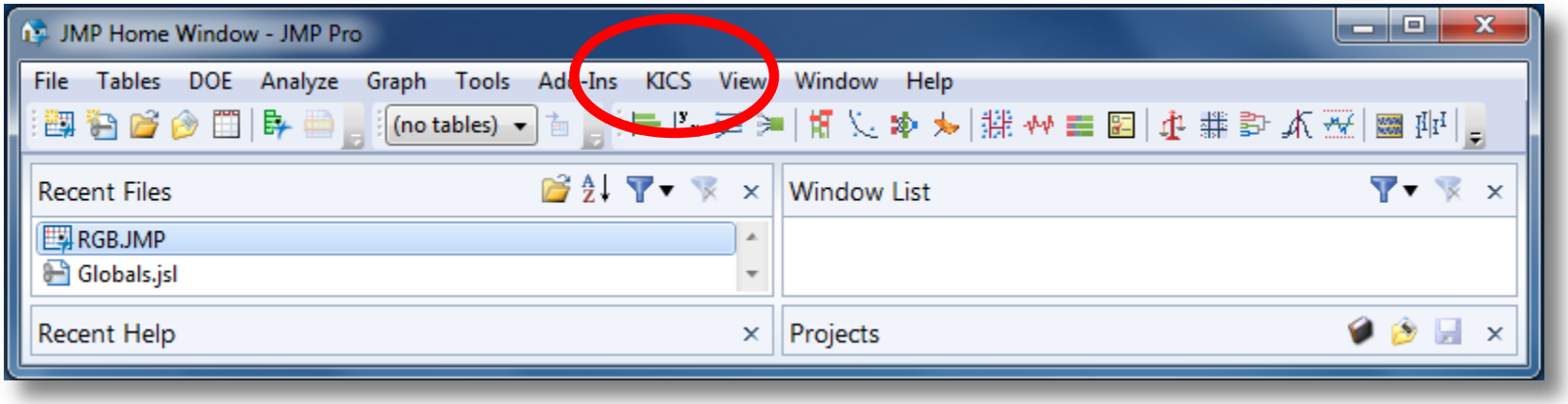
Rows

All rows	1,836
Selected	0
Excluded	0
Hidden	0
Labelled	0

	Respondent	Product	Product Code	Overall Liking	Shape Liking	Chocolate taste JAR	Hazelnut taste Int JAR
1	100	237_Firm_SP_2x6_nDC	237	8	8	3	4
2	100	256_Fluffy_F_3x5_nDC	256	8	8	3	4
3	100	268_Firm_F_2x6_DC	268	8	5	3	4
4	100	347_Fluffy_SP_2x6_DC	347	8	6	3	4
5	100	430_Fluffy_F_2x6_nDC	430	8	7	3	4
6	100	559_Firm_SP_3x5_nDC	559	8	9	3	4
7	100	676_Firm_F_2x6_nDC	676	8	7	3	4
8	100	693_Fluffy_SP_2x6_nDC	693	8	8	3	4
9	100	725_Firm_SP_3x5_DC	725	7	9	3	4
10	100	758_Fluffy_SP_3x5_nDC	758	8	8	3	4
11	100	774_Firm_F_3x5_DC	774	8	9	2	2
12	100	815_Fluffy_F_3x5_DC	815	8	7	3	4
13	101	237_Firm_SP_2x6_nDC	237	5	5	3	2
14	101	256_Fluffy_F_3x5_nDC	256	7	7	2	3
15	101	268_Firm_F_2x6_DC	268	9	5	3	2
16	101	347_Fluffy_SP_2x6_DC	347	2	4	4	2
17	101	430_Fluffy_F_2x6_nDC	430	9	8	3	3
18	101	559_Firm_SP_3x5_nDC	559	7	4	3	4
19	101	676_Firm_F_2x6_nDC	676	9	6	3	3
20	101	693_Fluffy_SP_2x6_nDC	693	4	5	1	2

The KICS Package

All of the analyses described in this presentation were performed in JMP using a bespoke analysis toolkit ("KICS") that was written in a collaboration between Kraft Foods and SAS UK that has continued for almost four years.



A prototype of this toolkit was demonstrated at this conference two years ago. Since then its functionality has been continually enhanced and extended to take full advantage of each of the three upgrades to JMP (Version 7 to Version 10) during the course of its development.

KICS is now deployed in the form of a JMP Add-In to Kraft Foods R&D sites around the world, together with its own customized help file.

The KICS Package

Main KICS menu

Basic Data Manipulation	→
Raw Data Analysis	→
Summarized Data Analysis	→
About KICS	
Online Help	

B1	**Clear Workspace**
B2	**Profile Editor**
B3	**Data Splitter**
B4	**Variable Grouping**
B5	**File Manipulation**
B6	**File Splitter**
B7	**Means Summary**
B8	**Combine Files**

S1	**Correlation**
S2	**Multiple Star Charts**
S3	**Overlaid Star Chart**
S4	**Scatter Plots**
S5	**PCA**
S6	**Principal Components Regression**

R1	**Multiple Comparisons by Attribute**
R2	**Multiple Comparisons by Subgroup**
R3	**Multiple Distributions**
R4	**Multiple Star Charts**
R5	**Overlaid Star Chart**
R6	**Scatter Plots**
R7	**Stacked Bar Charts**
R8	**Iterative Clustering**
R9	**JAR Scale Evaluation**

Package functionality is comprehensive; scripts customised to Kraft Foods requirements for consumer test evaluations

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The KICS Package

Basic Data Manipulation → B2 Profile Editor

A favorite user feature is the ability to create multiple color profiles to differentiate/ describe patterns in products in graphics and then switch between them at will

Data Preparation Window - JMP

Phase 1 - Instructions

Select between ONE and FIVE data files from which to build the definitive product set upon which the profile will be based. Your choices will be added to the list in the box labelled 'Selected Files' below as you make your selection. Make sure your selection incorporates ALL products that could be included in the analyses.

Phase 2 - Instructions

When you have selected all the files you want to include, identify the column containing the PRODUCT NAME in each file by selecting it on each of the tabs below. As you do so, a list of the unique product names identified will be built up in the table on the right. Only character columns can be selected, and if there is only one option it will be pre-selected.

Phase 3 - Instructions

The table below shows which files contain which products, so if you see any instances of the same product being identified by more than one name, quit the procedure and edit your data files to eliminate the inconsistency. If you see any names that are NOT products, you have made an incorrect selection from one of the files and must change it.

When you are satisfied, click below to create the profile itself.

File Selection | Additional Information

JMP Data Files in This Folder

☑ Chocolate Tablet RGT - Product

Selected Files

File #1: Chocolate Tablet RGT - Product

File #2:

File #3:

File #4:

File #5:

Help & Quit

Online Help | Quit This Analysis

Variable Lists

File #1 | File #2 | File #3 | File #4 | File #5

Respondent
Product
PRODUCT CODE
Overall Liking
Shape Liking
Overall mouthfeel Liking
Firmness on biting Liking
Crispiness Liking
Texture Liking
Creaminess Liking
Fluffiness Liking
Overall taste Liking
Hazelnut taste Liking
Creaminess Intensity
Fluffiness Intensity
Chocolate taste JAR
Hazelnut taste Int JAR
Balance filling / wafer JAR
Balance filling-choc coating JAR
Nourishing filling JAR
location
age group
gender
Order Tried

Create a Profile for the Product Set Below Now

Matched Products

No.	All Files	File #1
1	237_Firm_SP_2x6_nDC	Yes
2	256_Fluffy_F_3x5_nDC	Yes
3	268_Firm_F_2x6_DC	Yes
4	347_Fluffy_SP_2x6_DC	Yes
5	430_Fluffy_F_2x6_nDC	Yes
6	559_Firm_SP_3x5_nDC	Yes
7	676_Firm_F_2x6_nDC	Yes
8	693_Fluffy_SP_2x6_nDC	Yes
9	725_Firm_SP_3x5_DC	Yes
10	758_Fluffy_SP_3x5_nDC	Yes
11	774_Firm_F_3x5_DC	Yes
12	815_Fluffy_F_3x5_DC	Yes

evaluations done

Data files are selected to build product set for colour profile creation

The KICS Package

Basic Data Manipulation → B2 Profile Editor

A favorite user feature is the ability to create multiple color profiles to differentiate/ describe patterns in products in graphics and then switch between them at will

Data Preparation Window - JMP

Phase 1 - Instructions

Select between ONE and FIVE data files from which to build the definitive product set upon which the profile will be based. Your choices will be added to the list in the box labelled 'Selected Files' below as you make your selection. Make sure your selection incorporates ALL products that could be included in the analyses.

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Phase 3 - Instructions

The table below shows which files contain which products, so if you see any instances of the same product being identified by more than one name, quit the procedure and edit your data files to eliminate the inconsistency. If you see any names that are NOT products, you have made an incorrect selection from one of the files and must change it.

When you are satisfied, click below to create the profile itself.

Product Subset/Ordering Tools

No. Products = 12; Max. Visible = 12; Currently Visible = 12

Current Status

Product Name	Label	Char	Mean	Select
774_Firm_F_3x5_DC	774	k	7.38	✓
268_Firm_F_2x6_DC	268	c	7.29	✓
676_Firm_F_2x6_nDC	676	g	7.08	✓
815_Fluffy_F_3x5_DC	815	l	7.07	✓
725_Firm_SP_3x5_DC	725	i	7.07	✓
559_Firm_SP_3x5_nDC	559	f	6.93	✓
237_Firm_SP_2x6_nDC	237	a	6.91	✓
256_Fluffy_F_3x5_nDC	256	b	6.88	✓
347_Fluffy_SP_2x6_DC	347	d	6.86	✓
758_Fluffy_SP_3x5_nDC	758	j	6.59	✓
430_Fluffy_F_2x6_nDC	430	e	6.58	✓
693_Fluffy_SP_2x6_nDC	693	h	6.44	✓

Black/White Label Cutoff Control

Profile | Sort | Move

Select Products to which to Apply Changes

Select ALL Products | Select FIRST Product

Select no more than ONE product at a time

Colours | Label Text

Apply Colours to SELECTED Products

First specify no. of colours to combine, then choose actual colours by clicking:

7 6 5 4 3 2 1

Brightness

Assign Random Colours Instead

New Profile Creator

Type New Profile Name Here

Check This Box to Write New Profile Upon Exit

OK

Colour profile built on order of overall liking

Product Subset/Ordering Tools

No. Products = 12; Max. Visible = 12; Currently Visible = 12

Current Status

Product Name	Label	Char	Mean	Select
237_Firm_SP_2x6_nDC	237	a	-	☐
256_Fluffy_F_3x5_nDC	256	b	-	✓
268_Firm_F_2x6_DC	268	c	-	☐
347_Fluffy_SP_2x6_DC	347	d	-	✓
430_Fluffy_F_2x6_nDC	430	e	-	✓
559_Firm_SP_3x5_nDC	559	f	-	☐
676_Firm_F_2x6_nDC	676	g	-	☐
693_Fluffy_SP_2x6_nDC	693	h	-	✓
725_Firm_SP_3x5_DC	725	i	-	☐
758_Fluffy_SP_3x5_nDC	758	j	-	✓
774_Firm_F_3x5_DC	774	k	-	☐
815_Fluffy_F_3x5_DC	815	l	-	✓

Black/White Label Cutoff Control

Profile | Sort | Move

Select Products to which to Apply Changes

Select ALL Products | Select FIRST Product

Select no more than ONE product at a time

Colours | Label Text

Apply Colours to SELECTED Products

First specify no. of colours to combine, then choose actual colours by clicking:

