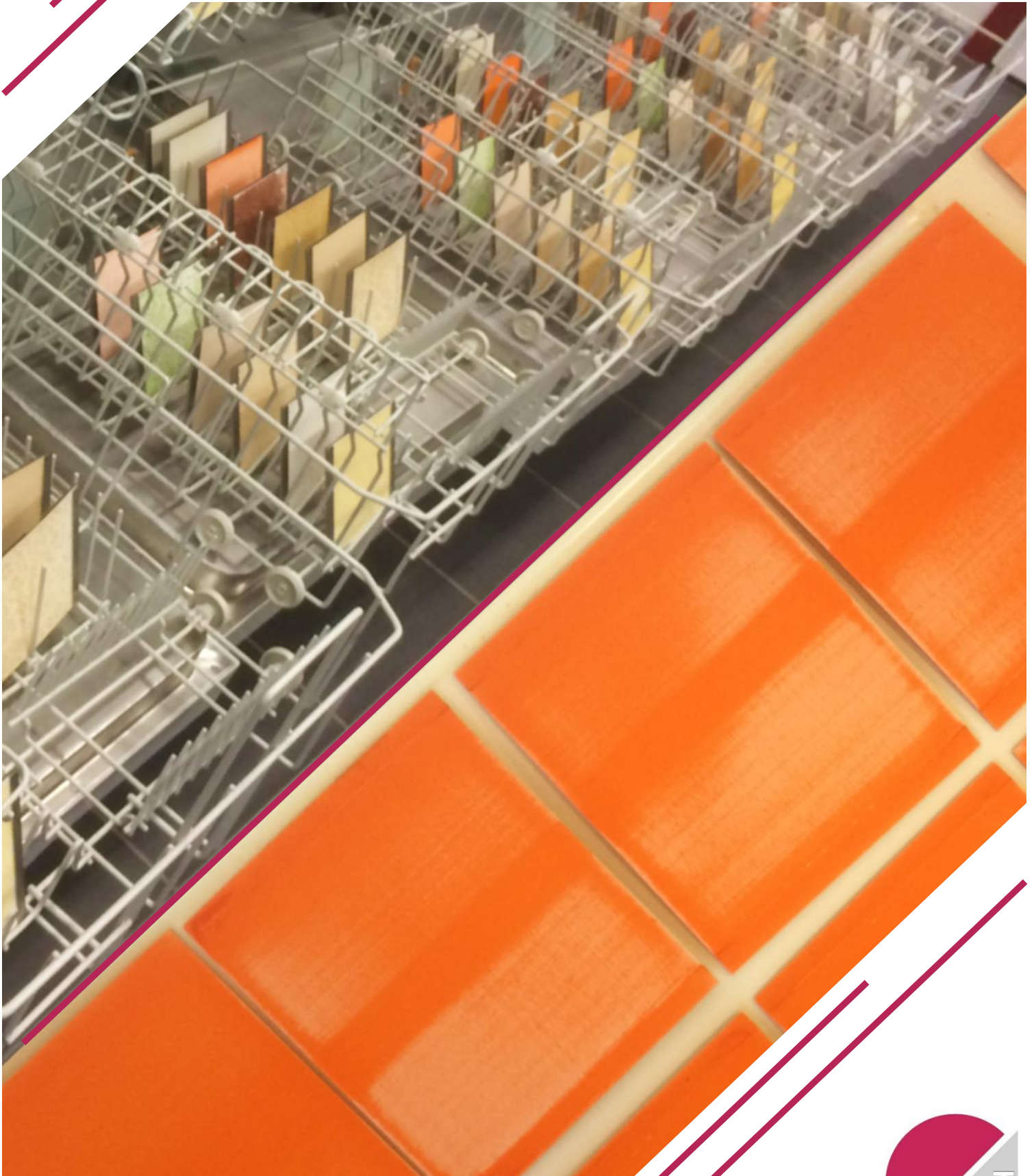


(HAND) DISHWASH & HARD SURFACE CLEANING BOOK



Version 8.274



Introduction

This sample book shows examples and results achieved with the only available commercial set of Dishwash Monitors for Detergent Performance Testing.

In the late 90's CFT produced a lot of soiled dishes for her customers according to different standards, for instance IKW. This kind of production is normally done in-house by the end-users or the test institutes. One reason is because of the difficulty and expenses to send this across long distances. CFT felt that this production was very labour intensive and we wanted to serve all our customers and not only the ones close by. That is when we started to develop our own CFT Dishwash Method with the soiled (melamine) tiles.

Currently our range of different soils available has been widely expanded. The set of tiles that we offer is especially suitable to do reliable screenings. The CFT Dishwash Method is not a full replacement, but it can certainly help you save a lot of time, effort and money by running smaller scale IKW or other labour intensive test runs. Another advantage of the tiles is that they are lightweight, unbreakable and very reproducible.

This book contains the following parts: A description how to use this book, an index of our testmaterials, product sheets with a full description of our testmaterials for different testing purposes, an application legend and a description of the detergents used in our detergent comparison test (described in more detail on page 5).


Feel free to contact us if you have any remaining questions.

Center For Testmaterials BV
Stoomloggerweg 11
3133 KT Vlaardingen
The Netherlands
+31 (0) 10 460 39 55
info@cftbv.nl
<http://www.cftbv.nl>

How to use this Dishwash & Hard surface cleaning book?


The picture below is an example of a product sheet of one of our DM-tiles. The other pictures show a breakdown of this description.

DM-03 Shepherd's Pie, baked on G * L * A * P * X

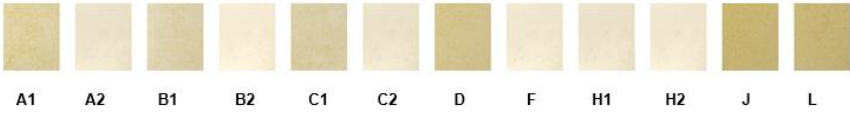


Complicated soil mix, challenging different aspects of the detergent. Contains potatoes (starch), egg yolk (protein) and minced meat (including fat). Light weight, unbreakable and very reproducible.

On smooth surface



Order code:	Substrate:	Size:	Yu:
DM-03	Melamine	10 x 12 cm	



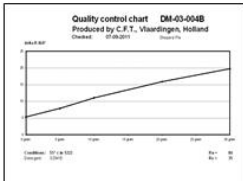
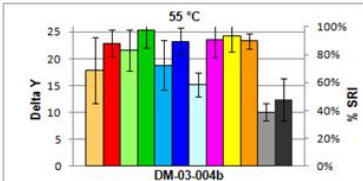
DM-03

Discriminative Power²: **5,2**

Reproducibility Ratio: **7,9**

Reliability Ratio: **8,2**

Dynamic Range: **57,0**

DM-03

The CFT-code of the soil (on melamine).

Shepherd's Pie, baked on

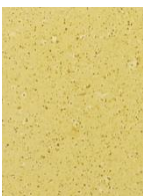
Soil name.



Example picture of the type of soil.

A stain made from apple concentrate, which is an important component of a lot of fruit drinks, syrup and related products.

Description of the type of soil.



A picture of the tile.



Application for the soil. You can find the application legend in the back of this book. Please note that other applications could well be possible as well.

Order code:	Substrate:	Yu:
C-H001	CN-11: Woven Cotton (w3x)	90,9
KC-H001	CN-42: Knitted Cotton (w3x)	94,1

Table with the order codes of this stain on different substrates. Also shows the Yu (Y-unsoiled) value of the different substrates.



Scanned images of the results after wash of the soil on melamine, for all the detergents. The photographs shown here are the visual results of the soil on melamine tiles, which aims to correlate with porcelain.

Discriminative Power²

Discriminative Power² Index (0-10):

$$\frac{\sqrt{\sum_{i=1}^{n-1} \sum_{j=i+1}^n (1-T_{(\mu_i=\mu_j)}) * ABS(\mu_i-\mu_j)}}{c}$$

End of 2013 CFT developed a new and better way to calculate the Discriminative Power of a Testmaterial. We have called this Discriminative Power² (DP²). This is a calculation to quantify the Discriminative Power. It is based on the sum of the significance (Student T-Test) of all different results (in ΔY) times the size of this difference. The absolute value is scaled on a ratio from 0 to 10. Average DP² is 5.9.

Reproducibility Ratio

Reproducibility Ratio (0-10): Index: 1 - CoV SD(Ys)/Avg(Ys)

This Coefficient of Variance indicates the consistency of the soiled Y-values within a batch, scaled on a ratio from 0 to 10.

Reliability Ratio

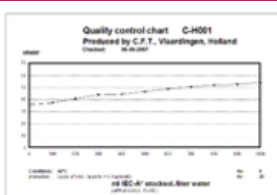
Reliability Ratio (0-10): Index: 1 - CoV SD(ΔY)/Avg(Yw)

The Coefficient of Variance of SD of the repetitions in ΔY over the average cleaning levels (Avg(Yw)) indicates the consistency of results between repetitions, scaled on a ratio from 0 to 10.

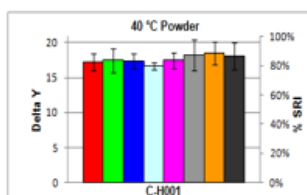
Dynamic Range

Dynamic Range: Max SRI – Min SRI

The difference between the best cleaning detergent SRI and the worst cleaning detergent SRI sets the range in which all results will occur. This is an absolute difference.



Every batch of Standardized Testmaterials undergoes a strict quality control, for instance a dosage response test. All results for the latest batches are published online. If the soil is available on different substrates, the QC-graph is given for each different substrate.



Graphical results of a Detergent Comparison study, a standard procedure during all our R&D work. All results are given in delta Y on the left Y-axis and in % SRI on the right Y-axis. The colour bars represent different detergents. The full coloured bars represent powder detergents and the bubble filled bars represent liquid detergents. The level of Standard Deviation between the repetitions is given as standard error bars. If the soil is available on different substrates, the QC-graph is given for each different substrate.

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DM-177	Mixed starch, coloured, extra severe	49	DM-07 Spaghetti Bolognese sauce with cheese 79
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			DM-54 Oatmeal, coloured with chocolate 80



DM-Series

The DM-Series was initially developed for Automatic Dishwash testing. This will reflect in the suitability of these tiles for other applications. Nevertheless some of these tiles are also very suitable for handdish liquid formulation experiments, especially in combination with our CFT developed test method using a Sheen Washability Tester.

Recently we have also identified which tiles are suitable for use in professional I&I dishwash tests.

DM-01

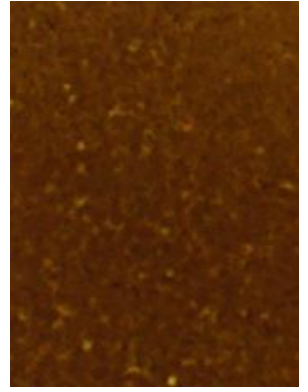
Lasagne Bolognese

G * L * A * P * X



Complicated but interesting soil mix, challenging different aspects of the detergent. Contains pasta, meat, cheese, tomato sauce and milk.

On smooth surface.



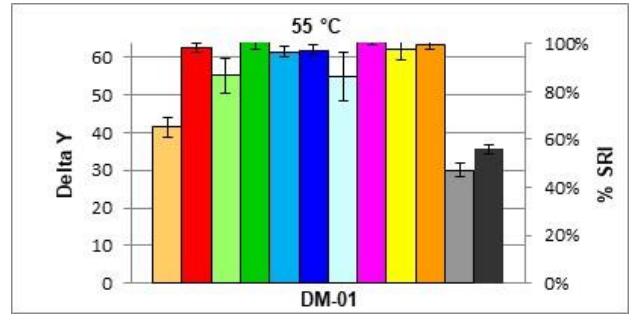
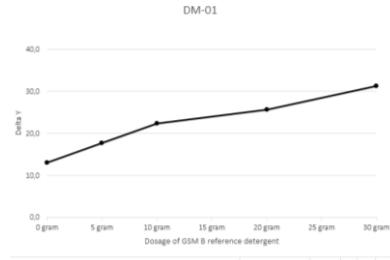
Order code:	Substrate:	Size	Yu:
DM-01	Melamine	10 x 12 cm	82
DT-01	Technical Porcelain	10 x 12 cm	92

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-01

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a



DT-01

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable

DM-03

Shepherd's pie, baked

G * L * A * P * X



Complicated soil mix, challenging different aspects of the detergent. Contains potatoes (starch), egg yolk (protein) and minced meat (including fat).

On smooth surface.



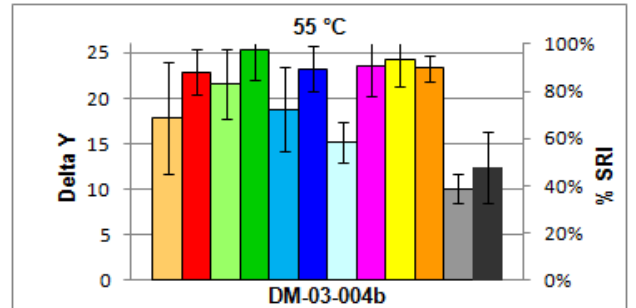
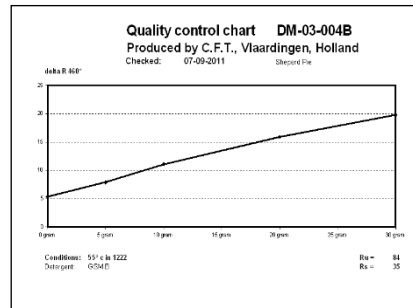
Order code:	Substrate:	Size	Yu:
DM-03	Melamine	10 x 12 cm	82
DT-03	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-03

Discriminative Power²: **5,2**
 Reproducibility Ratio: **7,9**
 Reliability Ratio: **8,2**
 Dynamic Range: **57,0**



DT-03

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-04A Carbonara sauce



Complicated soil mix, challenging the protease enzymes in your detergent. Contains egg, cream, cheese and bacon.

Also available with added spaghetti (DM-04B)

On smooth surface.