7 6 5 4 3 2 1

Brightness

Assign Random Colours Instead

New Profile Creator

Type New Profile Name Here

Check This Box to Write New Profile Upon Exit

OK

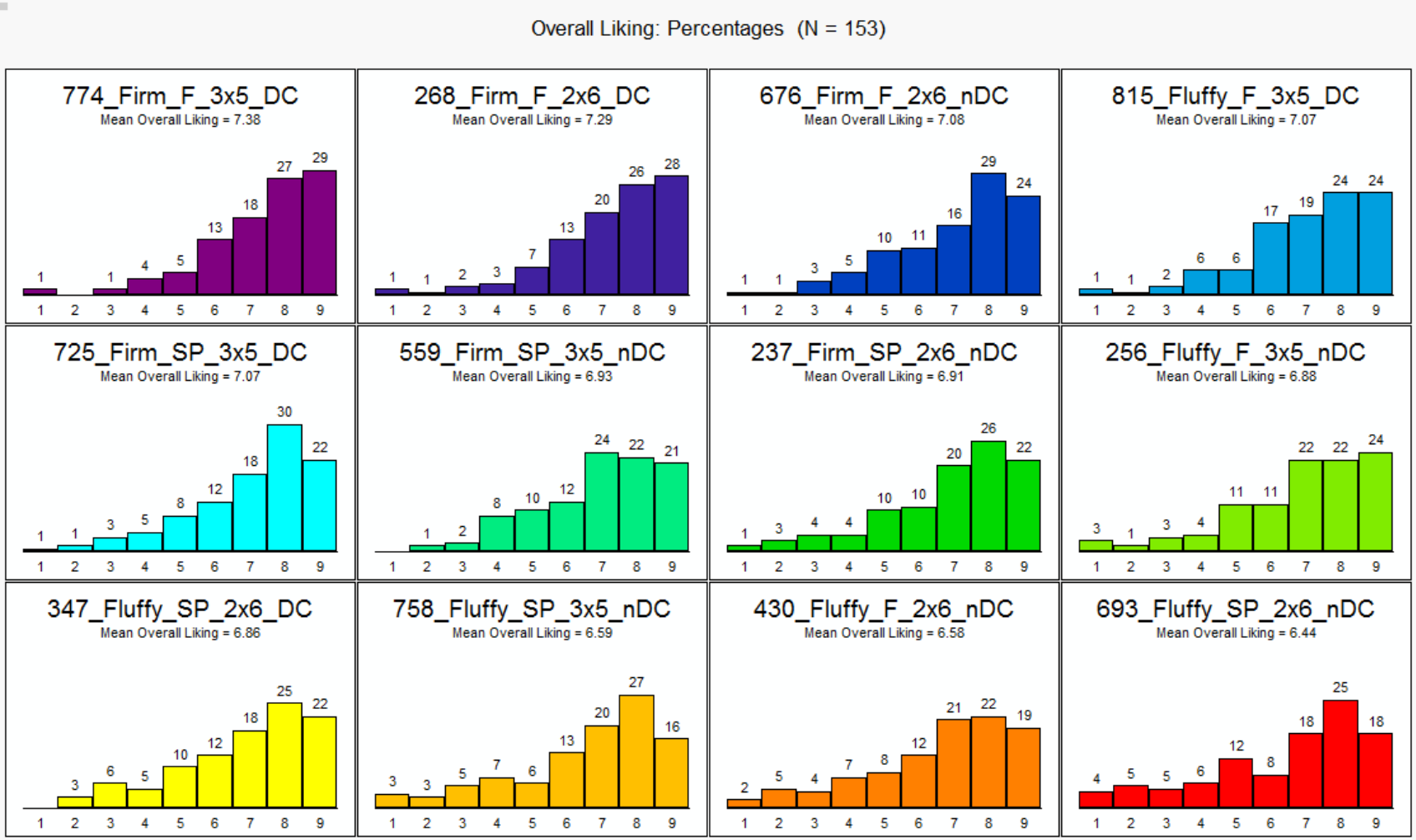
Colour profile built on center type of chocolate tablet

The KICS Package

Raw Data Analysis → R3 Multiple Distributions

Multiple distribution charts generated to user specified orientation & order.

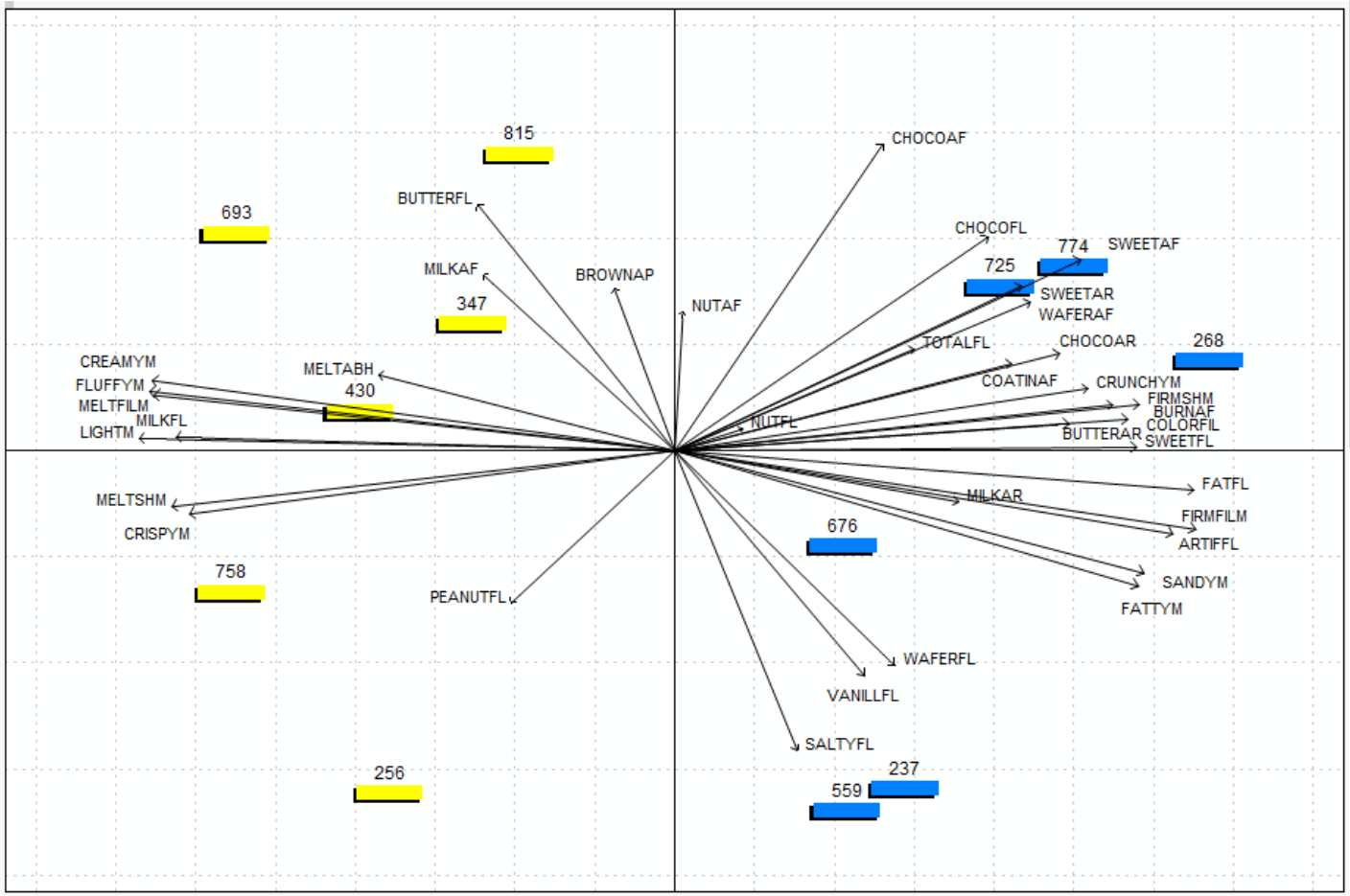
=> Conclude from this that no one product satisfies all consumers (>20% liking scores 6 or less for all products)



The KICS Package

Summarized Data Analysis → S5 Principal Component Analysis

Descriptive sensory data summarized using PCA show strong differentiation between products with different center type (Fluffy=yellow; Firm = blue)



Product Name
237_Firm_SP_2x6_nDC
256_Fluffy_F_3x5_nDC
268_Firm_F_2x6_DC
347_Fluffy_SP_2x6_DC
430_Fluffy_F_2x6_nDC
559_Firm_SP_3x5_nDC
676_Firm_F_2x6_nDC
693_Fluffy_SP_2x6_nDC
725_Firm_SP_3x5_DC
758_Fluffy_SP_3x5_nDC
774_Firm_F_3x5_DC
815_Fluffy_F_3x5_DC

The KICS Package

Raw Data Analysis → R3 Multiple Distributions

Multiple distribution charts illustrate consumer fluffy intensity ratings

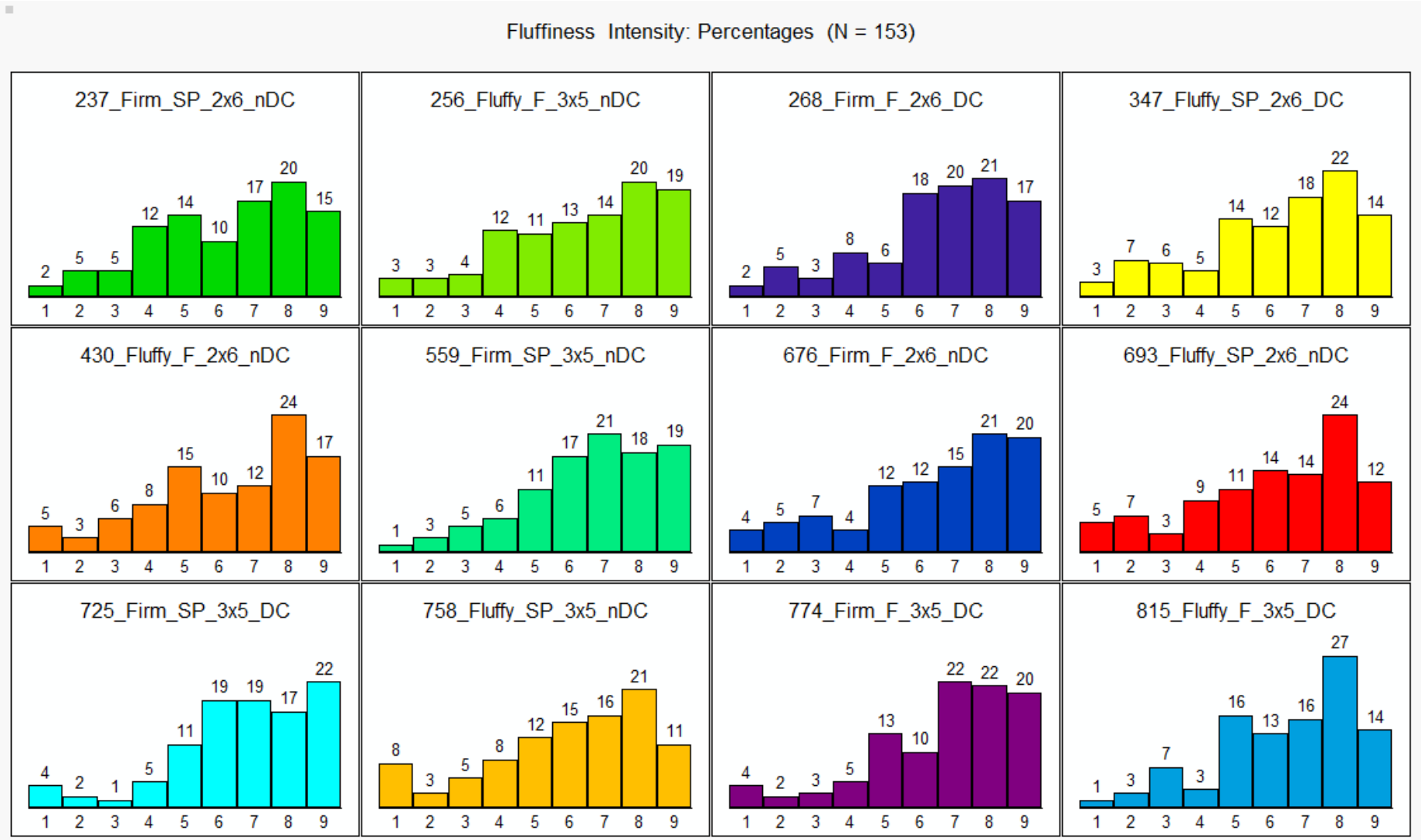
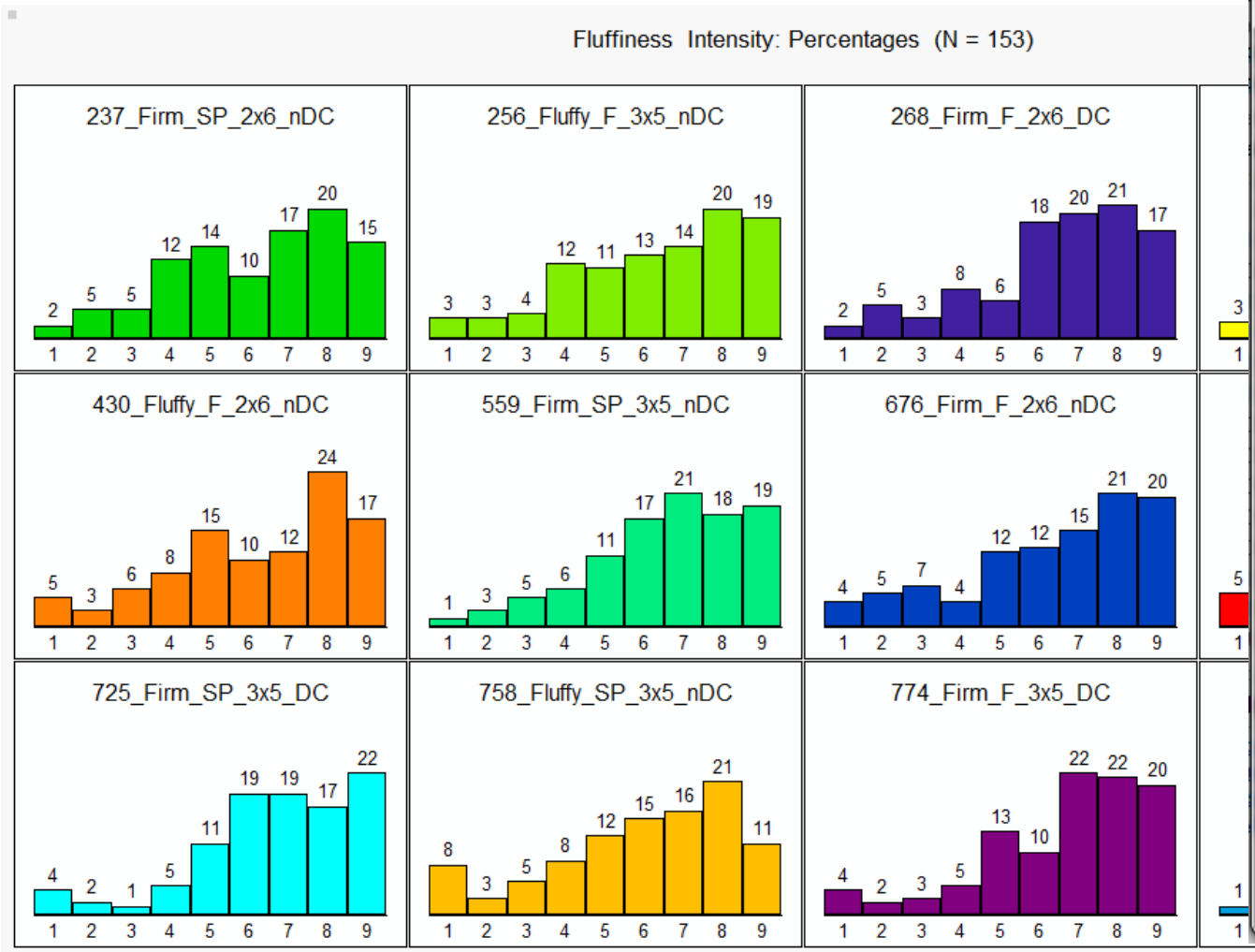


Chart customization via Chart Selection Controls panel

Common to all KICS package graphics output, this panel enables editing within graphics and management of multi-graphic layout



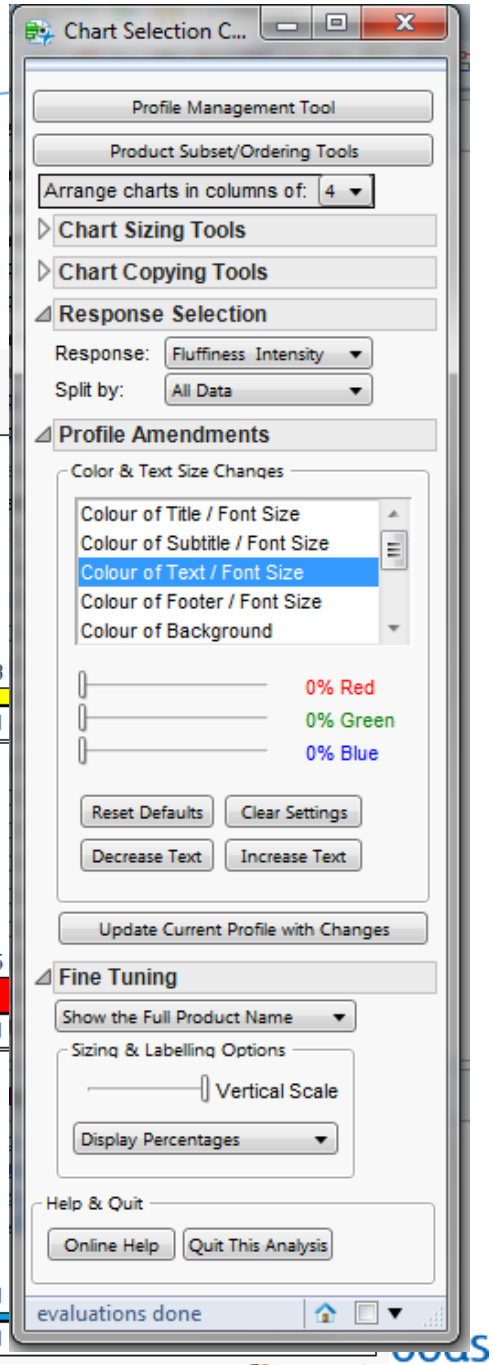
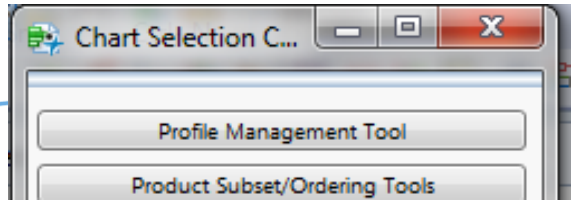


Chart customization via Chart Selection Controls panel



Profile Management Tool : Enables switch between product set color profiles

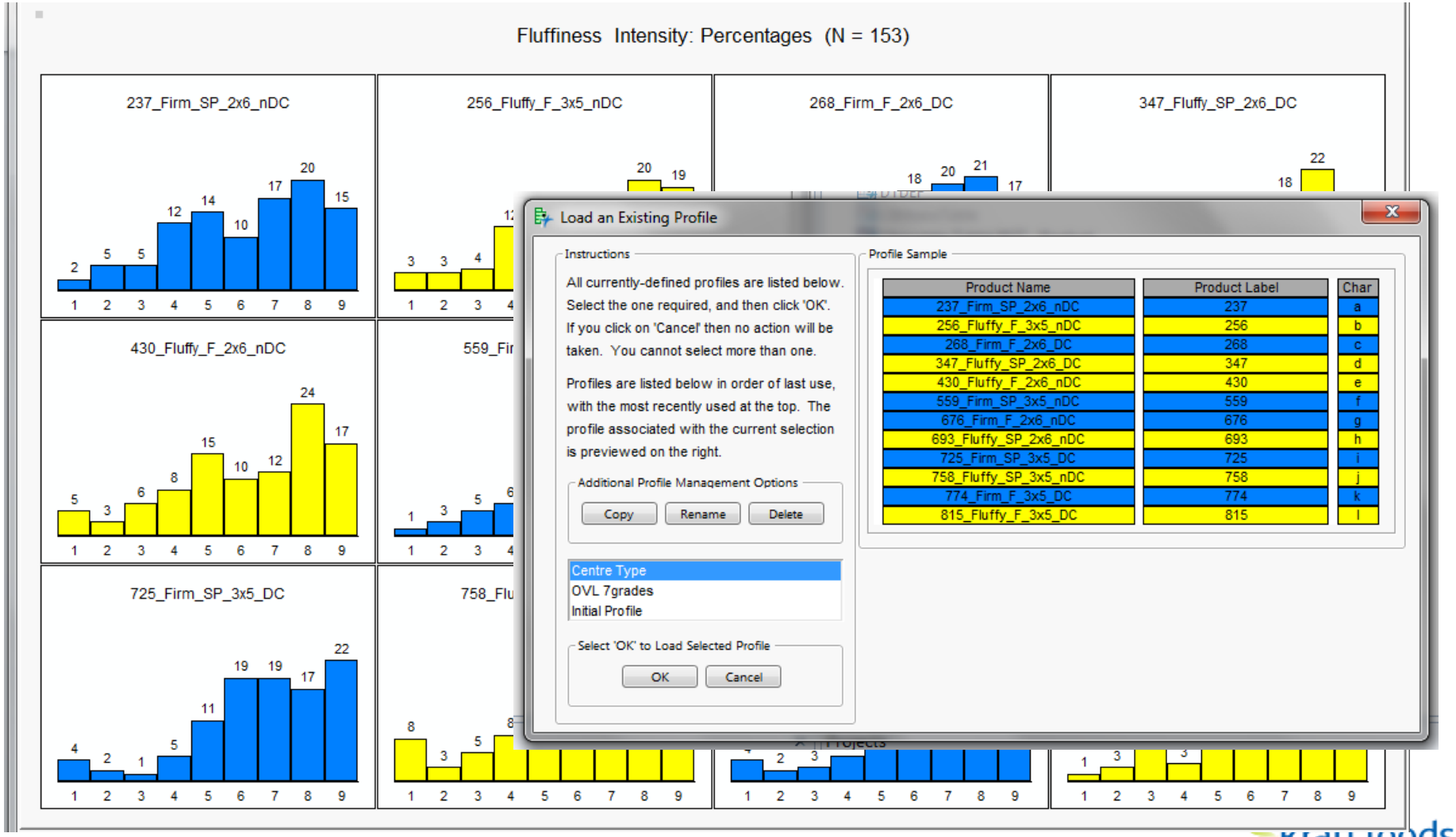
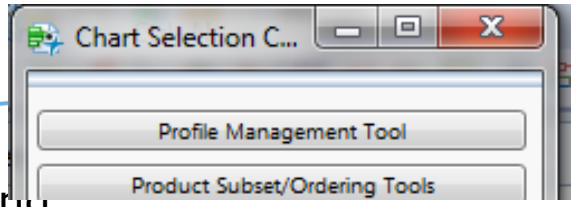


Chart customization via Chart Selection Controls panel



Product Subset/Ordering Tool : ***SORT*** - Enables reordering of multi-graphics based on a named variable (here: overall liking)