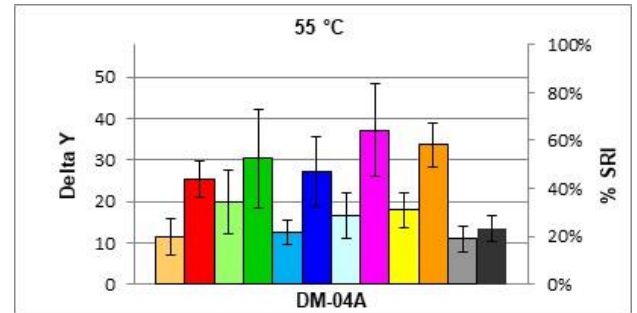
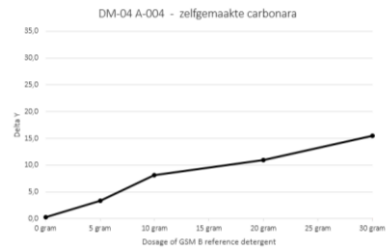
Order code:	Substrate:	Size	Yu:
DM-04A	Melamine	10 x 12 cm	82
DT-04A	Technical Porcelain	10 x 12 cm	92

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

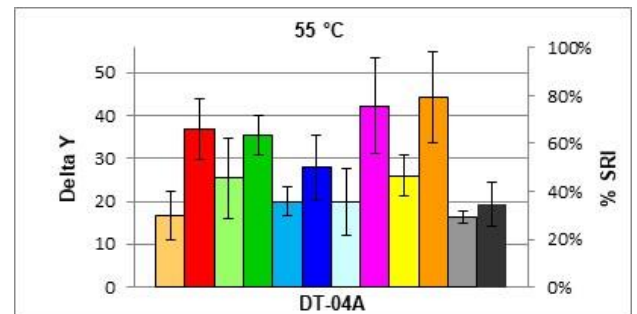
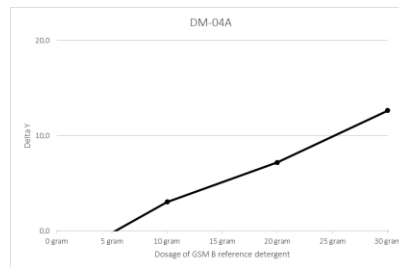
DM-04A

Discriminative Power²: **N/A**
 Reproducibility Ratio: **N/A**
 Reliability Ratio: **N/A**
 Dynamic Range: **N/A**



DT-04 A

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-04B Spaghetti Carbonara

★^A ★^P



Complicated soil mix, challenging different aspects of the detergent. Contains potatoes (starch), egg, cream, cheese (proteins) and bacon.

Also available without spaghetti (DM-04A)

On smooth surface.



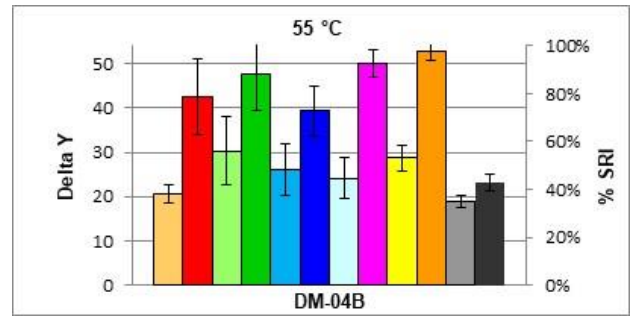
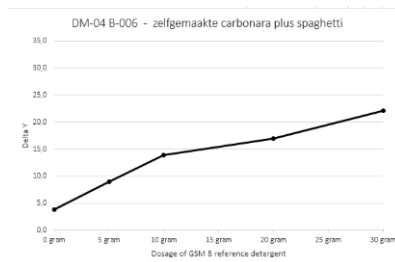
Order code:	Substrate:	Size	Yu:
DM-04B	Melamine	10 x 12 cm	82
DT-04B	Technical Porcelain	10 x 12 cm	92

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-04B

Discriminative Power²: N/A
 Reproducibility Ratio: N/A
 Reliability Ratio: N/A
 Dynamic Range: N/A



DT-04B

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable

DS-105 Heavily burnt on Pasta Cheese



A combination of pasta and cheese, that is burnt on high temperature for a long time. This meant to simulate the leftovers of for instance a lasagne dish.

On stainless steel.

Order code:	Substrate:	Size	Yu:
DS-106	Stainless steel	10 x 12 cm	54
DT-106	Technical Porcelain	10 x 12 cm	92

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DS-105

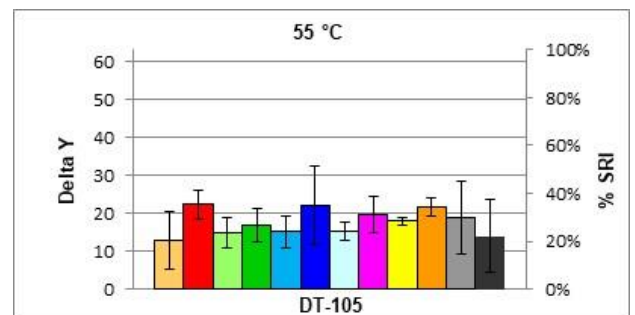
Discriminative Power²: 7,1
 Reproducibility Ratio: 8,6
 Reliability Ratio: 8,0
 Dynamic Range: 61,1

Graphs unavailable

DS-105

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graph unavailable



DM-06

Cheese, baked



Common stain in consumer households. Will respond on detergent formulation. Take care with positioning during detergent tests, because the stain will respond to agitation in the machine. Also suitable to use in machine testing. Also available with double soil load, see DM-08.

On smooth surface.



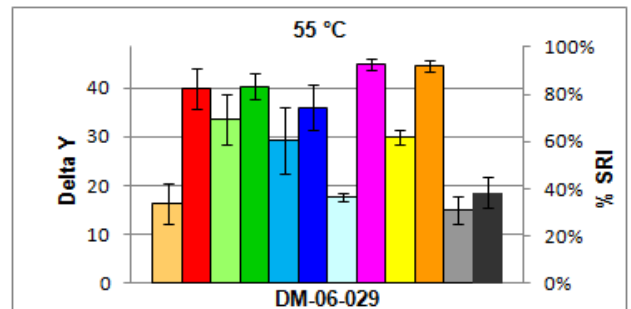
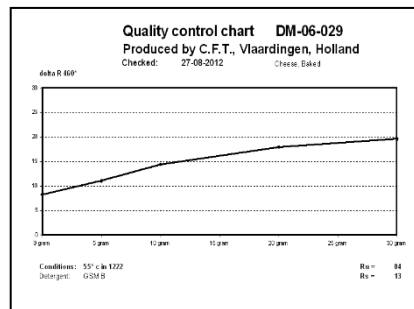
Order code:	Substrate:	Size	Yu:
DM-06	Melamine	10 x 12 cm	82
DT-06	Technical Porcelain	10 x 12 cm	91,9



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

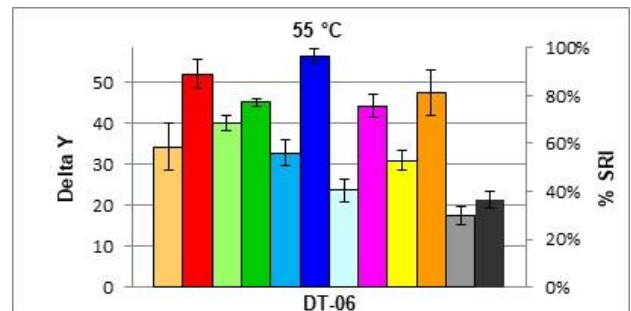
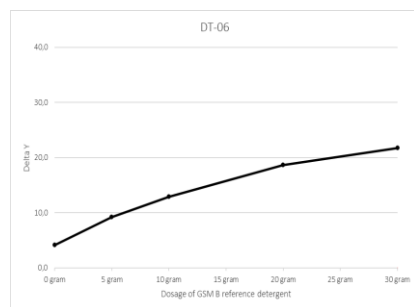
DM-06

Discriminative Power²: 7,1
 Reproducibility Ratio: 8,6
 Reliability Ratio: 8,0
 Dynamic Range: 61,1



DT-06

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a



DS-106

Heavily burnt on Cheese



Common stain in consumer households. The difference between this stain and the regular DM-06 is that this stain is baked on a very high temperature for a long time.

On stainless steel.



Order code:	Substrate:	Size	Yu:
DM-106	Melamine	10 x 12 cm	82
DT-106	Technical Porcelain	10 x 12 cm	91,9

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DS-106

Discriminative Power²: n/a
Reproducibility Ratio: n/a
Reliability Ratio: n/a
Dynamic Range: n/a

Graphs unavailable

DT-106

Discriminative Power²: n/a
Reproducibility Ratio: n/a
Reliability Ratio: n/a
Dynamic Range: n/a

Graphs unavailable

DM-07

Spaghetti Bolognese sauce with cheese

G * L * A * P * X



Complex, but interesting soil mix. Contains fats, starch and proteins.
On smooth surface.



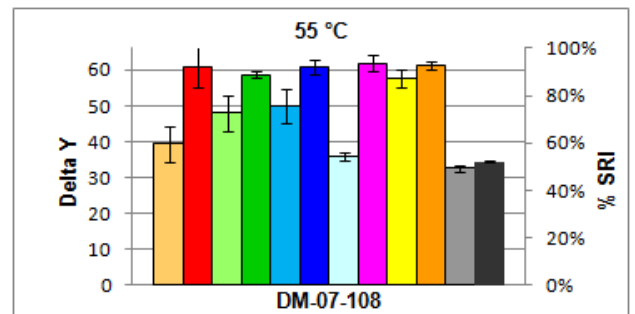
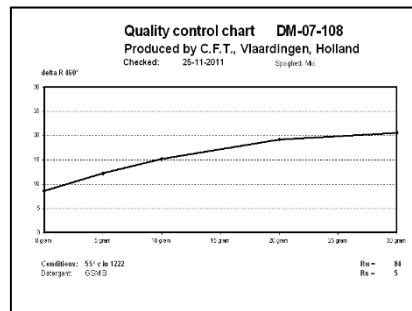
Order code:	Substrate:	Size	Yu:
DM-07	Melamine	10 x 12 cm	82
DT-07	Technical Porcelain	10 x 12 cm	91,9



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

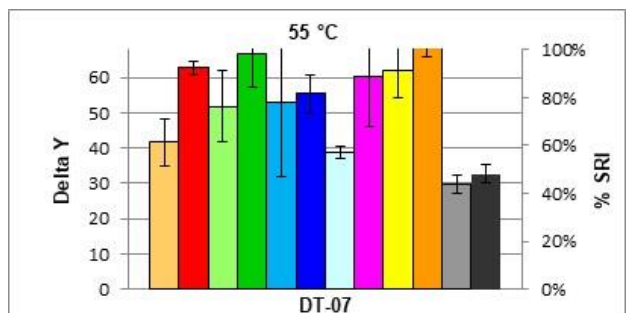
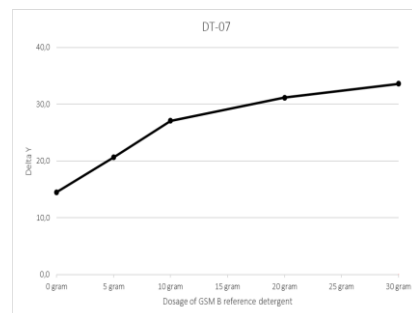
DM-07

Discriminative Power²: **7,1**
 Reproducibility Ratio: **6,5**
 Reliability Ratio: **8,5**
 Dynamic Range: **42,8**



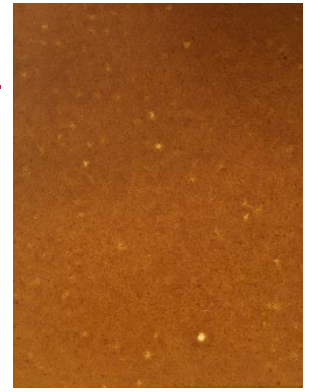
DT-07

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-08

Cheese, baked, double soil load



Common stain in consumer households. Will respond on detergent formulation. Take care with positioning during detergent tests, because the stain will respond to agitation in the machine. Also suitable to use in machine testing. Double soil load compared to DM-06.

On smooth surface.

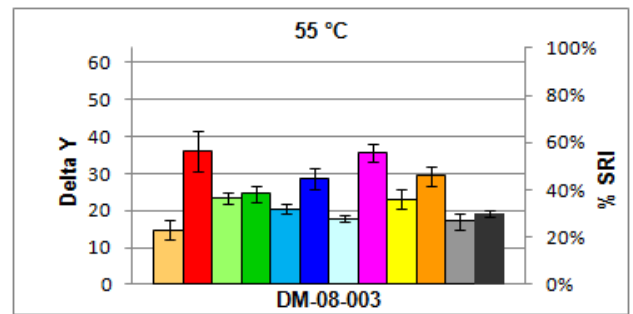
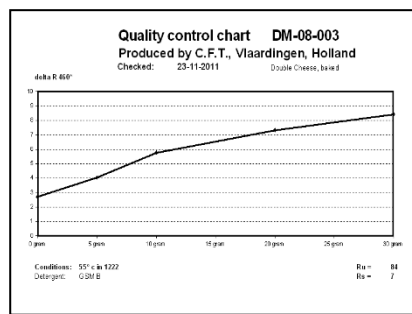
Order code:	Substrate:	Size	Yu:
DM-08	Melamine	10 x 12 cm	82
DT-08	Technical Porcelain	10 x 12 cm	91,9



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

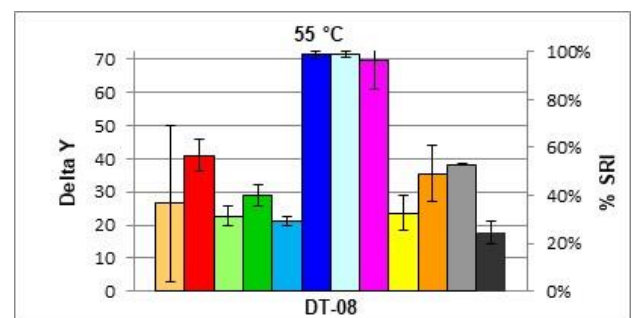
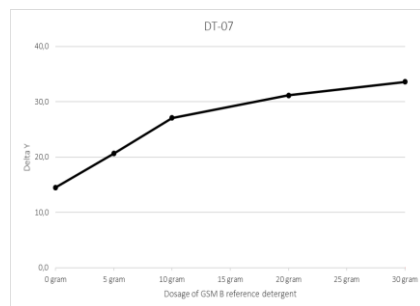
DM-08

Discriminative Power²: **6,1**
 Reproducibility Ratio: **7,2**
 Reliability Ratio: **8,1**
 Dynamic Range: **33,3**



DT-08

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-10

Crème brulée, baked



Crème brûlée dessert baked at high temperature on the substrate. Shows some response to agitation. Especially suitable for objective screening methods.