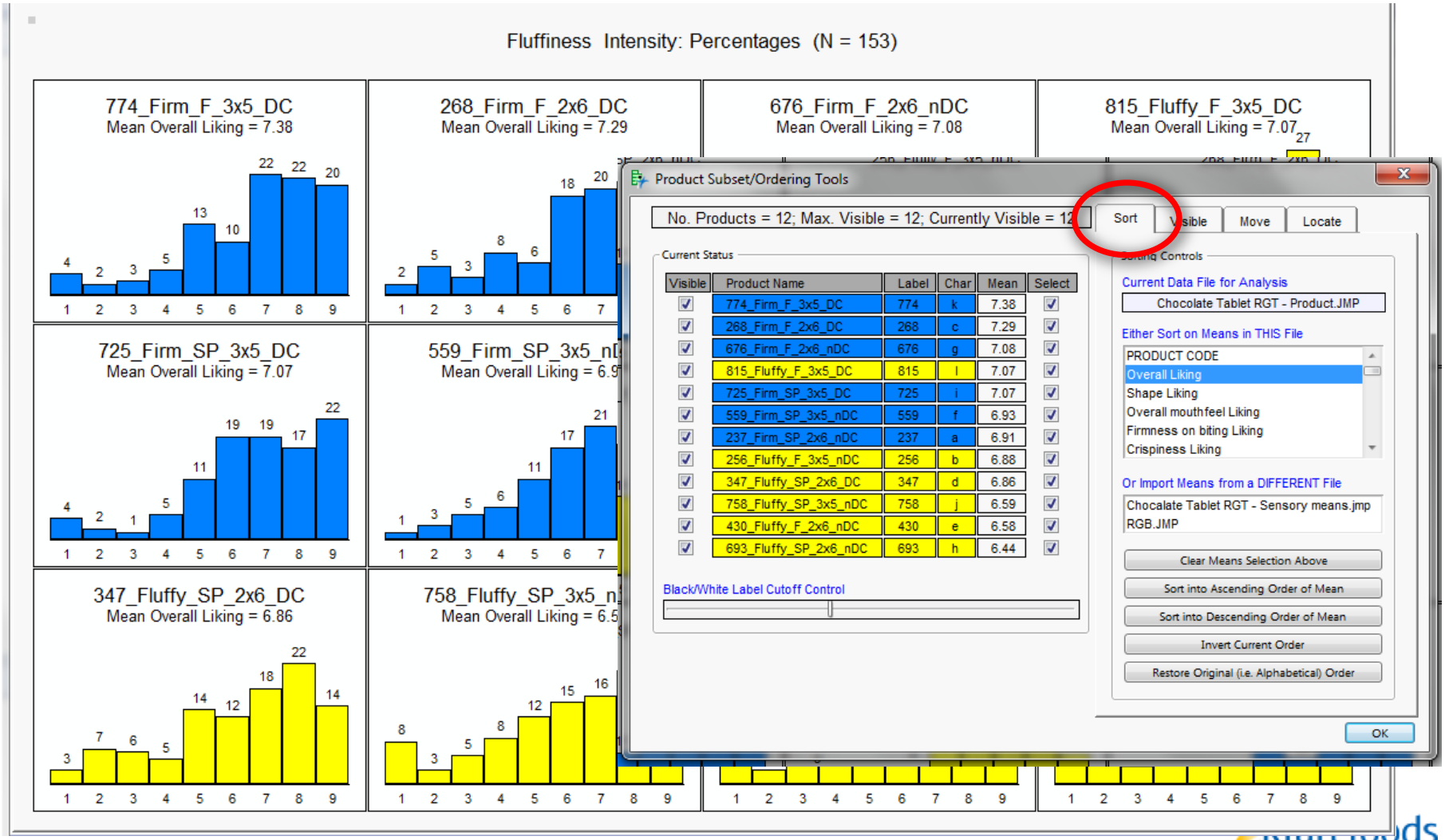
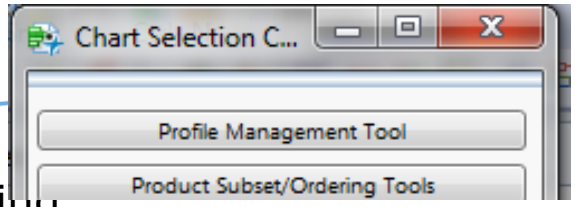


Chart customization via Chart Selection Controls panel



Product Subset/Ordering Tool : ***MOVE*** - Enables reordering of multi-graphics based on user specified instructions: Firm first then Fluffy

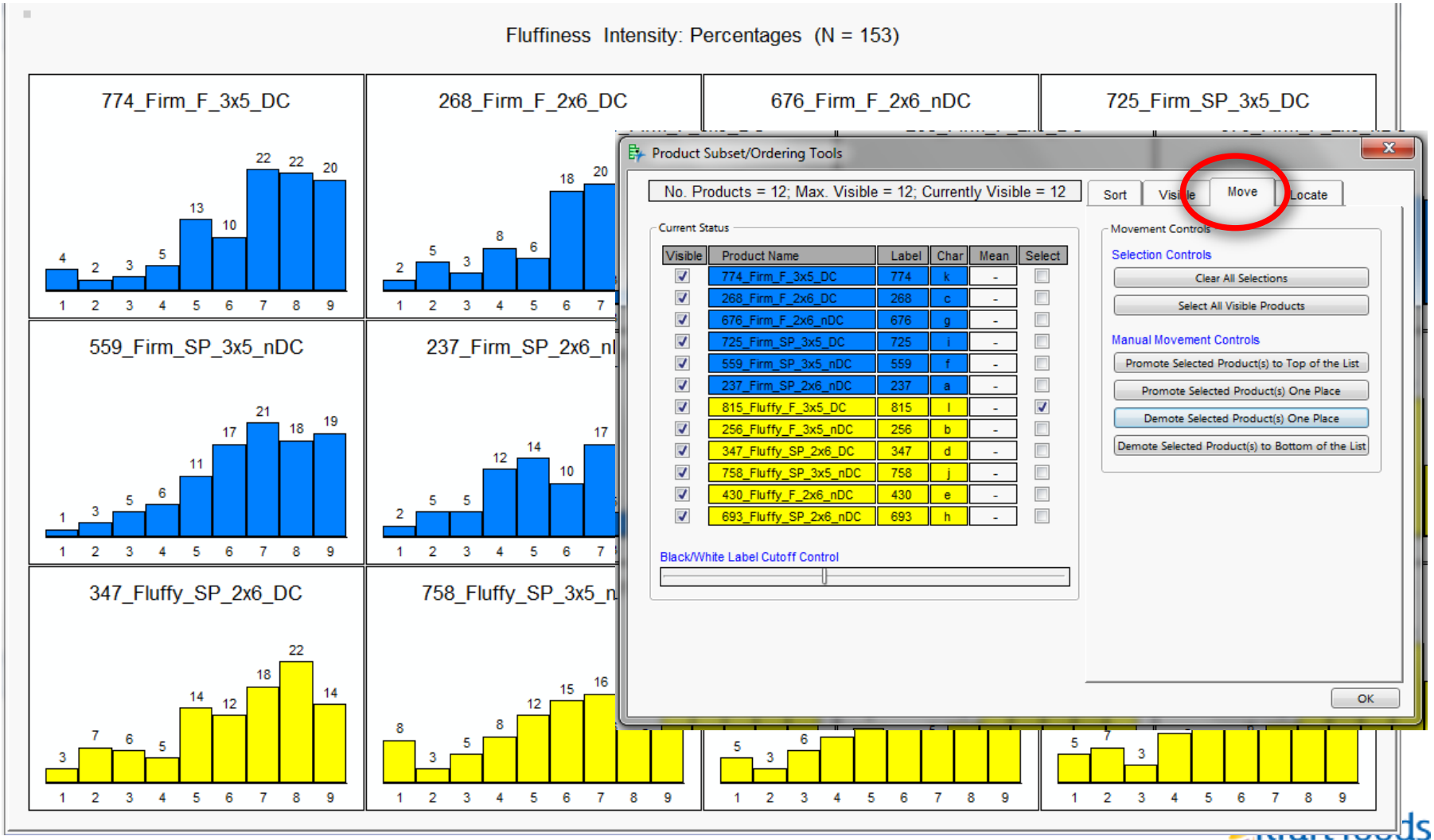
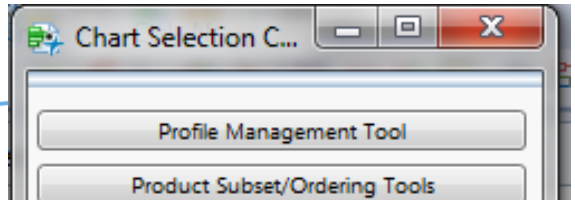
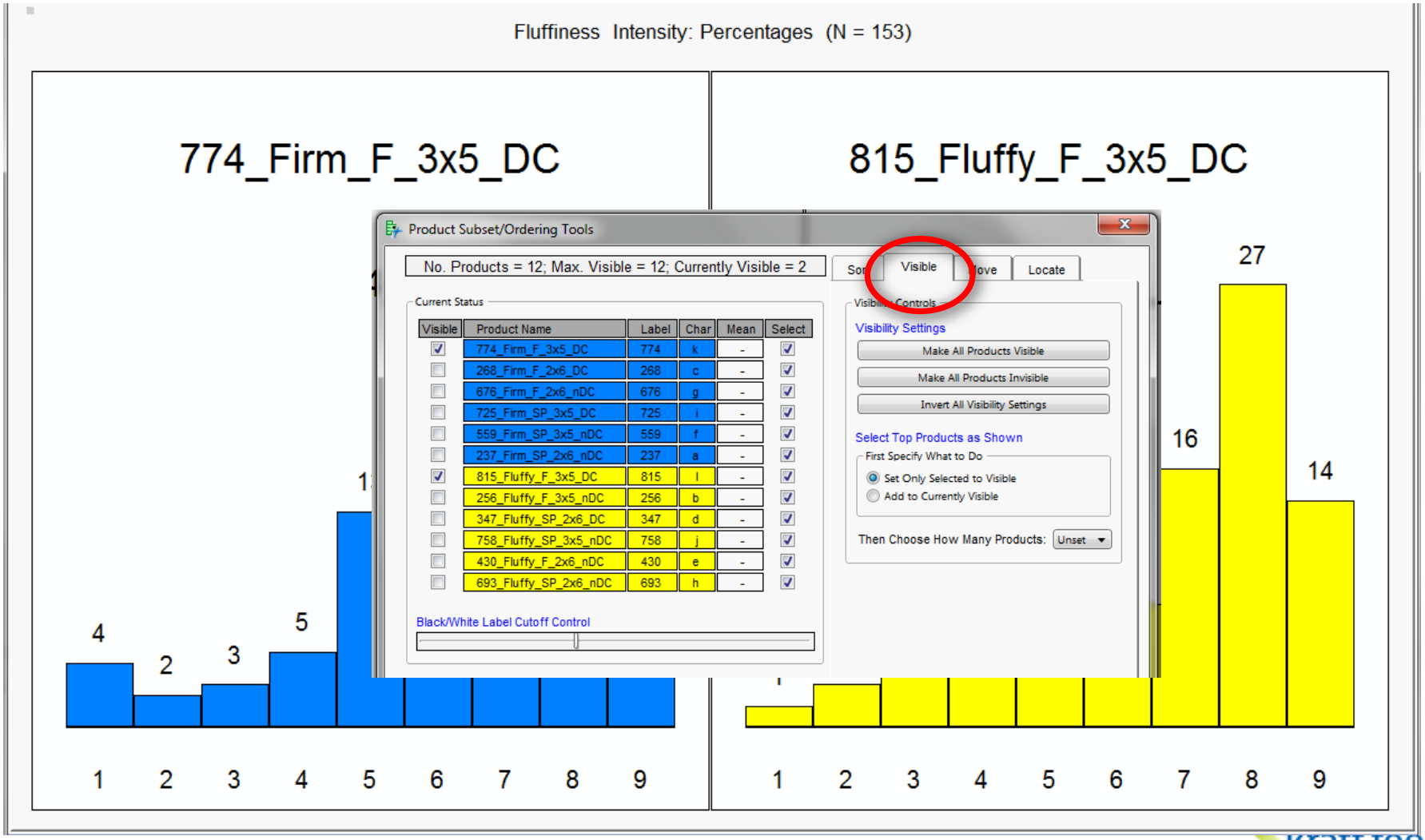


Chart customization via Chart Selection Controls panel



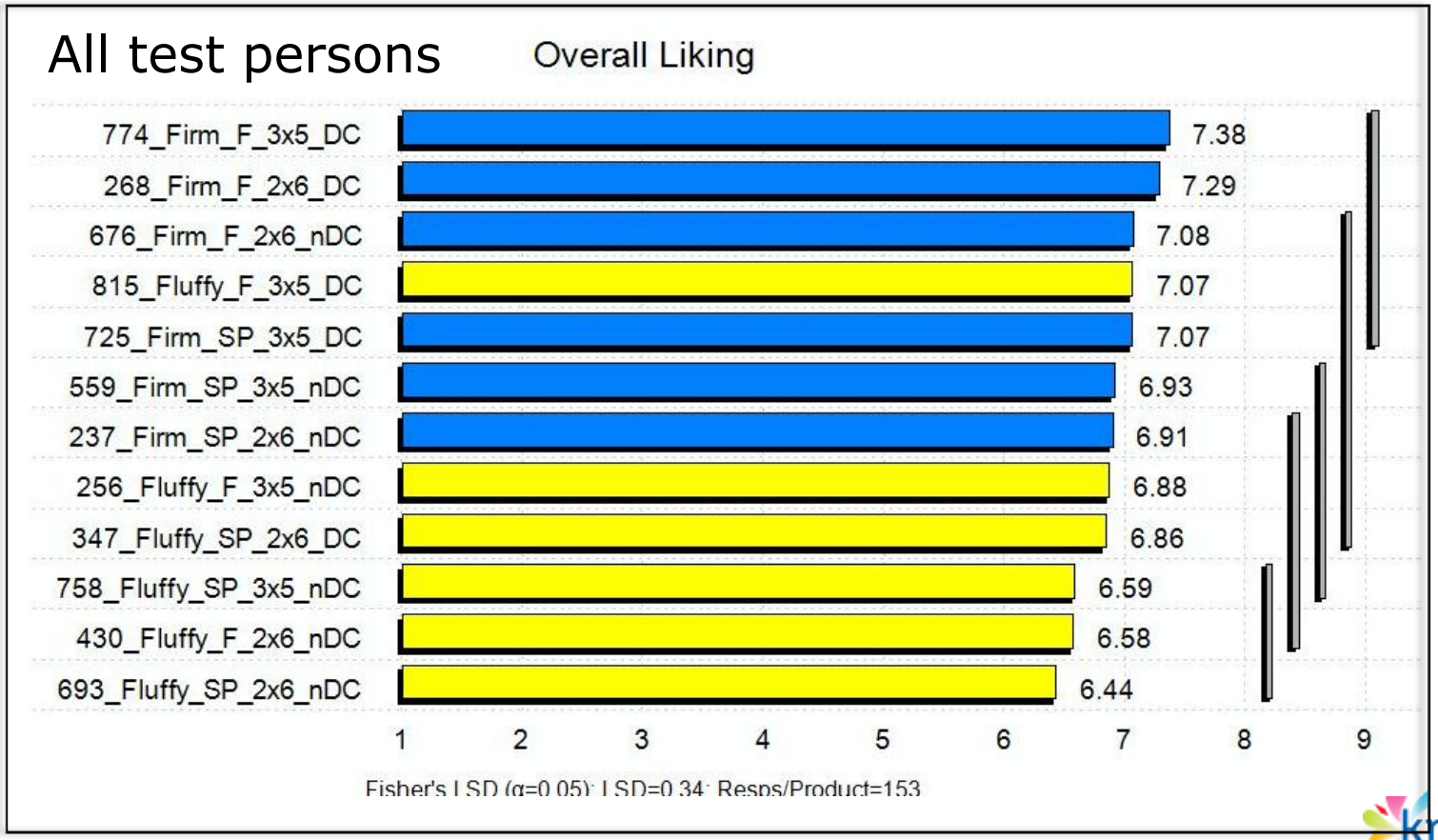
Product Subset/Ordering Tool : ***VISIBLE*** - Enables selection of graphic subset from a multi graphical display.



Overall product performance

Multiple range test on overall liking illustrates performance difference between products; those connected by same bar are statistical parity for test applied.

Conclude : Firm tablets generally are rated better that fluffy tablets, also other factors differentiate within center type – Finger better than Single Piece for Firm



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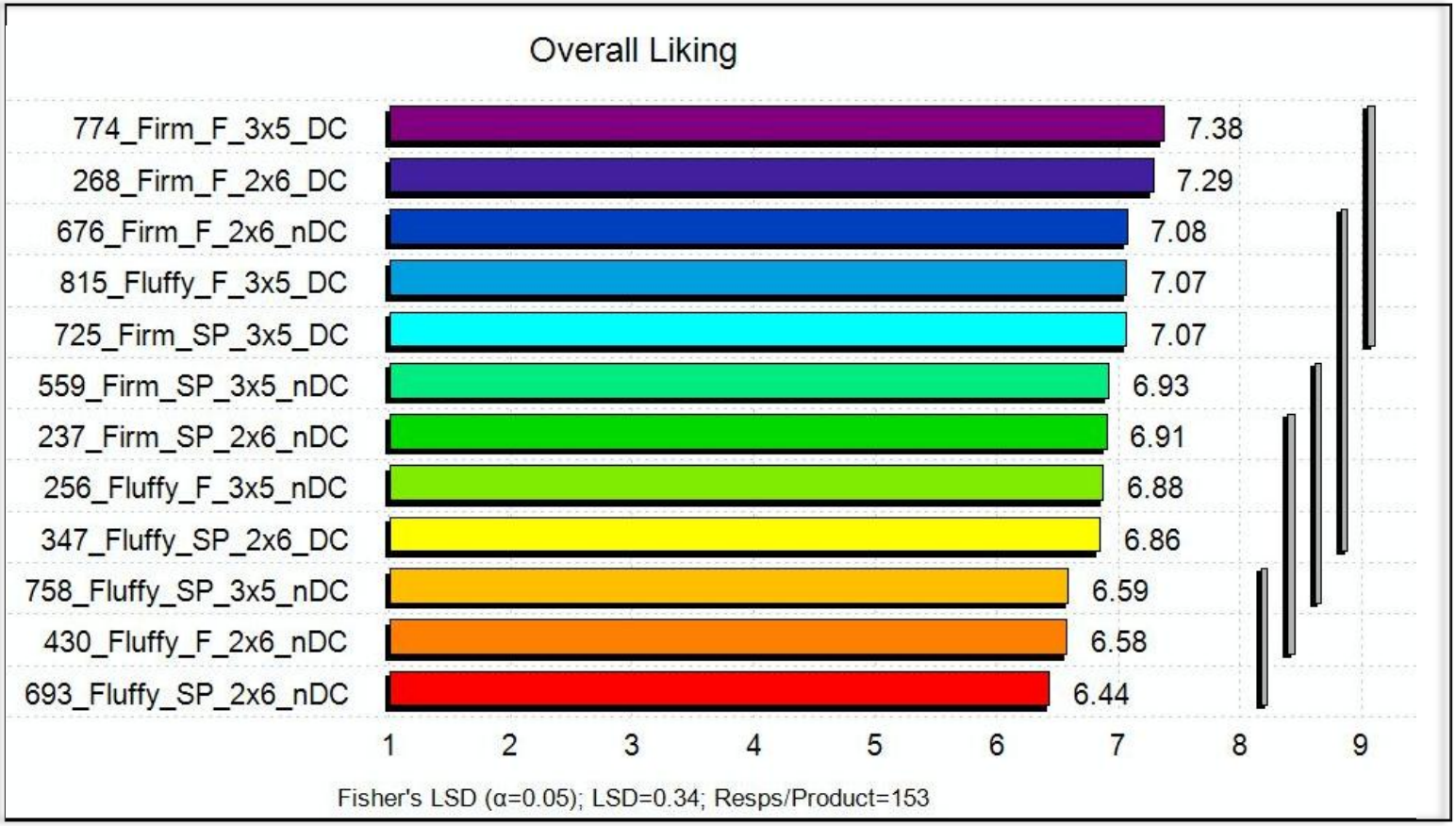
Overall product performance

Multiple Range Test:

Such comparisons do *not* however examine different preference patterns



Consumers are rarely homogeneous with regards their preference patterns, and different sensory drivers frequently attract or repel different groups of consumers.

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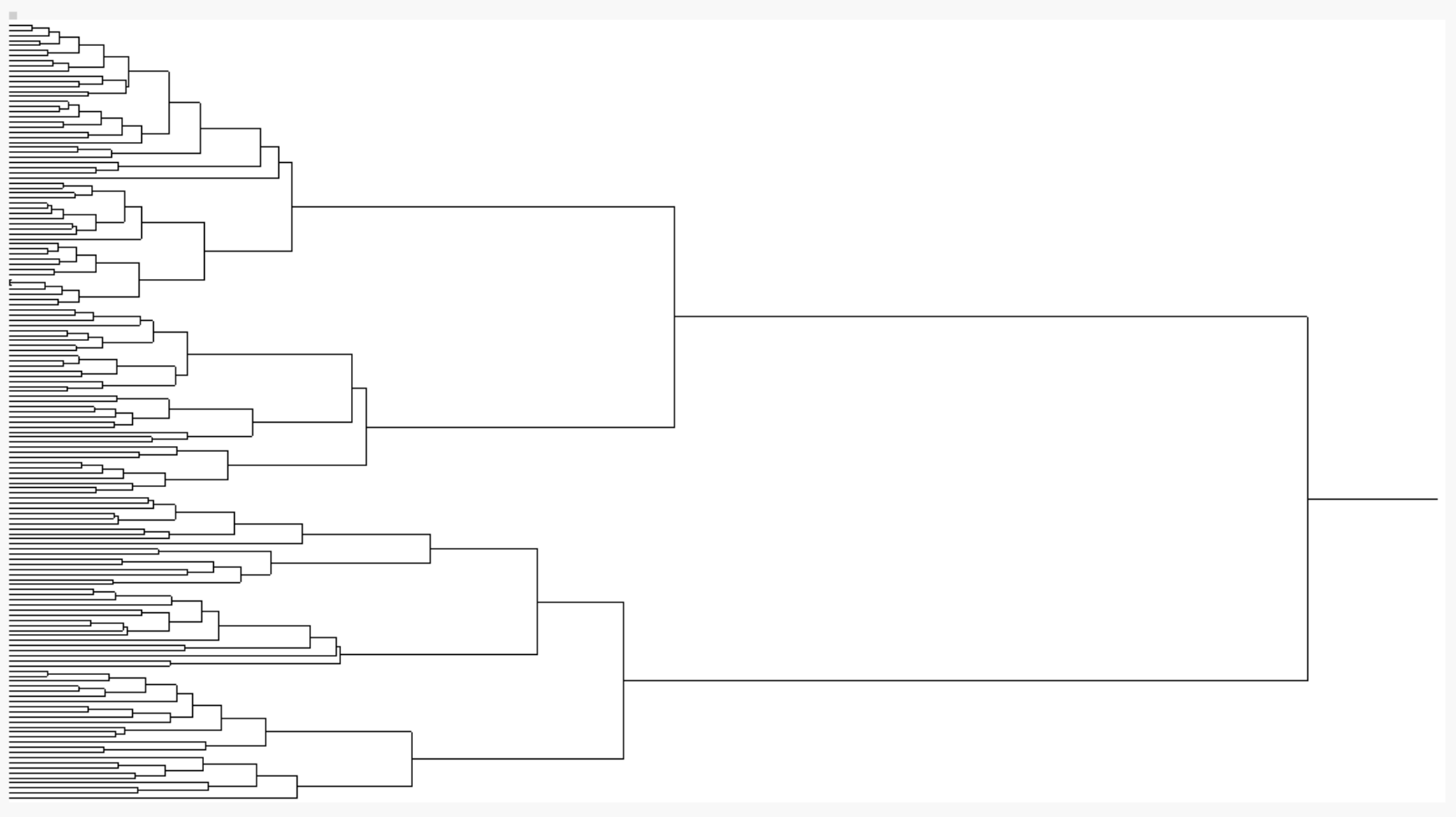
Cluster Analysis

Determination of the *number* of clusters utilizes JMP's multivariate platform to display a basic dendrogram from which a decision can be made.