On smooth surface.



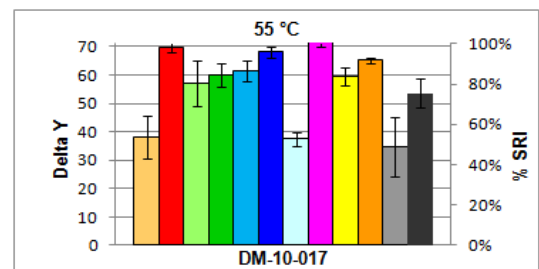
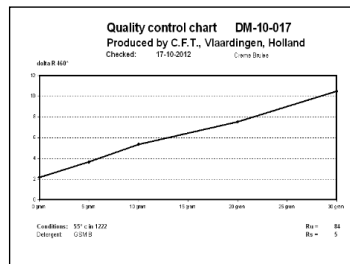
Order code:	Substrate:	Size	Yu:
DM-10	Melamine	10 x 12 cm	82
DG-10	Glass	10 x 12 cm	79
DP-10	Plastic (PP)	10 x 12 cm	79
DT-10	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

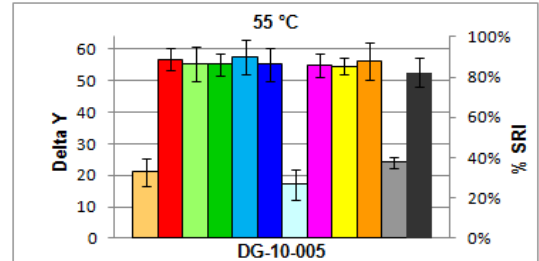
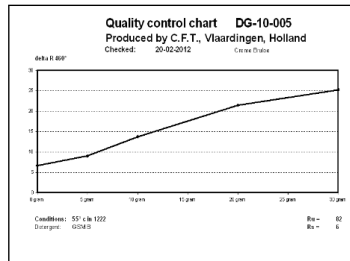
DM-10

Discriminative Power²: **7,4**
 Reproducibility Ratio: **6,1**
 Reliability Ratio: **5,9**
 Dynamic Range: **54,7**



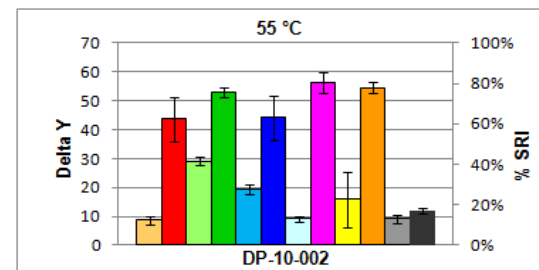
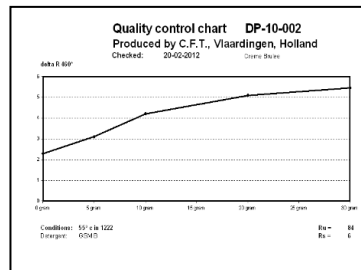
DG-10

Discriminative Power²: **7,4**
 Reproducibility Ratio: **4,0**
 Reliability Ratio: **7,3**
 Dynamic Range: **65,5**



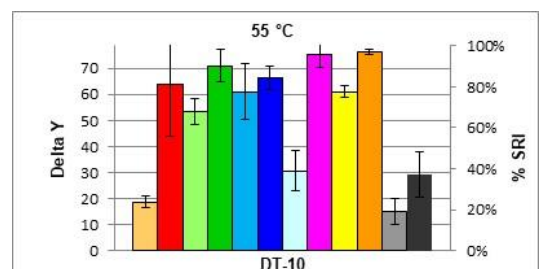
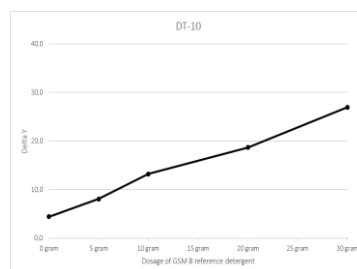
DP-10

Discriminative Power²: **8,7**
 Reproducibility Ratio: **6,8**
 Reliability Ratio: **6,8**
 Dynamic Range: **68,2**



DT-10

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



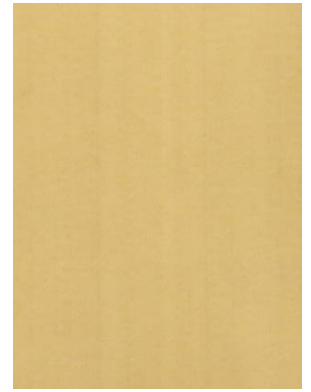
DM-11

Tea



Standard soiled tea tile for measuring bleach performance of dishwash detergents and hard surface cleaners. Especially suitable for objective screening methods.

On rough surface.



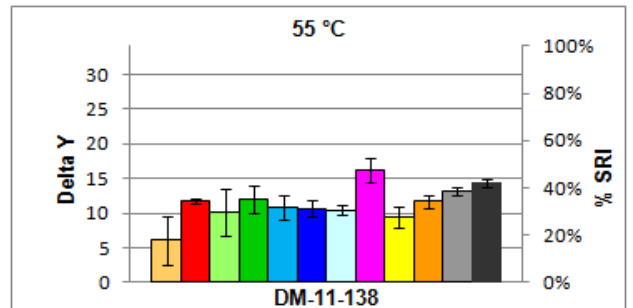
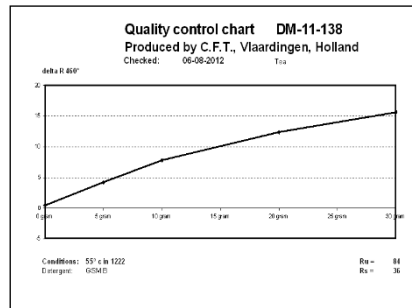
Order code:	Substrate:	Size	Yu:
DM-11	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-11

Discriminative Power²: **4,4**
 Reproducibility Ratio: **8,8**
 Reliability Ratio: **9,0**
 Dynamic Range: **29,8**



DM-12

Tea with milk



Tea tile like DM-11 but with added milk, for measuring bleach performance of dishwash detergents and hard surface cleaners. Is also slightly responsive to protease enzymes. Especially suitable for objective screening methods.

On rough surface.

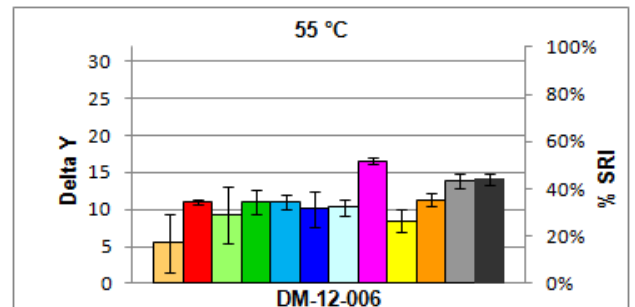
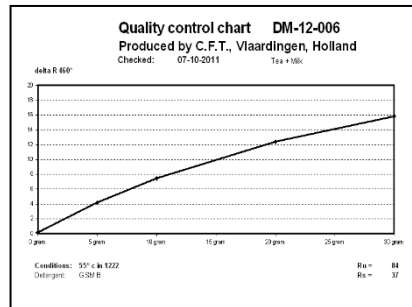
Order code:	Substrate:	Size	Yu:
DM-12	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-12

- Discriminative Power²: **4,5**
- Reproducibility Ratio: **9,2**
- Reliability Ratio: **9,0**
- Dynamic Range: **33,6**



DM-14

Highly discriminative tea stain, also for I&I



Tea tile with a different application method than DM-11.

On rough surface.



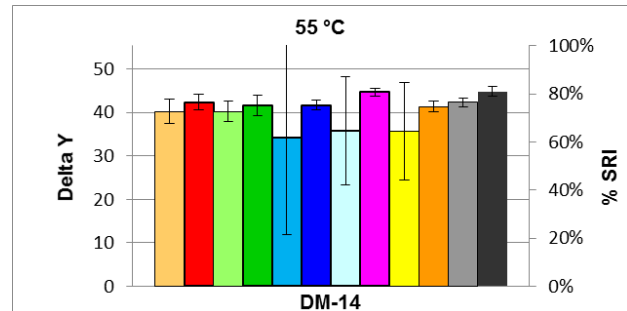
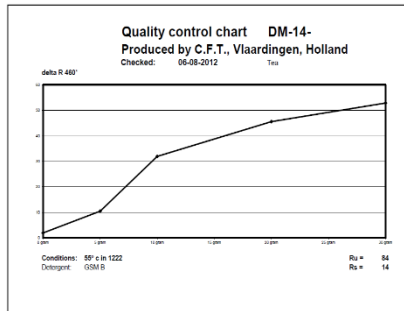
Order code:	Substrate:	Size	Yu:
DM-14	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-14

Discriminative Power²: **2,3**
 Reproducibility Ratio: **8,5**
 Reliability Ratio: **6,8**
 Dynamic Range: **18,8**



DM-21 Egg yolk



Standard soiled egg yolk tile for measuring overall and protease performance of dishwash detergents and hard surface cleaners. Especially suitable for objective screening methods.

On smooth surface.



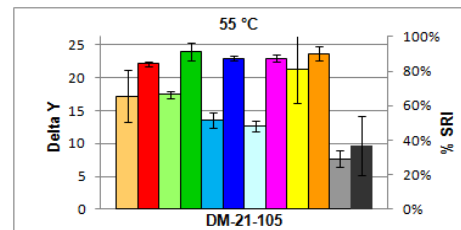
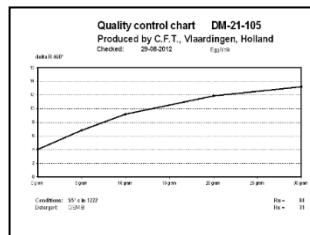
Order code:	Substrate:	Size	Yu:
DM-21	Melamine	10 x 12 cm	82
DG-21	Glass	10 x 12 cm	79
DS-21	Stainless steel	10 x 12 cm	54
DP-21	Plastic (PP)	10 x 12 cm	80
DT-21	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

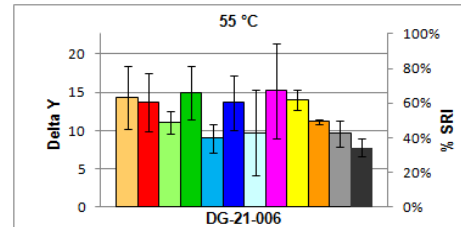
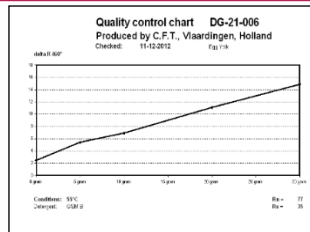
DM-21

Discriminative Power²: **5,6**
 Reproducibility Ratio: **8,2**
 Reliability Ratio: **8,7**
 Dynamic Range: **60,6**



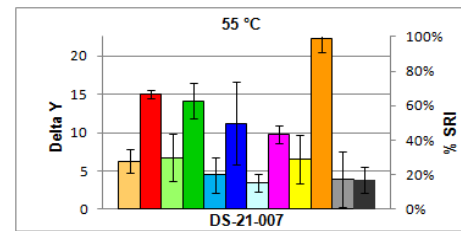
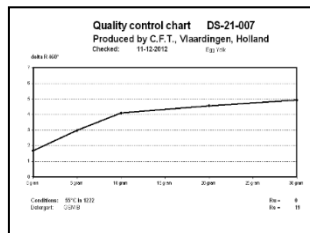
DG-21

Discriminative Power²: **4,4**
 Reproducibility Ratio: **8,6**
 Reliability Ratio: **8,5**
 Dynamic Range: **34,9**



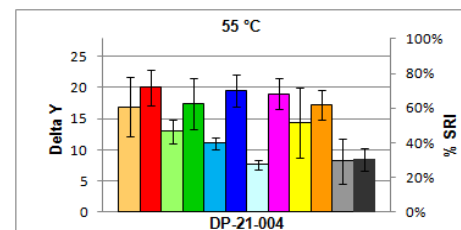
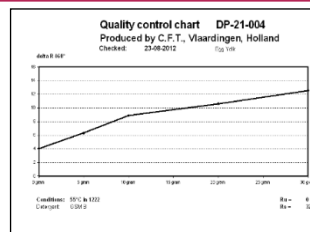
DS-21

Discriminative Power²: **5,5**
 Reproducibility Ratio: **7,9**
 Reliability Ratio: **7,3**
 Dynamic Range: **80,1**



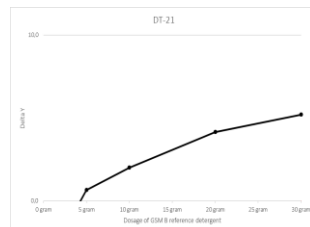
DP-21

Discriminative Power²: **5,3**
 Reproducibility Ratio: **9,0**
 Reliability Ratio: **8,4**
 Dynamic Range: **45,6**



DT-21

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



Graphs unavailable

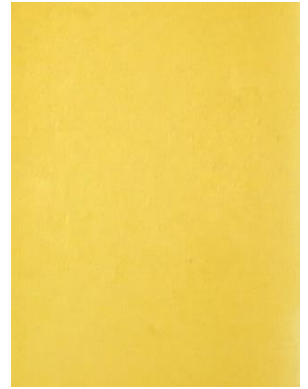
DM-22

Egg yolk, double soil load



Double soiled egg yolk tile for measuring overall and protease performance of dishwasher detergents and hard surface cleaners. More difficult to remove than DM-21. Discriminates better, even amongst high performing detergents. Especially suitable for objective screening methods.

On smooth surface.



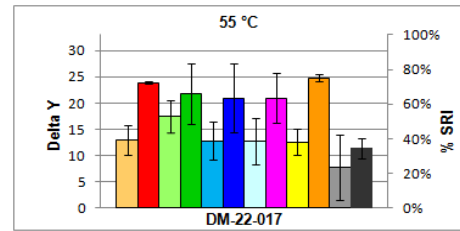
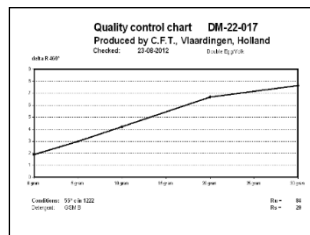
Order code:	Substrate:	Size	Yu:
DM-22	Melamine	10 x 12 cm	82
DG-22	Glass	10 x 12 cm	79
DS-22	Stainless steel	10 x 12 cm	54
DP-22	Plastic (PP)	10 x 12 cm	79
DT-22	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

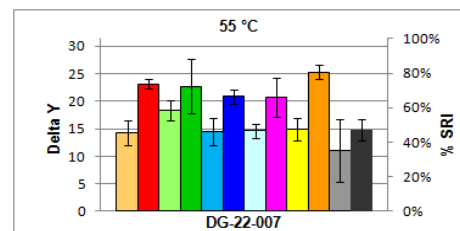
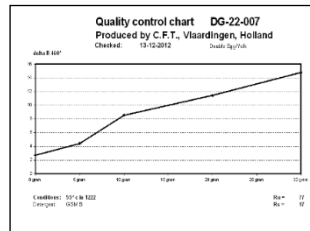
DM-22

Discriminative Power²: **5,6**
 Reproducibility Ratio: **8,3**
 Reliability Ratio: **7,5**
 Dynamic Range: **53,4**



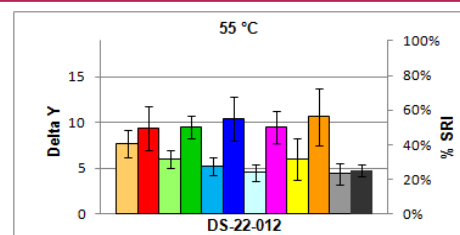
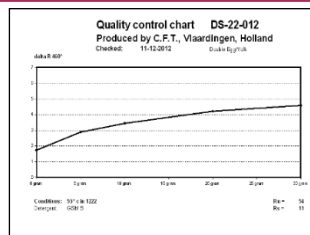
DG-22

Discriminative Power²: **5,2**
 Reproducibility Ratio: **9,2**
 Reliability Ratio: **8,3**
 Dynamic Range: **44,8**



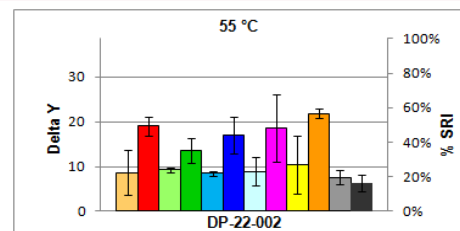
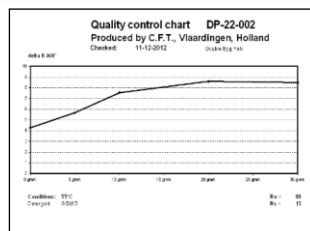
DS-22

Discriminative Power²: **4,4**
 Reproducibility Ratio: **8,2**
 Reliability Ratio: **8,1**
 Dynamic Range: **34,2**



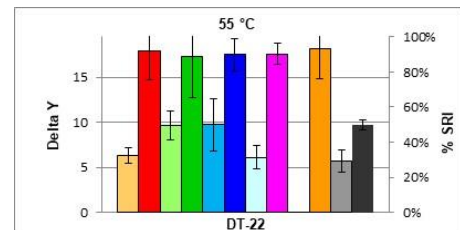
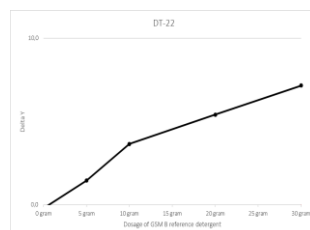
DP-22

Discriminative Power²: **5,4**
 Reproducibility Ratio: **8,9**
 Reliability Ratio: **7,9**
 Dynamic Range: **40,3**



DT-22

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-23

Egg yolk, 1.5x soil load



1.5 times soiled egg yolk tile for measuring overall and protease performance of dishwash detergents and hard surface cleaners. More difficult to remove than DM-21, but less severe than DM-22. Discriminates better, even amongst high performing detergents. Especially suitable for objective screening methods.

On smooth surface.



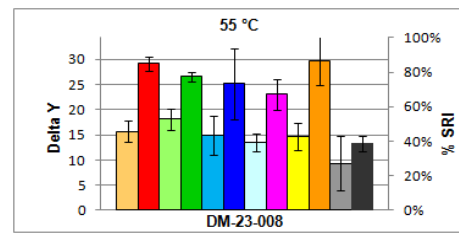
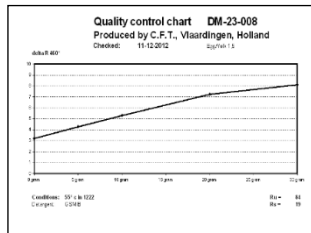
Order code:	Substrate:	Size	Yu:
DM-23	Melamine	10 x 12 cm	82
DG-23	Glass	10 x 12 cm	79
DS-23	Stainless steel	10 x 12 cm	54
DP-23	Plastic (PP)	10 x 12 cm	80
DT-23	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

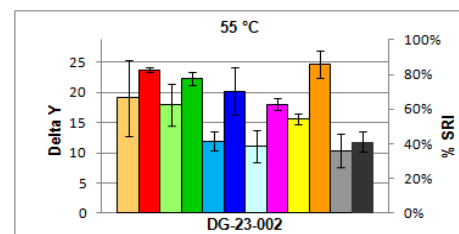
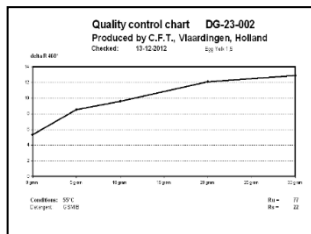
DM-23

Discriminative Power²: **6,0**
 Reproducibility Ratio: **8,7**
 Reliability Ratio: **8,0**
 Dynamic Range: **60,5**



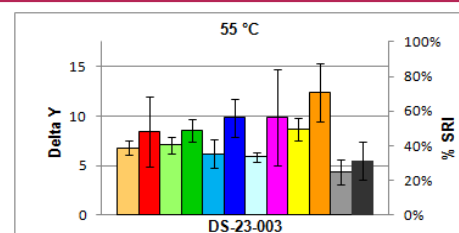
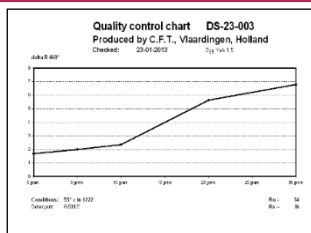
DG-23

Discriminative Power²: **5,5**
 Reproducibility Ratio: **8,5**
 Reliability Ratio: **8,5**
 Dynamic Range: **48,0**



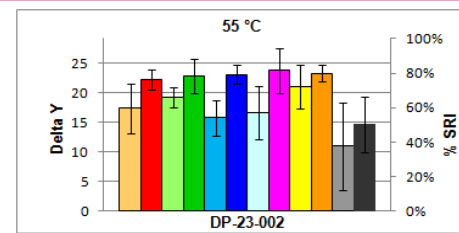
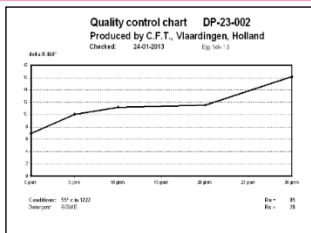
DS-23

Discriminative Power²: **4,2**
 Reproducibility Ratio: **8,3**
 Reliability Ratio: **7,8**
 Dynamic Range: **46,7**



DP-23

Discriminative Power²: **5,0**
 Reproducibility Ratio: **7,8**
 Reliability Ratio: **8,0**
 Dynamic Range: **44,1**



DT-23

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-24

Egg yolk, 0.75x soil load



0.75 times soiled egg yolk tile for measuring overall and protease performance of dishwasher detergents and hard surface cleaners. Slightly less difficult to remove than DM-21. Especially suitable for objective screening methods.

On smooth surface.



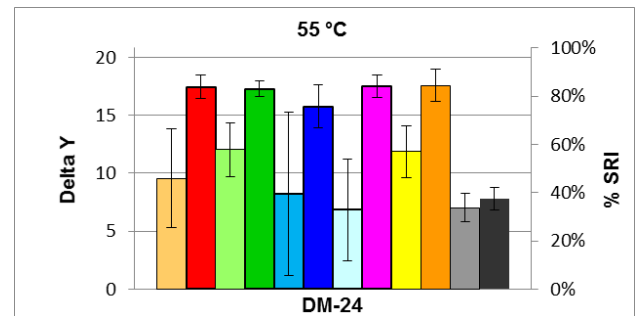
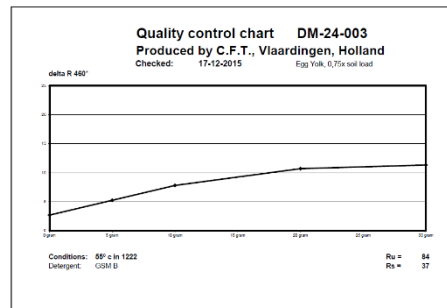
Order code:	Substrate:	Size	Yu:
DM-24	Melamine	10 x 12 cm	82
DT-24	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

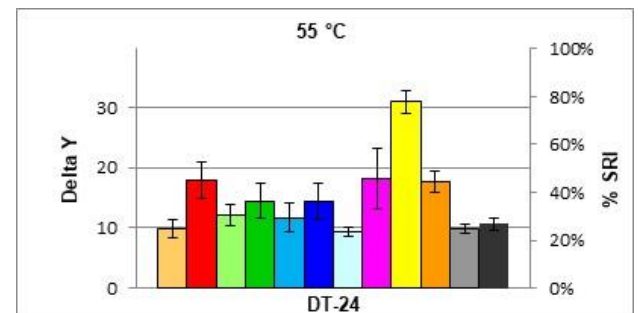
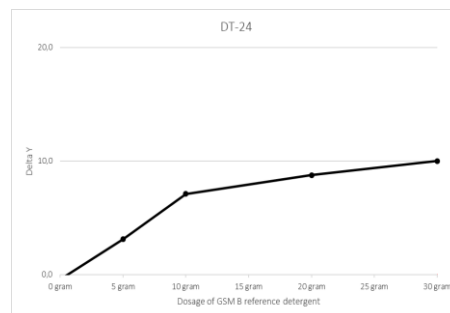
DM-24

Discriminative Power²: **5,6**
 Reproducibility Ratio: **9,1**
 Reliability Ratio: **8,9**
 Dynamic Range: **45,0**



DT-24

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-25

Boiled egg yolk, based on IKW protocol



Boiled egg yolk tile for measuring overall and protease performance of dishwash detergents and hard surface cleaners. Shows good correlation with the IKW boiled egg yolk soil. Especially suitable for objective screening methods.

On smooth surface.

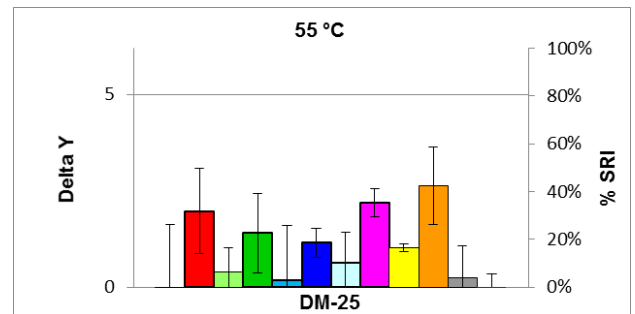
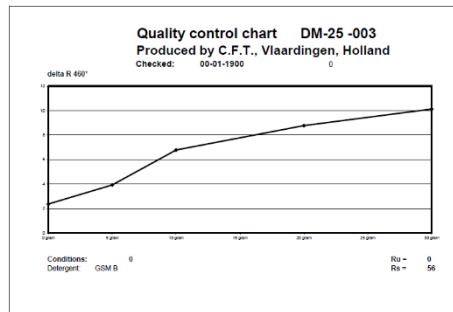


Order code:	Substrate:	Size	Yu:
DM-25	Melamine	10 x 12 cm	82
DT-25	Technical Porcelain	10 x 12 cm	92



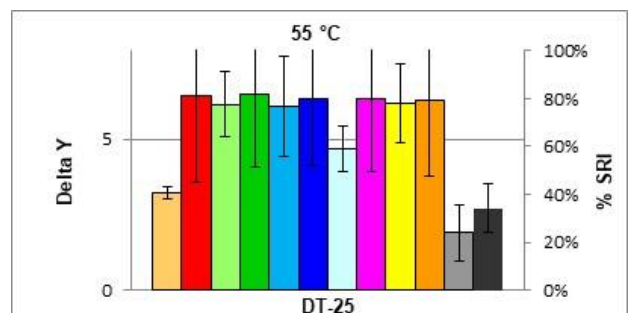
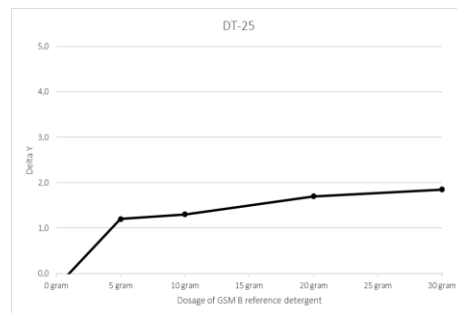
DM-25

Discriminative Power²: **6,0**
 Reproducibility Ratio: **9,7**
 Reliability Ratio: **9,5**
 Dynamic Range: **46,3**



DT-25

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-31

Egg yolk with milk



Standard soiled egg yolk with milk tile for measuring overall and protease performance of dishwasher detergents and hard surface cleaners. Especially suitable for objective screening methods.

On smooth surface.