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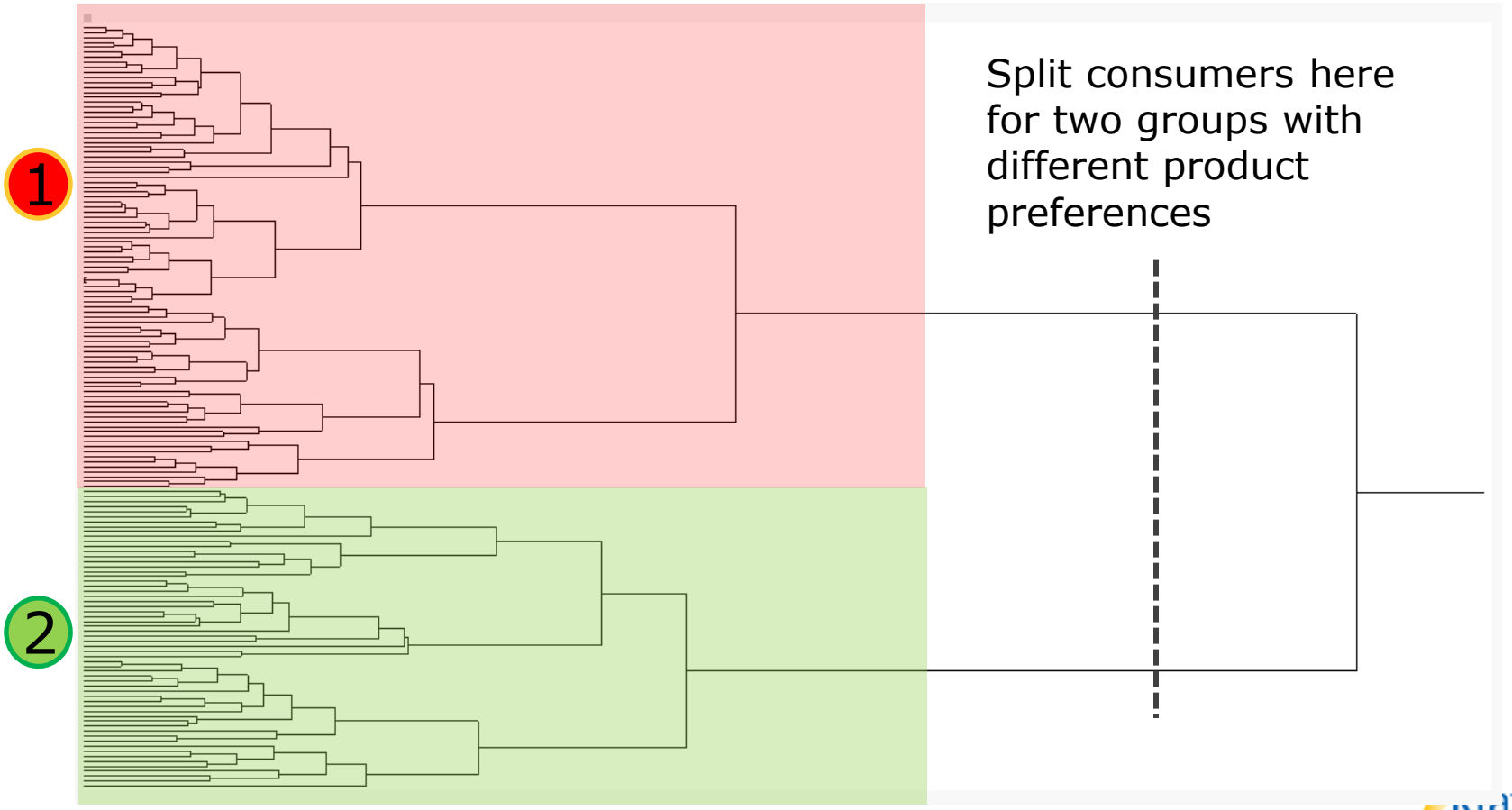
Cluster Analysis

In practice, the number of clusters present in the data is rarely a clear-cut choice. Decisions are frequently subjective, and may take into account commercial considerations such as portfolio strategy – here a differentiated new product line is to be launched to 'complement' current product so it makes sense to look for two clusters



Cluster Analysis: Solution Stability

Any one or more of the following can have a dramatic effect upon the cluster solution obtained:

- Cluster method (typically k-Means or Ward)
- Presentation order of consumers
- Inclusion or exclusion of one or more consumers from the analysis

How can a *stable* solution be generated?

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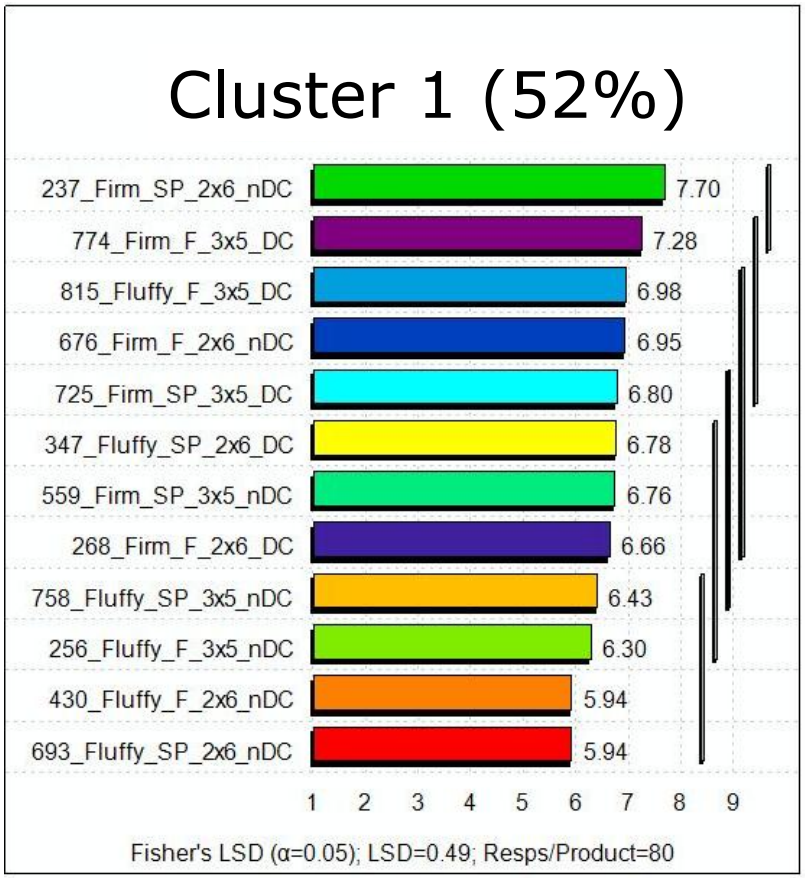
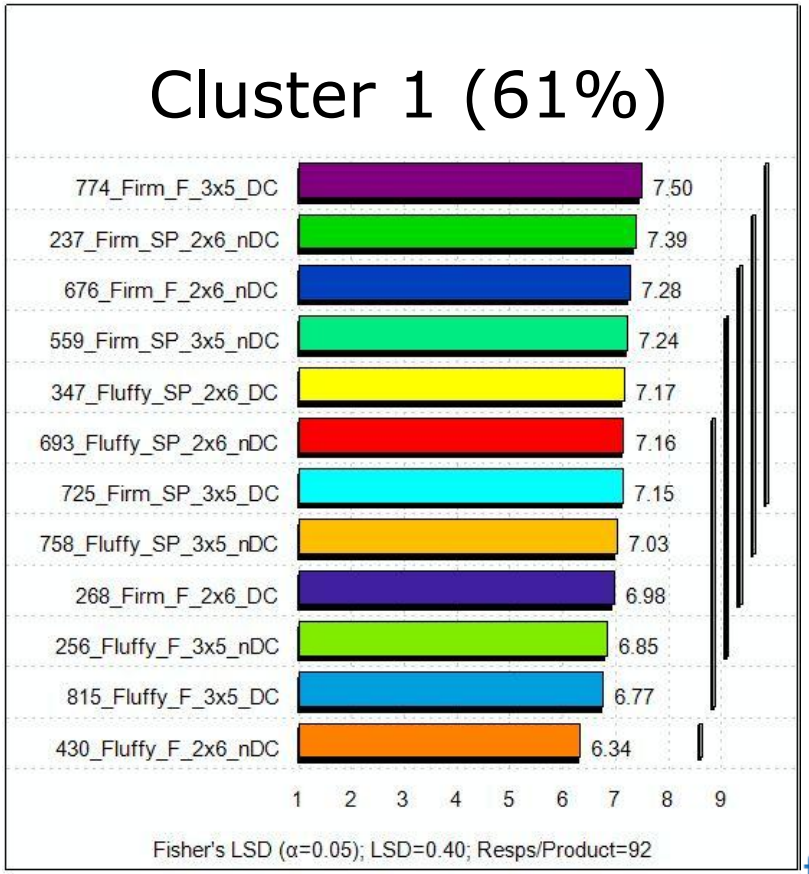
Cluster analysis – Comparison of Cluster 1 results for different omitted records

There is a common 'theme' between clusters – firm center preferred, however some individual product performances are inconsistent and cluster sizes are different.
=> We need a method to determine a more stable solution from our consumer test data to make better business decisions

Consumer IDs 100 & 101 omitted



Consumer IDs 102-103 omitted



Cluster Analysis: Iterative Clustering

Approach

Run clustering methods (Kmeans or Ward) iteratively for 'perturbed' data files and assign individual consumers to their consensus cluster.

Perturbed: Structured omission of consumers; 50 iterations

Challenges overcome

- *Cluster analysis is not consistent in assigning the same name to clusters from different executions*

  $\Rightarrow$ *Cluster 1 in one solution can be cluster 2 in another*

- *Consensus cluster solution should have the same interpretation each time it's generated*

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Cluster Analysis: Iterative Clustering

On-line Help for Iterative clustering gives full details of method & its use

Kraft Interactive Consumer & Sensory Analysis Package

File Edit Bookmark Options Help

Contents | Index | Back | Print | << | >>

R8.4 Iterative Clustering - Control Panel

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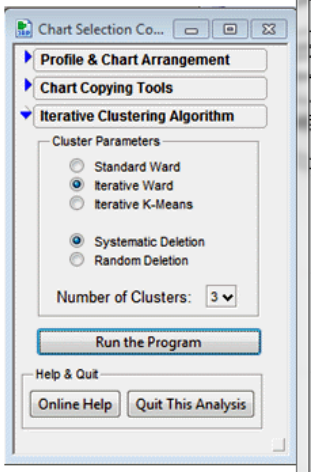
Contents >> Raw Data Analysis >> Iterative Clustering

The iterative clustering programs are operated by means of a control panel, which as always appears on the screen to the left of the results window, and which comprises a set of modules. One of these is the standard set of controls that permit any specified graph to be copied to the clipboard, the JMP journal or a file in a variety of graphics formats, details of which can be accessed in the Chart Copying Tools section of this file. The module which specifically controls the type of clustering performed, and the roles of the parameters relevant to those methods that are supplied to the user, is described below.

Clustering Method: Either a hierarchical method (Ward) or a partitional method (*k*-Means) can be used to perform the individual clusterings. There is at present no mechanism for combining the two within any individual analysis, though obviously any analysis can be run twice, each time using a different method. Selection of Standard Ward will result in the number of deletions selected *can* be set to zero, in which case every analysis using Ward's Method will be identical.

Iterative Algorithms: The user can also select either of two iterative algorithms (Iterative Ward and Iterative *k*-Means), and compare the outputs from them in terms of the clustering solutions that they generate. These algorithms both comprise iterative procedures for compiling and consolidating a large number of solutions. These solutions are generated by analyzing random shuffles of the original data set from which a specified number of random respondents have been removed prior to each run. The resulting solutions are then recombined into a single reconciliation of the results in such a way as to identify a clustering that is typical of the majority of the results obtained. Such a procedure has been adopted because of the discovery during past analyses of consumer data that radically different solutions are sometimes obtained from analyzing data that differs in only a very small way from the original data set - for example by removing the scores of just one or two respondents from the study or (in the case of *k*-means clustering) by permuting the order in which the respondents are fed into the analysis. One of the objects of the exercise, then, is to determine how *stable* the consolidated solution is - a task that can be addressed by looking at the extent to which the various outputs agree with one another. Two different algorithms have been scripted which address this task: they differ in terms of the way in which the various outputs are combined into a single solution, but have been found in all comparisons conducted to date to deliver very similar consensus solutions. The two algorithms are described in greater detail here.



Clusters and Deletions: The "Number of Clusters" selector shown above specifies the number of clusters which every run of the clustering algorithm will generate. The number of respondents that will be removed from each run prior to analysis is currently fixed at 4: the method used to identify which respondents are removed is then specified by the user as either Systematic Deletion or Random Deletion.