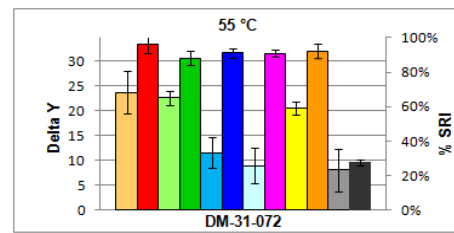
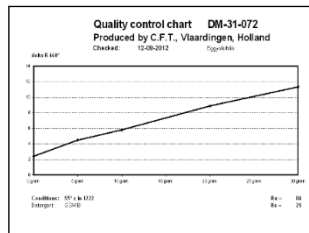
Order code:	Substrate:	Size	Yu:
DM-31	Melamine	10 x 12 cm	82
DG-31	Glass	10 x 12 cm	79
DS-31	Stainless steel	10 x 12 cm	54
DP-31	Plastic (PP)	10 x 12 cm	79
DT-31	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

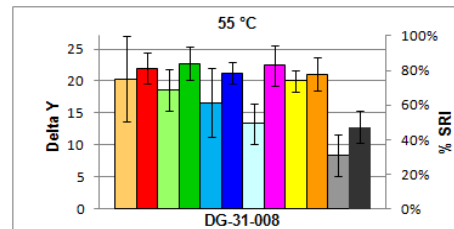
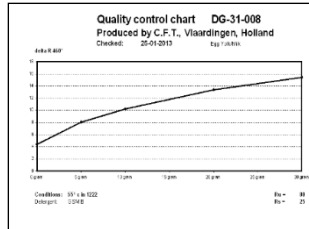
DM-31

Discriminative Power²: **6,8**
 Reproducibility Ratio: **8,2**
 Reliability Ratio: **8,4**
 Dynamic Range: **71,8**



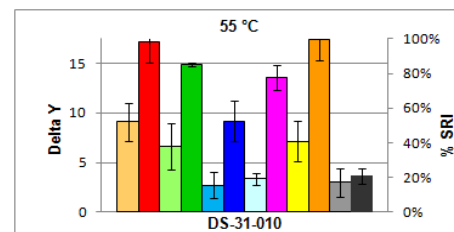
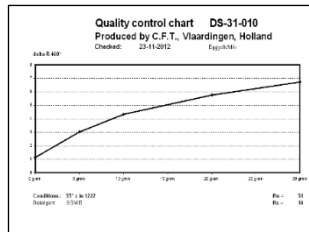
DG-31

Discriminative Power²: **5,1**
 Reproducibility Ratio: **8,3**
 Reliability Ratio: **8,3**
 Dynamic Range: **55,3**



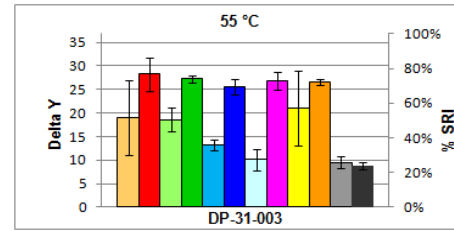
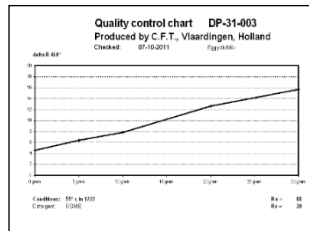
DS-31

Discriminative Power²: **5,6**
 Reproducibility Ratio: **8,2**
 Reliability Ratio: **8,3**
 Dynamic Range: **84,8**



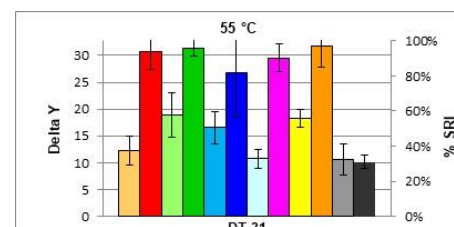
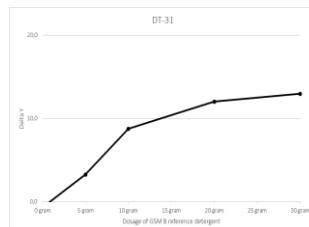
DP-31

Discriminative Power²: **6,2**
 Reproducibility Ratio: **8,9**
 Reliability Ratio: **8,4**
 Dynamic Range: **53,7**



DT-31

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-32

Egg yolk with milk, double soil load



Double soiled egg yolk with milk tile for measuring overall and protease performance of dishwash detergents and hard surface cleaners. More difficult to remove than DM-31. Discriminates better, even amongst high performing detergents. Especially suitable for objective screening methods.

On smooth surface.



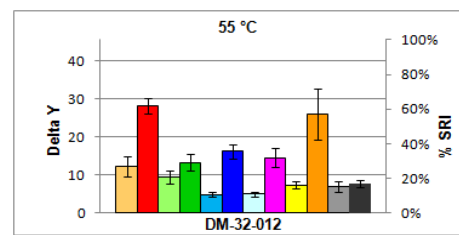
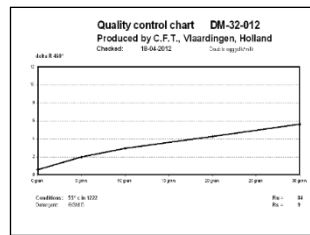
Order code:	Substrate:	Size	Yu:
DM-32	Melamine	10 x 12 cm	82
DG-32	Glass	10 x 12 cm	79
DS-32	Stainless steel	10 x 12 cm	54
DP-32	Plastic (PP)	10 x 12 cm	80
DT-32	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

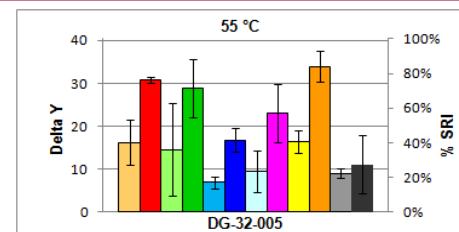
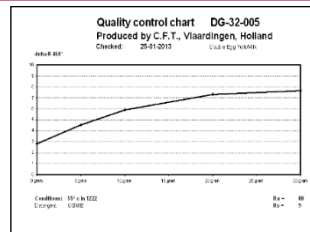
DM-32

Discriminative Power²: **6,2**
 Reproducibility Ratio: **7,8**
 Reliability Ratio: **8,3**
 Dynamic Range: **70,2**



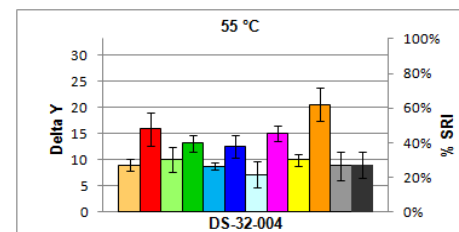
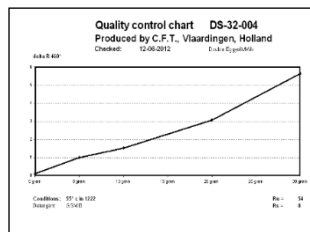
DG-32

Discriminative Power²: **6,6**
 Reproducibility Ratio: **6,4**
 Reliability Ratio: **7,1**
 Dynamic Range: **70,2**



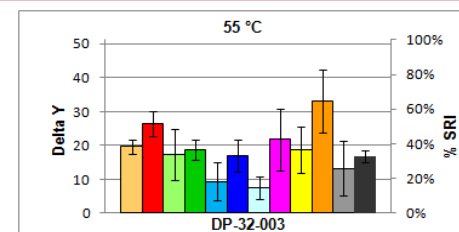
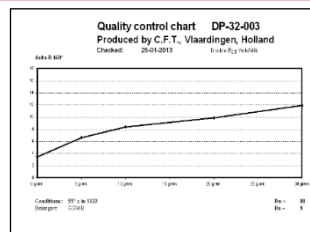
DS-32

Discriminative Power²: **4,9**
 Reproducibility Ratio: **7,9**
 Reliability Ratio: **7,4**
 Dynamic Range: **40,1**



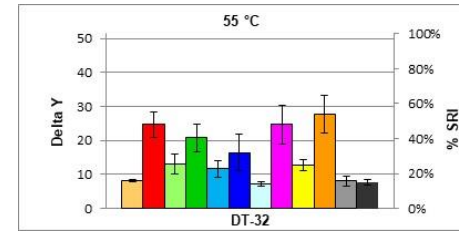
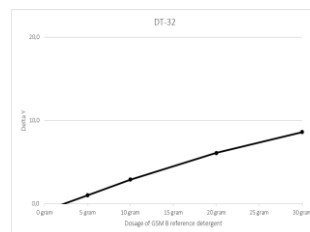
DP-32

Discriminative Power²: **5,8**
 Reproducibility Ratio: **5,7**
 Reliability Ratio: **6,7**
 Dynamic Range: **49,0**



DT-32

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-33 Egg yolk with milk, 1.5x soil load



1.5 times soiled egg yolk with milk tile, for measuring overall and protease performance of dishwasher detergents and hard surface cleaners. More difficult to remove than DM-31, but less difficult than DM-32. Especially suitable for objective screening methods.

On smooth surface.



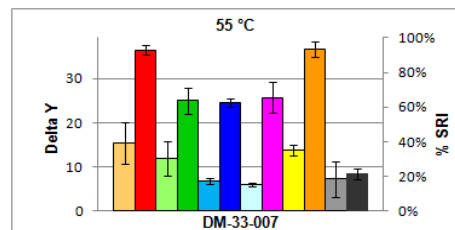
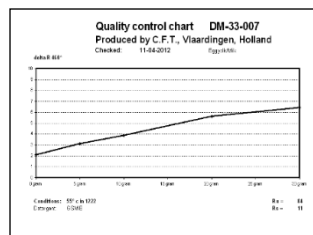
Order code:	Substrate:	Size	Yu:
DM-33	Melamine	10 x 12 cm	82
DG-33	Glass	10 x 12 cm	79
DS-33	Stainless steel	10 x 12 cm	54
DP-33	Plastic (PP)	10 x 12 cm	79
DT-33	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

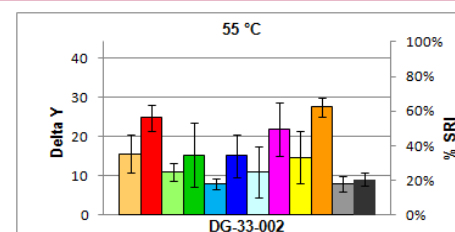
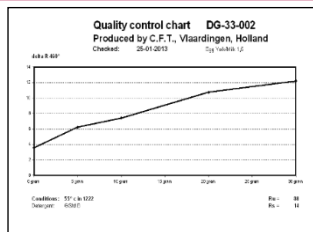
DM-33

Discriminative Power²: **7,1**
 Reproducibility Ratio: **8,0**
 Reliability Ratio: **8,2**
 Dynamic Range: **78,9**



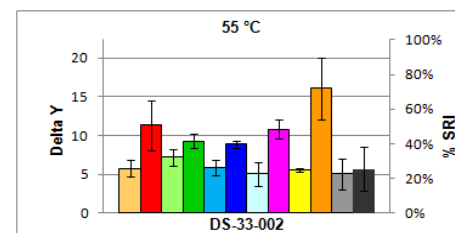
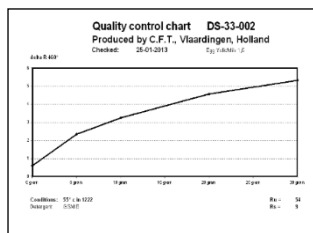
DG-33

Discriminative Power²: **5,8**
 Reproducibility Ratio: **5,3**
 Reliability Ratio: **6,9**
 Dynamic Range: **43,9**



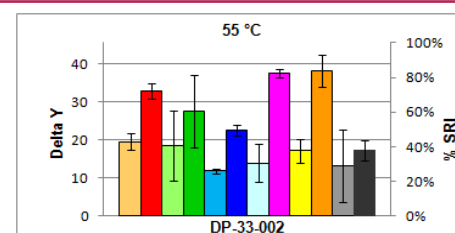
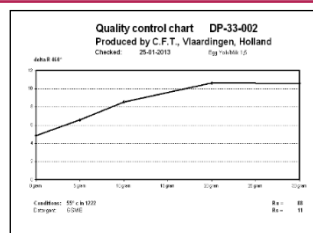
DS-33

Discriminative Power²: **4,7**
 Reproducibility Ratio: **7,1**
 Reliability Ratio: **7,8**
 Dynamic Range: **54,9**



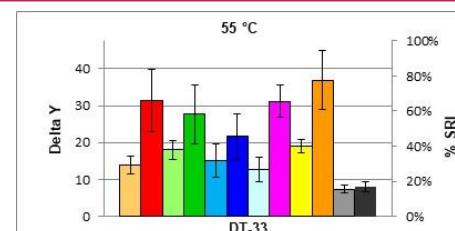
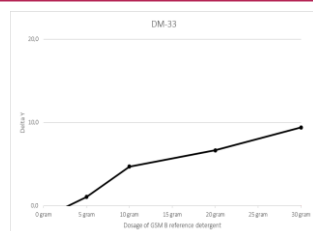
DP-33

Discriminative Power²: **6,6**
 Reproducibility Ratio: **8,4**
 Reliability Ratio: **6,8**
 Dynamic Range: **58,2**



DT-33

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



DM-34

Egg yolk with milk, 0.75x soil load



0.75 times soiled egg yolk with milk tile, for measuring overall and protease performance of dishwasher detergents and hard surface cleaners. Slightly less difficult to remove than DM-31. Especially suitable for objective screening methods.

On smooth surface.



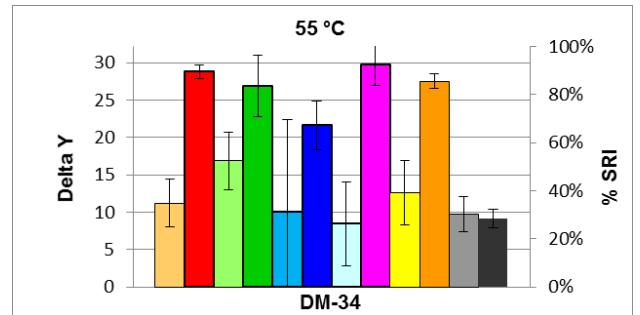
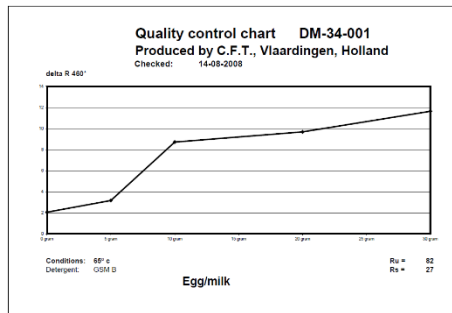
Order code:	Substrate:	Size	Yu:
DM-34	Melamine	10 x 12 cm	82
DT-34	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

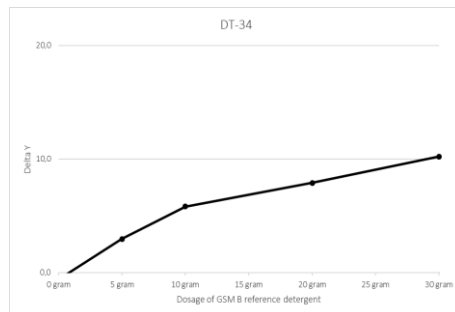
DM-34

Discriminative Power²: **8,4**
 Reproducibility Ratio: **7,5**
 Reliability Ratio: **7,7**
 Dynamic Range: **65,3**



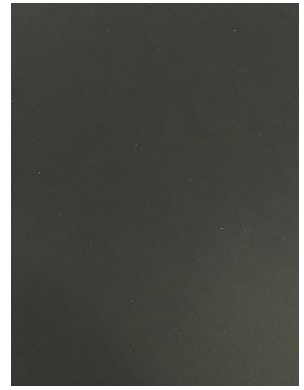
DT-34

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



Graphs
 unavailable

DM-40X Olive oil with pigment



Fatty stain for dishwash tests. The olive oil is coloured with pigment to make it measurable with a spectrophotometer.

On smooth surface.

Order code:	Substrate:	Size	Yu:
DM-40 X	Melamine	10 x 12 cm	82
DT-40 X	Technical Porcelain	10 x 12 cm	92

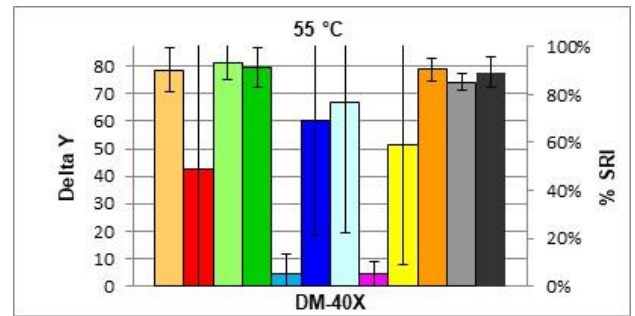
Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-40 X

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable



DT-40X

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable

DM-42

Blueberry yoghurt



A relatively easy to clean blueberry yoghurt stain. Unfortunately the results can be inhomogeneous due to agitation effects.

On smooth surface.



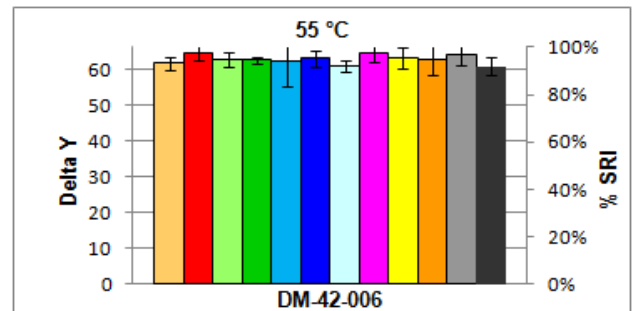
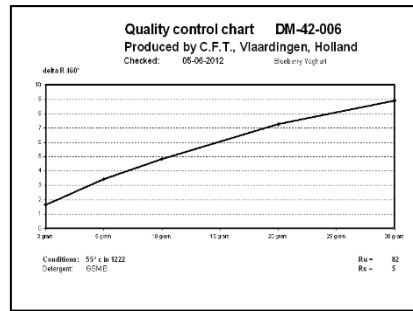
Order code:	Substrate:	Size	Yu:
DM-42	Melamine	10 x 12 cm	82
DP-42	Plastic (PP)	10 x 12 cm	79
DT-42	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

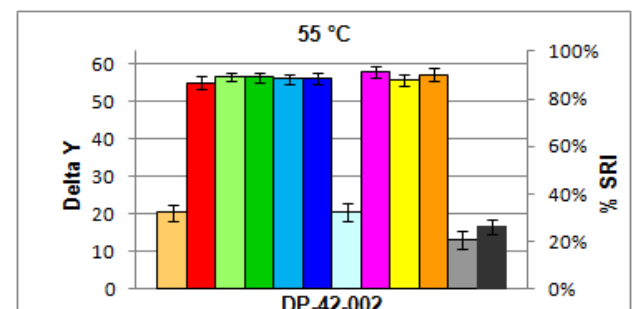
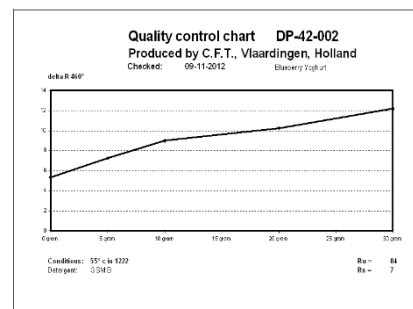
DM-42

Discriminative Power²: **3,5**
 Reproducibility Ratio: **4,8**
 Reliability Ratio: **8,6**
 Dynamic Range: **5,5**



DP-42

Discriminative Power²: **8,1**
 Reproducibility Ratio: **4,8**
 Reliability Ratio: **8,6**
 Dynamic Range: **5,5**



DM-44

IKW handdish soil normal



Fatty soil for dishwash tests. This stain is the soil used in the IKW handdish test. To make this stain more stubborn and useable in dishwash tests, it is baked in the oven.

On smooth surface.

Order code:	Substrate:	Size	Yu:
DM-44	Melamine	10 x 12 cm	82
DT-44	Technical Porcelain	10 x 12 cm	92

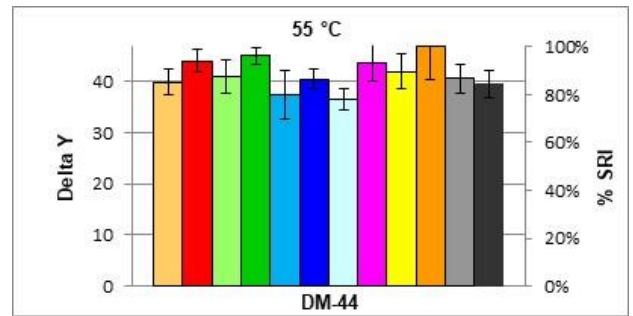
Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-44

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs
unavailable



DT-44

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable

DM-45 Fat mix with food colourant



Fatty stain for dishwash tests. The mix of different fats is coloured with an edible colourant.

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-45	Melamine	10 x 12 cm	82
DT-45	Technical Porcelain	10 x 12 cm	92

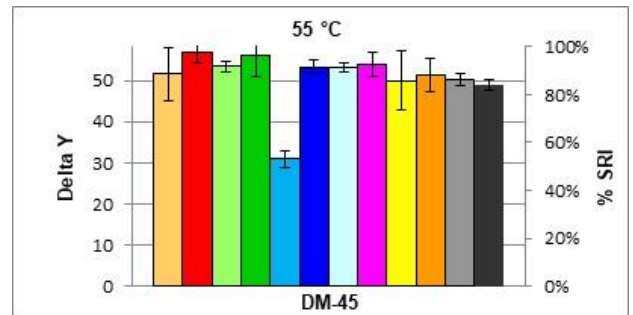
Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-45

Discriminative Power²: 3,5
 Reproducibility Ratio: 4,8
 Reliability Ratio: 8,6
 Dynamic Range: 5,5

Graphs
unavailable



DT-45

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable

DM-46 Gravy



Fatty stain for dishwash test. The stain is made with gravy, a very common stain in consumer kitchens.

On smooth surface.

Order code:	Substrate:	Size	Yu:
DM-46	Melamine	10 x 12 cm	82
DT-46	Technical Porcelain	10 x 12 cm	92

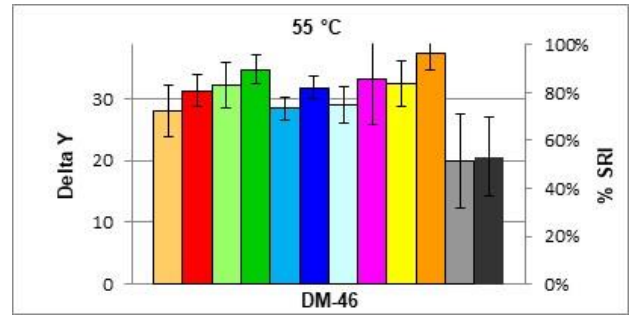
Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-46

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs
unavailable



DT-46

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graphs unavailable

DS-50

Corn oil

H



Corn oil on stainless steel tiles. Heated up to 180°C to polymerize the oil completely. Very hard to remove stain

Also available with olive oil (DS-50X), Soybean oil (DS-50Y) and sunflower oil (DS-50Z)

On extra smooth surface.



Order code:	Substrate:	Size	Yu:
DS-50	Melamine	10 x 12 cm	72

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DS-50

Discriminative Power²: **N/A**
 Reproducibility Ratio: **N/A**
 Reliability Ratio: **N/A**
 Dynamic Range: **N/A**

Graphs unavailable

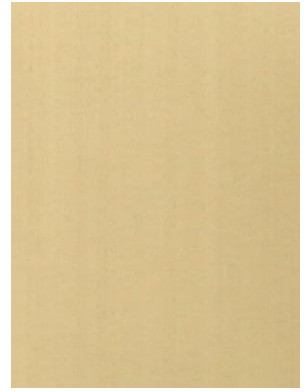
DM-51

Red wine



Standard soiled red wine tile for measuring bleach performance of dishwash detergents and hard surface cleaners. Especially suitable for objective screening methods.

On rough surface.



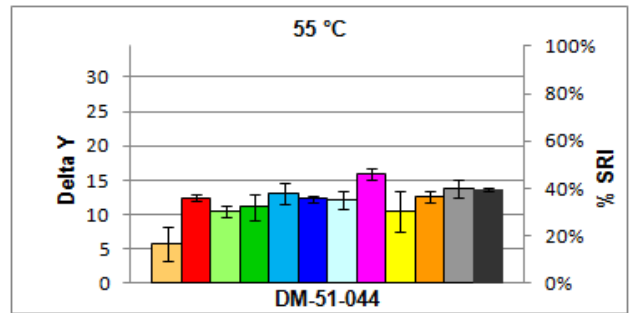
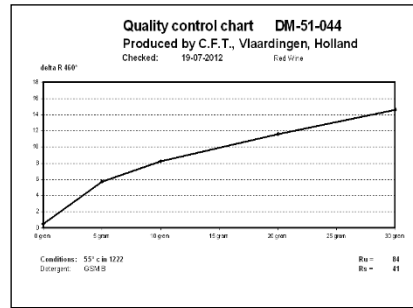
Order code:	Substrate:	Size	Yu:
DM-51	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-51

Discriminative Power²: **4,4**
 Reproducibility Ratio: **8,6**
 Reliability Ratio: **9,0**
 Dynamic Range: **28,2**



DM-54

Oatmeal, coloured with chocolate

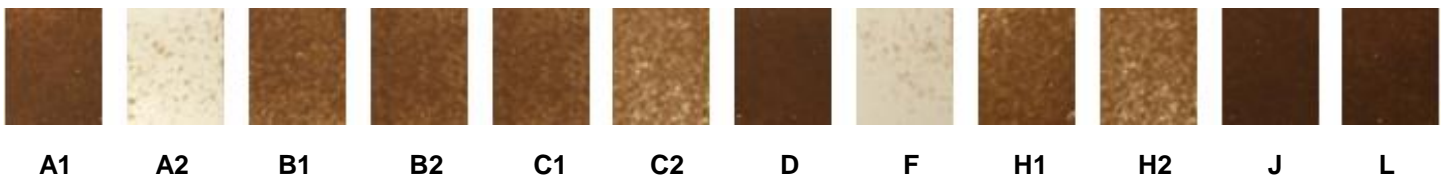


The oatmeal represents the cellulose soil group, the chocolate is added to colour the oatmeal and show visual effects. Especially suitable for objective screening methods. Sometimes a burn-in effect of the soil is visible. The after wash results can be very inhomogeneous due to influence of agitation.



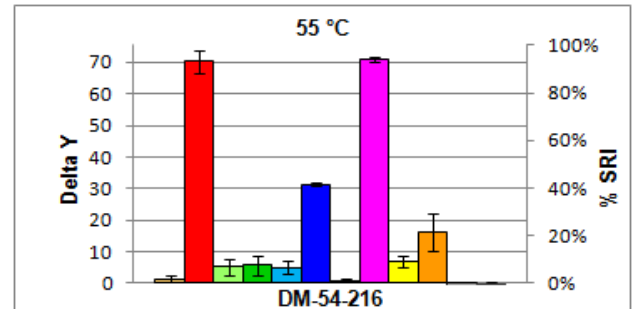
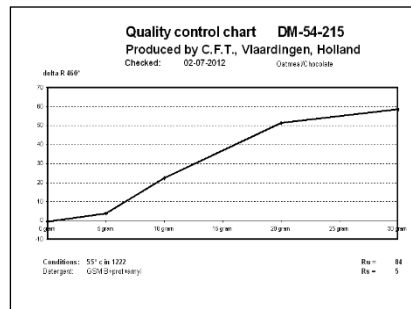
On smooth surface.