Run the Program: This button starts a clustering run once all selections have been made.

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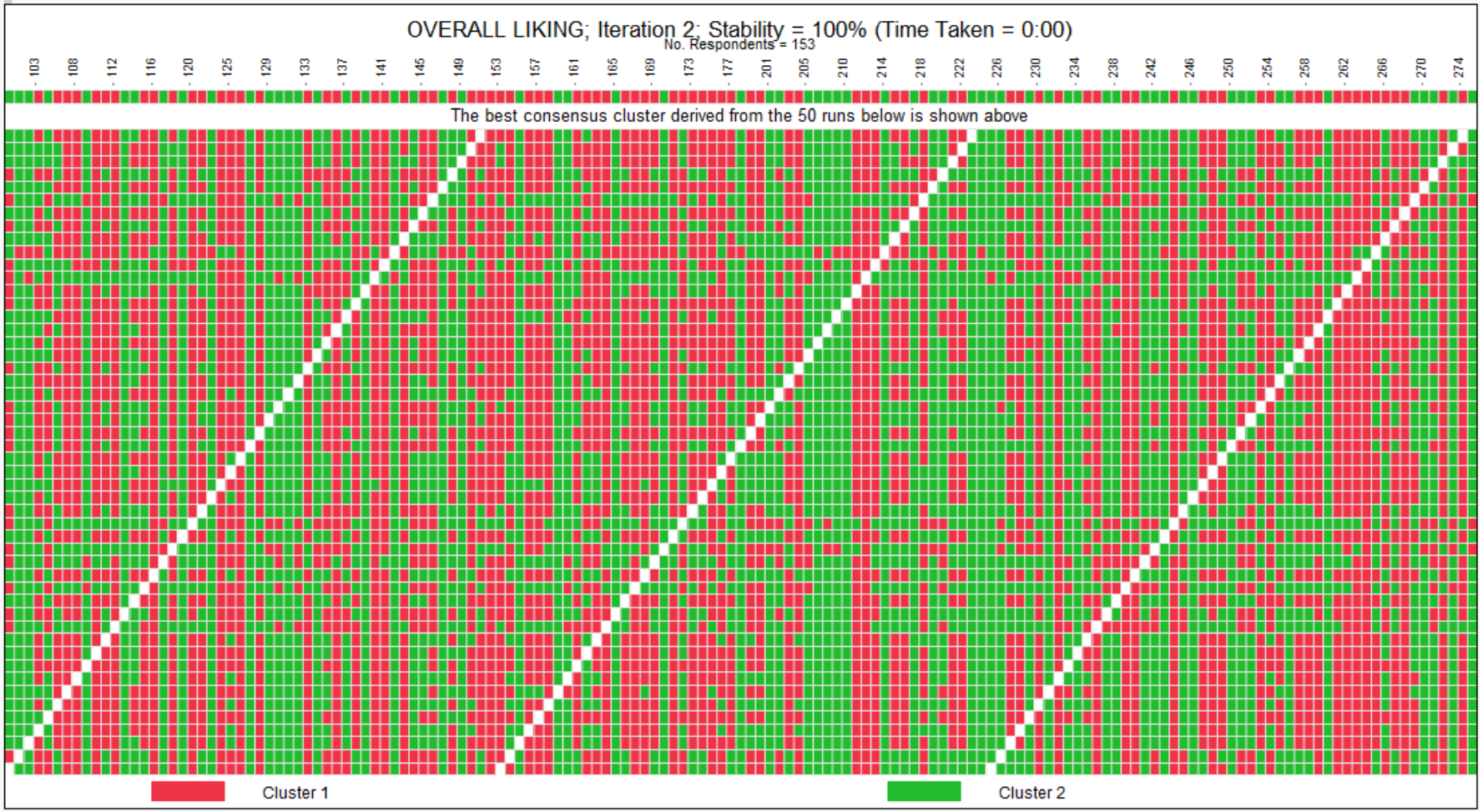
Iterative Clustering: Consensus cluster assignment for individual consumers

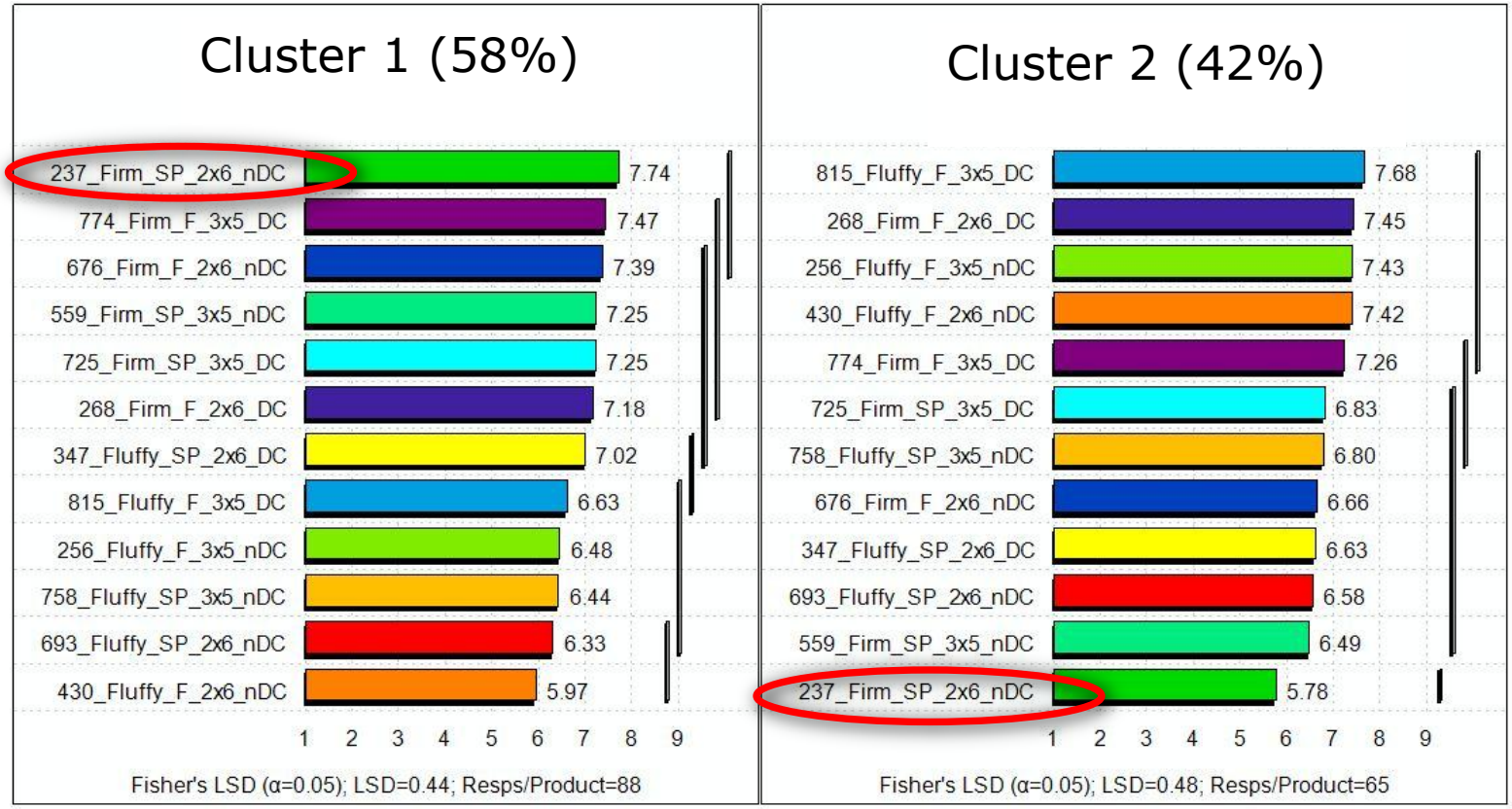
Kmeans: Random Permutation & Systematic Deletion of Consumers



The display shows the results of 50 cluster analyses, in each of which the order of the consumers is *randomly* permuted, and from each of which 3 *random* consumers have been removed.

Iterative Clustering: Cluster group overall liking scores

Conclude that cluster groups rate chocolate tablet designs differently indicating their ideal designs will be different
– Current product design dominates cluster 1 but is rated worst and significant lower than all other products in cluster 2



Kmeans: Random Permutation & Systematic Deletion of 3 consumers

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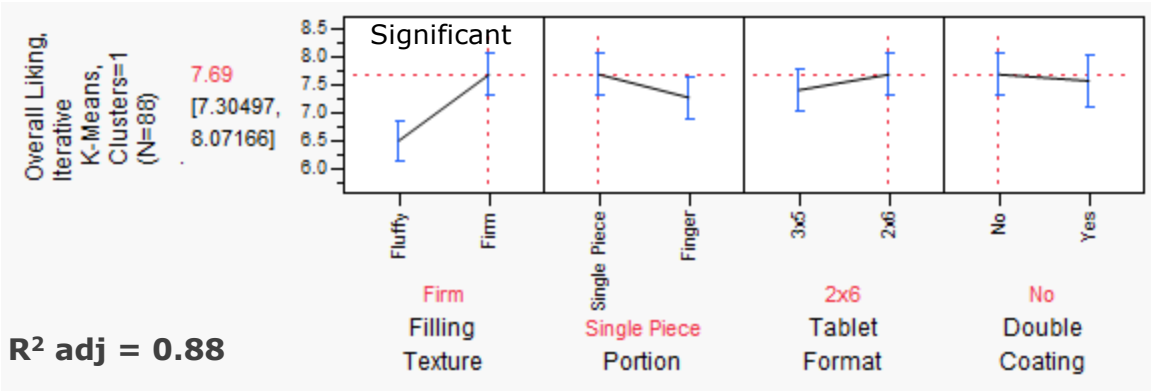
Standard JMP DoE analysis conducted to predicted optimal designs and understand importance of design factors

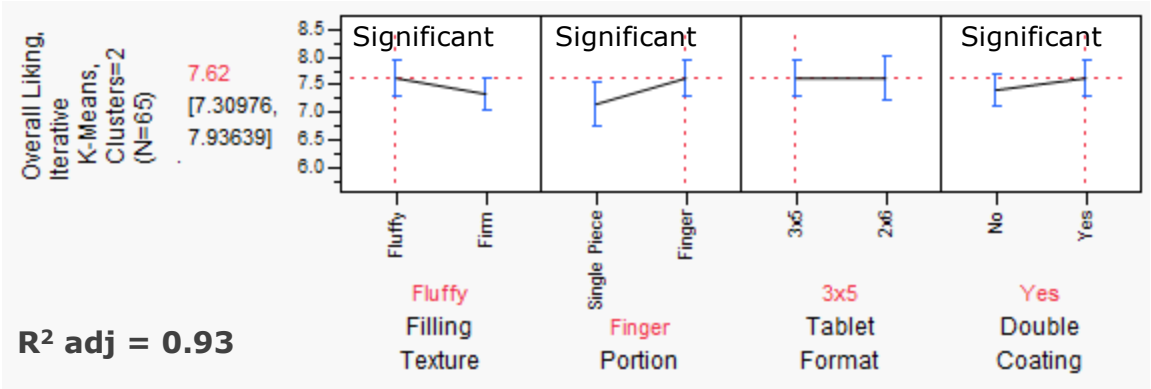
Current product performs best for cluster 1 and is the predicted optimal design



Overall Liking - Cluster 1 (58%)

	Optimal Design	Best in Test 237 (std product)
Overall Liking	**7.69**	**7.74**
Filling Texture	**Firm**	**Firm**
Portion	Single Piece	Single Piece
Tablet Format	2x6	2x6
Double Coating	No	No

Product 815 performs best for cluster 2 and is the predicted optimal design



Overall Liking - Cluster 2 (42%)