Order code:	Substrate:	Size	Yu:
DM-54	Melamine	10 x 12 cm	82
DP-54	Plastic (PP)	10 x 12 cm	79
DT-54	Technical Porcelain	10 x 12 cm	92



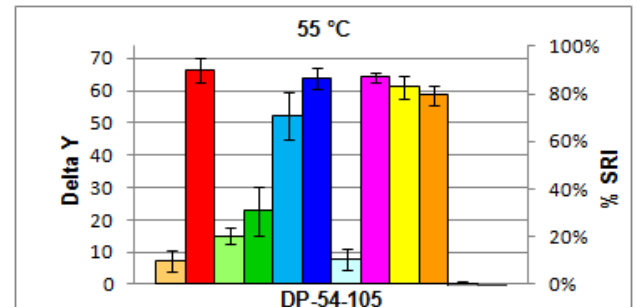
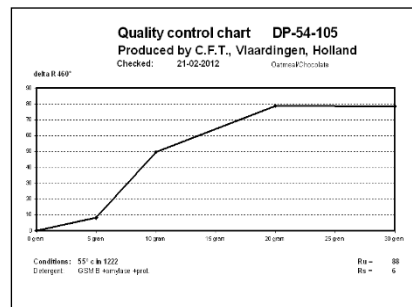
DM-54

Discriminative Power²: **9,3**
 Reproducibility Ratio: **7,2**
 Reliability Ratio: **5,0**
 Dynamic Range: **95,3**



DP-54

Discriminative Power²: **10,0**
 Reproducibility Ratio: **5,9**
 Reliability Ratio: **3,0**
 Dynamic Range: **91,0**



DT-54

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-60 Spinach



The spinach is not only suitable for cleaning comparison and particle removal, but the removed particles will also show possible redeposition effects in the machine (e.g. with DP H/I). Especially suitable for objective screening methods.

On smooth surface.



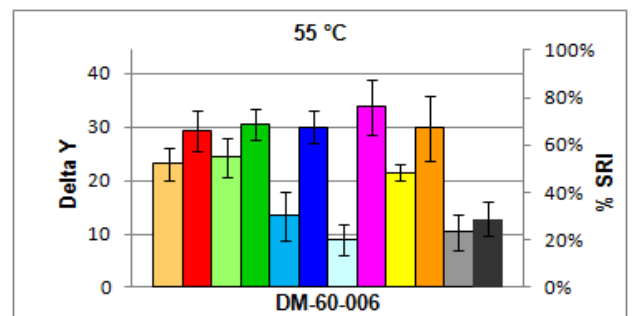
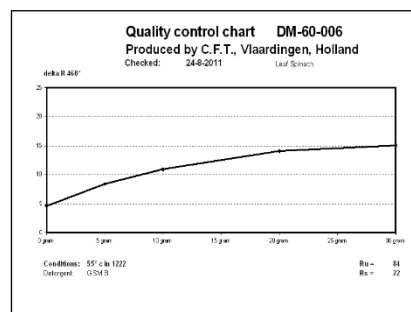
Order code:	Substrate:	Size	Yu:
DM-60	Melamine	10 x 12 cm	82
DT-60	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-60

Discriminative Power²: **6,5**
 Reproducibility Ratio: **7,6**
 Reliability Ratio: **7,7**
 Dynamic Range: **55,6**



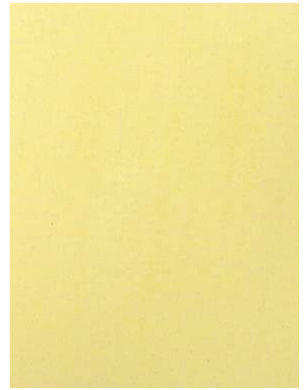
DT-60

Discriminative Power²: **6,5**
 Reproducibility Ratio: **7,6**
 Reliability Ratio: **7,7**
 Dynamic Range: **55,6**

Graphs unavailable

DM-62

Curry



Very stubborn, difficult to remove curry stain, for measuring bleach performance of dishwash detergents and hard surface cleaners. Especially suitable for objective screening methods.

On rough surface.

Order code:	Substrate:	Size	Yu:
DM-62	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

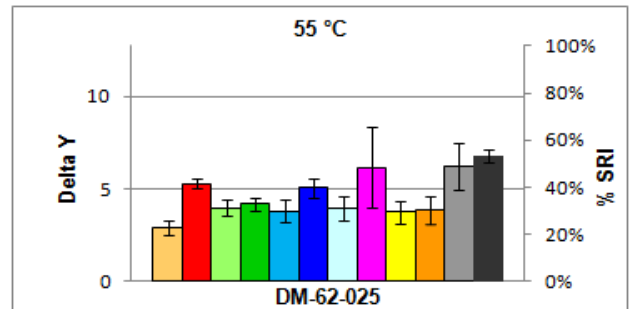
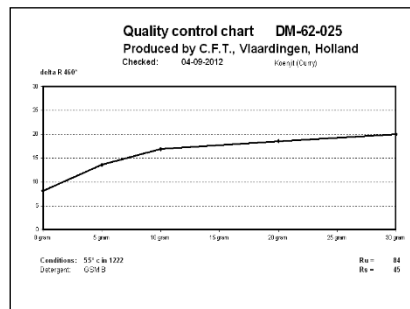
DM-62

Discriminative Power²: **3,7**

Reproducibility Ratio: **9,0**

Reliability Ratio: **9,4**

Dynamic Range: **23,6**



DG-70

Limescale



Limescale is one of the problems consumers encounter while using a dishwasher. The limescale is available on glass and on stainless steel.

On smooth glass.



Order code:	Substrate:	Size	Yu:
DG-70	Glass	10 x 12 cm	79
DS-70	Stainless steel	10 x 12 cm	54

Graphs unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DG-70

Discriminative Power²: 3,7
Reproducibility Ratio: 9,0
Reliability Ratio: 9,4
Dynamic Range: 23,6

Graphs unavailable

DS-70

Discriminative Power²: 3,7
Reproducibility Ratio: 9,0
Reliability Ratio: 9,4
Dynamic Range: 23,6

Graphs unavailable

DM-71

Mixed (corn/rice) starch, coloured with food colourant



Tile soiled with mixed (corn/rice) starch. For measuring performance of amylase enzymes in dishwash detergents, coloured with a food relevant colourant. Very good correlation with IKW mixed starch plates. Especially suitable for objective screening methods.

On rough surface.



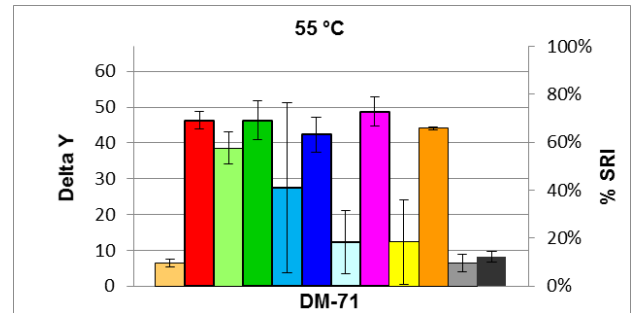
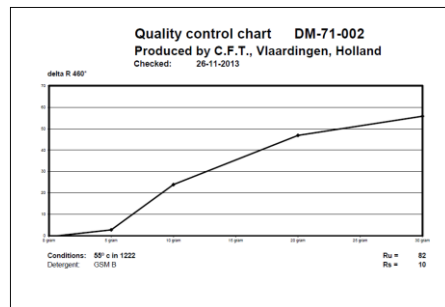
Order code:	Substrate:	Size	Ru:
DM-71	Melamine	10 x 12 cm	83
DT-71	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

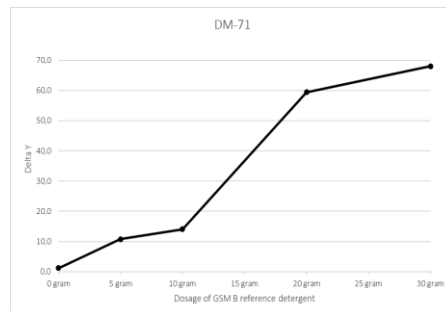
DM-71

Discriminative Power²: 7,9
 Reproducibility Ratio: 6,7
 Reliability Ratio: 3,5
 Dynamic Range: 62,7



DT-71

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a



Graph
unavailable

DM-73

Barilla pasta, used in IKW dishwash method, coloured with food colourant



Tile soiled with Barilla pasta, coloured with a food relevant colourant. Designed for measuring the performance of amylase enzymes in dishwash detergents. Very good correlation with IKW pasta plates. Especially suitable for objective screening methods.

On rough surface.

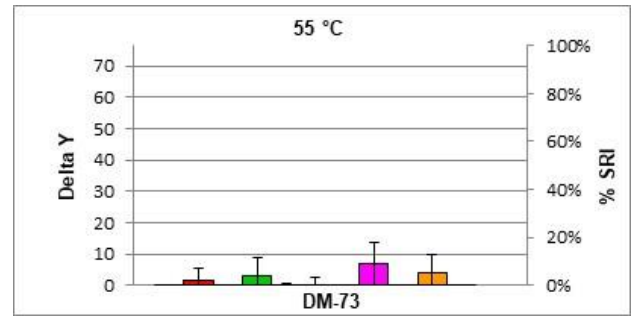
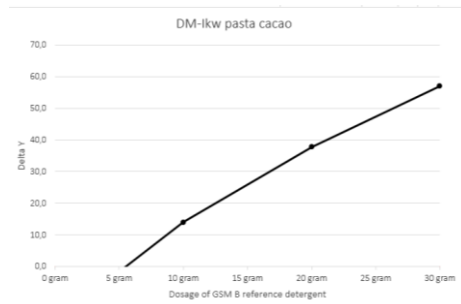
Order code:	Substrate:	Size	Ru:
DM-73	Melamine	10 x 12 cm	83
DT-73	Technical Porcelain	10 x 12 cm	92

Images unavailable

A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-73

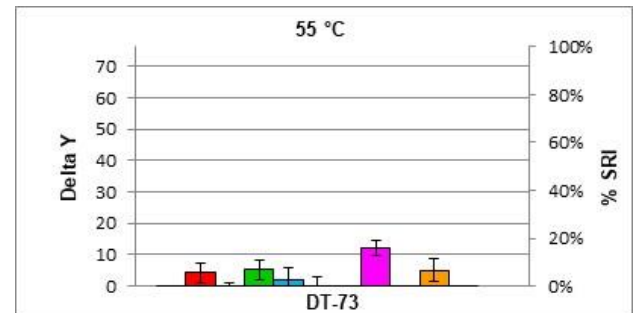
Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a



DT-73

Discriminative Power²: n/a
 Reproducibility Ratio: n/a
 Reliability Ratio: n/a
 Dynamic Range: n/a

Graph unavailable



DM-75

Chocolate pudding



Standard soiled chocolate pudding tile containing corn starch. For measuring performance of the combination of protease and amylase enzymes in dishwash detergents. Also very responsive to agitation and therefore machine evaluation. Especially suitable for objective screening methods.

On smooth surface.



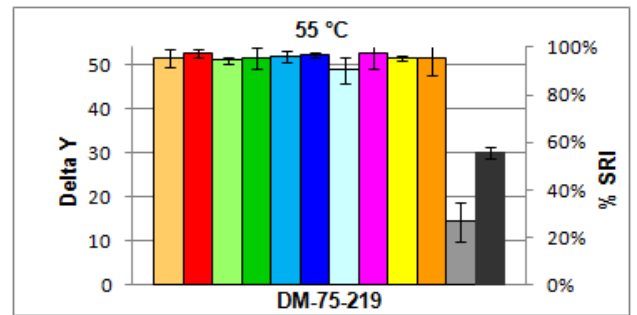
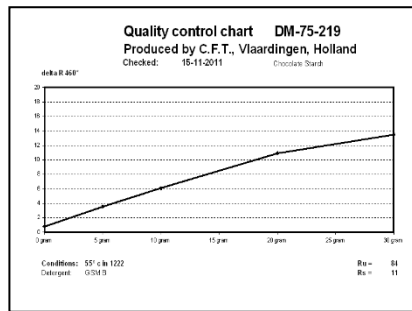
Order code:	Substrate:	Size	Yu:
DM-75	Melamine	10 x 12 cm	82
DT-75	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-75

Discriminative Power²: **5,9**
 Reproducibility Ratio: **8,7**
 Reliability Ratio: **8,3**
 Dynamic Range: **70,8**



DT-75

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-76

Corn starch, coloured



Standard soiled coloured corn starch tile for measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods.

On rough surface.



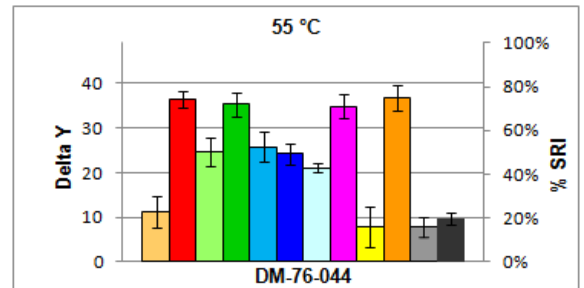
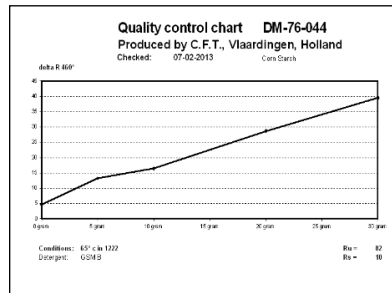
Order code:	Substrate:	Size	Ru:
DM-76	Melamine	10 x 12 cm	83
DG-76	Glass	10 x 12 cm	54
DS-76	Stainless steel	10 x 12 cm	51
DT-76	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

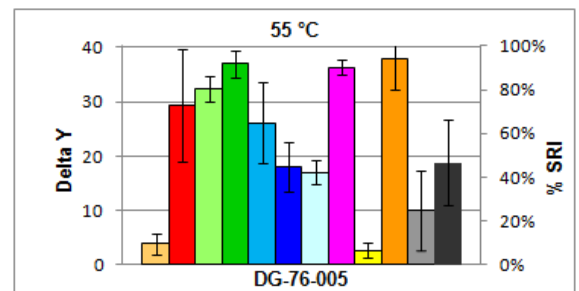
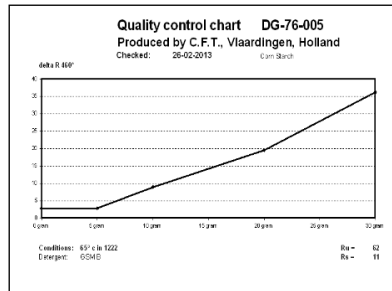
DM-76

Discriminative Power²: **7,1**
 Reproducibility Ratio: **9,1**
 Reliability Ratio: **8,0**
 Dynamic Range: **58,7**



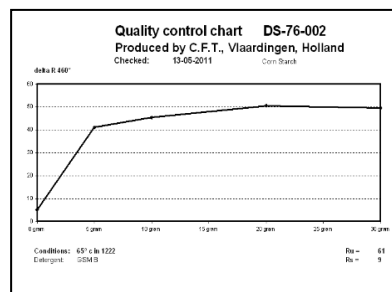
DG-76

Discriminative Power²: **7,4**
 Reproducibility Ratio: **7,1**
 Reliability Ratio: **6,8**
 Dynamic Range: **88,9**



DS-76

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**



Graph unavailable

DT-76

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph unavailable

DM-176 Corn starch, coloured, extra severe

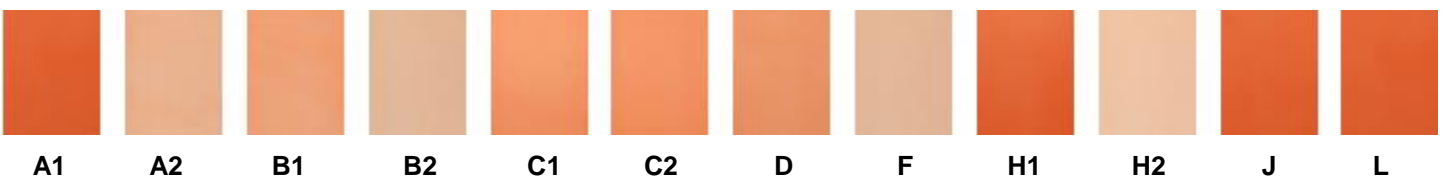


Extra aged version of DM-76 coloured corn starch tile. More stubborn and less easy to remove than DM-76. For measuring performance of amylase enzymes in dishwasher detergents.