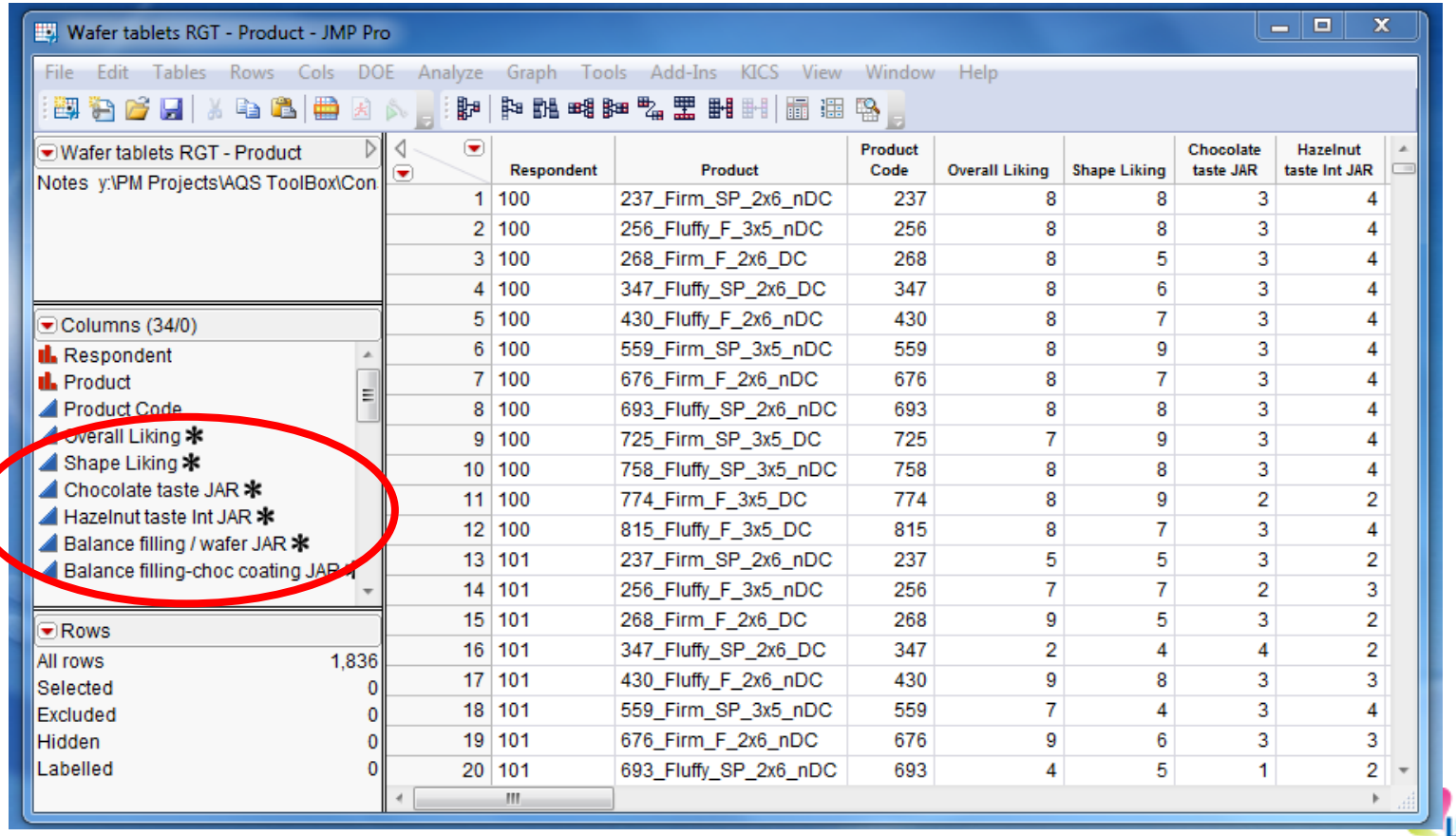
	Optimal Design	Best in Test 815
Overall Liking	**7.62**	**7.68**
Filling Texture	**Fluffy**	**Fluffy**
Portion	**Finger**	**Finger**
Tablet Format	Either	3x5
Double Coating	**Yes**	**Yes**

Conclude that product 815 should be launched to complement current product in market; having all four points of differentiation.

Note: Cluster analysis is critical for this insight, proceeding with just the overall results would see another firm product launched and possible cannibalization of share from current product

Bipolar ("JAR") Data

Some of the data recorded during the consumer study is *bipolar*, which means that product acceptability is not measured on a monotonic scale. Instead, the scales run from 1 ("Much Too Little") to 5 ("Much Too Much"), with 3 meaning "Just About Right", - hence "JAR".



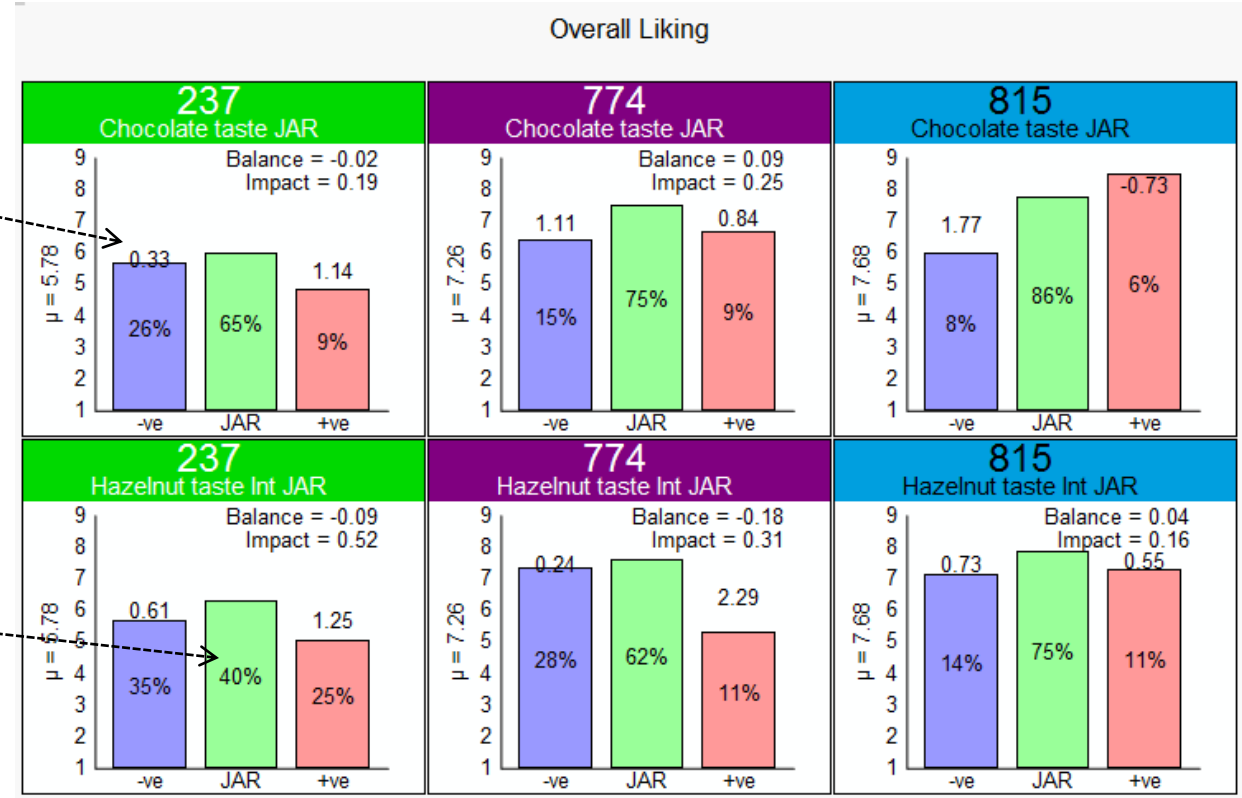
	Respondent	Product	Product Code	Overall Liking	Shape Liking	Chocolate taste JAR	Hazelnut taste Int JAR
1	100	237_Firm_SP_2x6_nDC	237	8	8	3	4
2	100	256_Fluffy_F_3x5_nDC	256	8	8	3	4
3	100	268_Firm_F_2x6_DC	268	8	5	3	4
4	100	347_Fluffy_SP_2x6_DC	347	8	6	3	4
5	100	430_Fluffy_F_2x6_nDC	430	8	7	3	4
6	100	559_Firm_SP_3x5_nDC	559	8	9	3	4
7	100	676_Firm_F_2x6_nDC	676	8	7	3	4
8	100	693_Fluffy_SP_2x6_nDC	693	8	8	3	4
9	100	725_Firm_SP_3x5_DC	725	7	9	3	4
10	100	758_Fluffy_SP_3x5_nDC	758	8	8	3	4
11	100	774_Firm_F_3x5_DC	774	8	9	2	2
12	100	815_Fluffy_F_3x5_DC	815	8	7	3	4
13	101	237_Firm_SP_2x6_nDC	237	5	5	3	2
14	101	256_Fluffy_F_3x5_nDC	256	7	7	2	3
15	101	268_Firm_F_2x6_DC	268	9	5	3	2
16	101	347_Fluffy_SP_2x6_DC	347	2	4	4	2
17	101	430_Fluffy_F_2x6_nDC	430	9	8	3	3
18	101	559_Firm_SP_3x5_nDC	559	7	4	3	4
19	101	676_Firm_F_2x6_nDC	676	9	6	3	3
20	101	693_Fluffy_SP_2x6_nDC	693	4	5	1	2

Bipolar ("JAR") Data

Because the optimum score for a JAR scale lies in the middle of the range as opposed to at the extreme end, such data cannot be analyzed in the same way as unipolar scales. The KICS graphic below shows one of the ways in which JAR scales can be usefully summarized.

Overall liking mean drop (difference from JAR)

Proportion of consumers giving rating



Balance = (-ve mean drop x –ve proportion) - (+ve mean drop x +ve proportion)

Example of Use: Lower attribute intensity if negative to improve product performance

Impact = (-ve mean drop x –ve proportion) + (+ve mean drop x +ve proportion)

Size can indicate importance to change

Conclude that Cluster 2 JAR responses indicate that consumer chocolate taste & hazelnut taste perceptions may drive product performance of most liked product in cluster 2 (815) versus best in test (774) and best in other cluster (237)

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Benefits of KICS Package

- *50% Efficiency*

  2-5 rather than 5-10 man days for analysis, interpretation and report generation

  Graphics can be customized within agreed report formats and exported into business presentation

- *Simpler, less error prone*

  Point & Click on JMP rather than use of several statistical software and self customisation of macros for case study specifics

- *Extended user capability*

  Several active users per RD&Q site rather than reliance on a few company experts/ external agencies

  Local knowledge of project/process applied better to the interpretation

- *Use of best practice analysis*

  Customized scripts use Kraft Foods' best statistical practices for global deployment – experts focusing more on this

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Collaborative Approach Creates a Successful Kraft Foods Application for Consumer Test Evaluation Using JMP® 10

David Rose, PhD, Principal Implementation Consultant, SAS UK
Jeff Stagg, Principal Scientist , Kraft Foods

EBC7 | **Topic:** JSL Application Development

Kraft Foods promotes statistical thinking and best practices globally with the development of software tools that execute complex data handling, calculation and reporting. JMP software was selected as the platform to provide a multi-product consumer test evaluation tool for the global Consumer Science function in Kraft Foods. Developed in 2009 in collaboration with SAS Professional Services in Marlow, it is now deployed to more than 40 consumer science professionals around the world. There are obvious benefits: the ease and speed of use reduces the processing time by half; the consistent use of best practice in analysis methods improves interpretation; and tailored reporting formats enable smart and efficient communication to customers. Just as important are the people benefits: many more are empowered through training and coaching to conduct effective analyses on their own, with confidence and their knowledge of product and process fully applied to the interpretation. Application development continues as user enthusiasm and feedback drive change in both flexibility and functionality. Developments in 2012 have taken advantage of new capabilities introduced in JMP 10; an online help manual is incorporated and Kraft Foods analysis methods are customized with JMP Scripting Language. We'll discuss: 1) an iterative clustering technique that reduces the uncertainty in individual consumer assignment to a cluster (a group of consumers with similar product preferences) and 2) consumers' Just About Right [JAR] scale evaluation, which generates insight for product change. The full standard JMP functionality (e.g., DOE, regression analysis, etc.) complements the customized scripts to provide the user with the ultimate tool to evaluate multiproduct consumer tests within Kraft Foods, so much so that users enjoy this work