On rough surface.

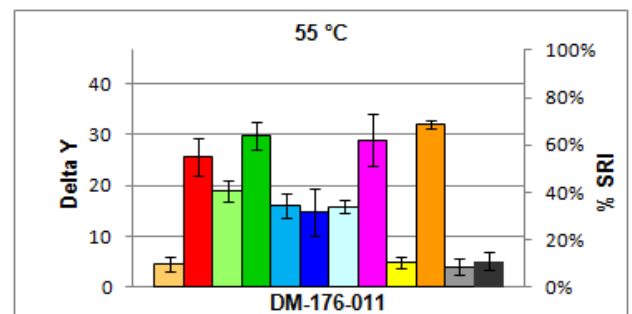
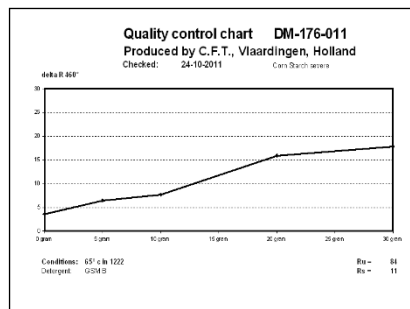


Order code:	Substrate:	Size	Ru:
DM-176	Melamine	10 x 12 cm	83
DG-176	Glass	10 x 12 cm	54
DT-176	Technical Porcelain	10 x 12 cm	92



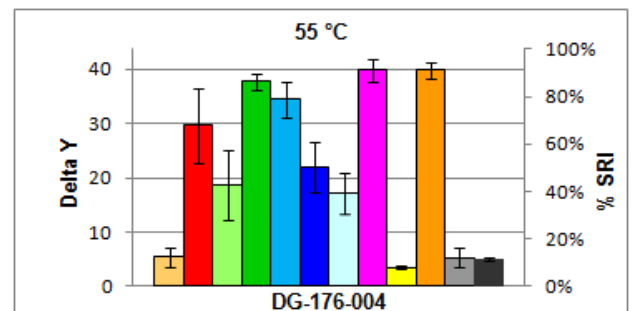
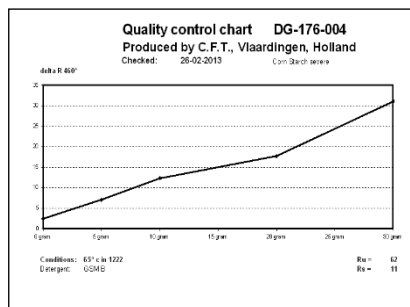
DM-176

Discriminative Power²: **6,9**
 Reproducibility Ratio: **8,5**
 Reliability Ratio: **7,9**
 Dynamic Range: **58,8**



DG-176

Discriminative Power²: **7,8**
 Reproducibility Ratio: **8,6**
 Reliability Ratio: **7,5**
 Dynamic Range: **84,1**



DT-176

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

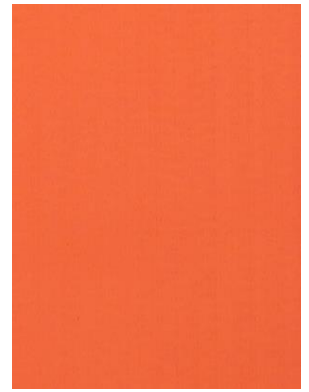
Graphs unavailable

DM-276 Corn starch, coloured, double soil load

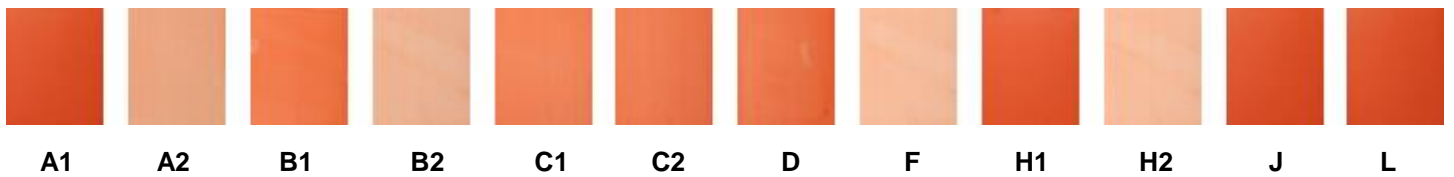


Double soiled coloured corn starch tile for measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods. Due to the double amount of starch it presents a bigger challenge to the enzymes.

On rough surface.

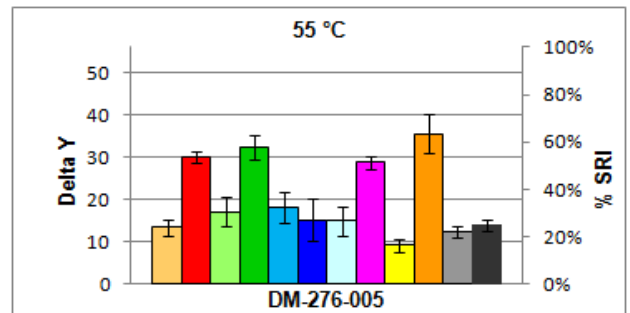
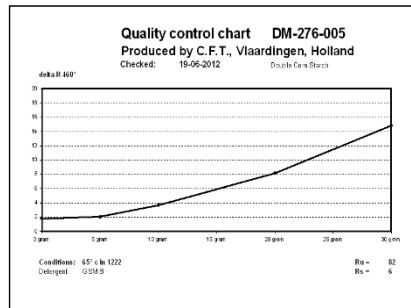


Order code:	Substrate:	Size	Ru:
DM-276	Melamine	10 x 12 cm	83
DG-276	Glass	10 x 12 cm	54
DT-276	Technical Porcelain	10 x 12 cm	92



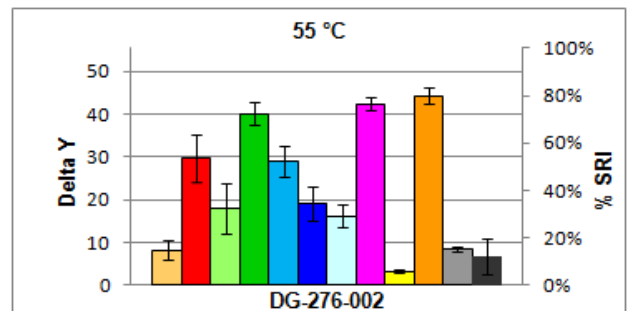
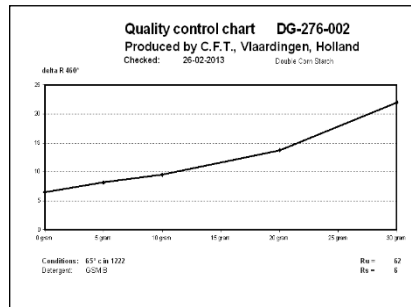
DM-276

Discriminative Power²: **6,5**
 Reproducibility Ratio: **8,5**
 Reliability Ratio: **7,8**
 Dynamic Range: **45,6**



DG-276

Discriminative Power²: **7,8**
 Reproducibility Ratio: **8,6**
 Reliability Ratio: **7,3**
 Dynamic Range: **74,1**



DT-276

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

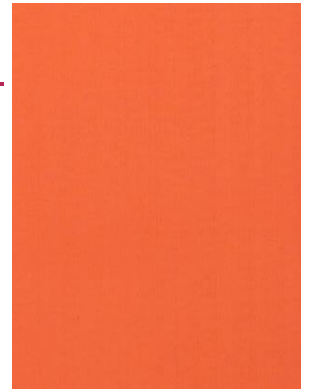
Graphs unavailable

DM-376 Corn starch, coloured, triple soil load



Triple soiled coloured corn starch tile for measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods. Due to the triple amount of starch it presents a bigger challenge to the enzymes.

On rough surface.



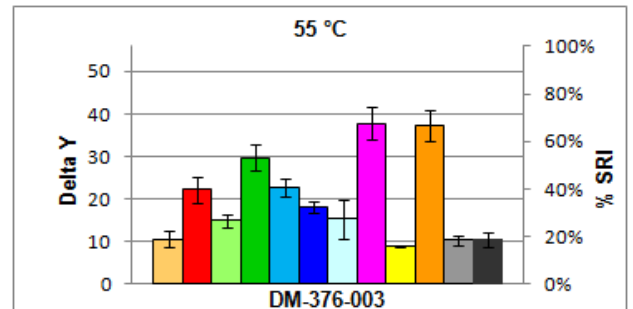
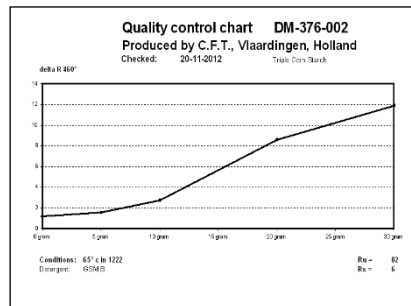
Order code:	Substrate:	Size	Ru:
DM-376	Melamine	10 x 12 cm	83
DG-376	Glass	10 x 12 cm	54
DT-376	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

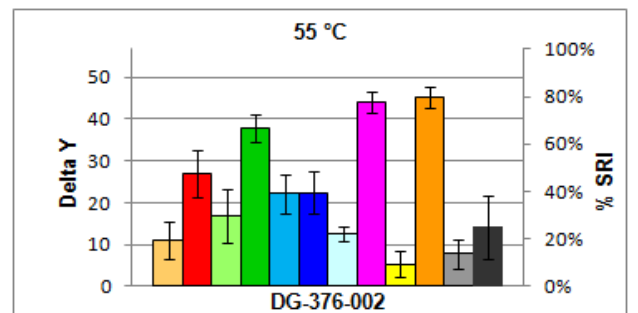
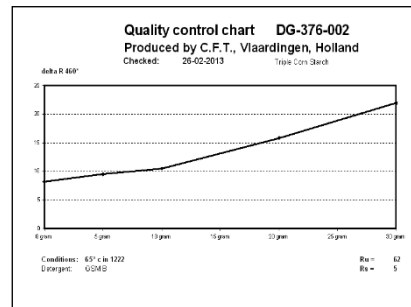
DM-376

Discriminative Power²: **6,7**
 Reproducibility Ratio: **7,6**
 Reliability Ratio: **8,0**
 Dynamic Range: **52,0**



DG-376

Discriminative Power²: **7,5**
 Reproducibility Ratio: **8,5**
 Reliability Ratio: **6,2**
 Dynamic Range: **70,5**



DT-376

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-77

Mixed (corn/rice) starch, coloured



Standard soiled coloured mixed (corn/rice) starch tile for measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods.

On rough surface



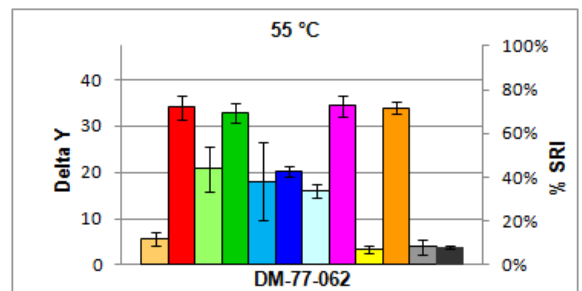
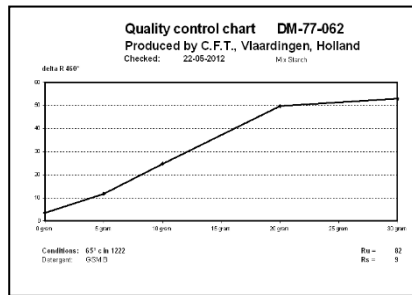
Order code:	Substrate:	Size	Ru:
DM-77	Melamine	10 x 12 cm	83
DG-77	Glass	10 x 12 cm	54
DS-77	Stainless Steel	10 x 12 cm	51
DT-77	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

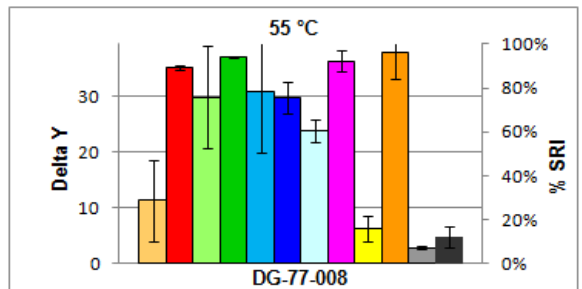
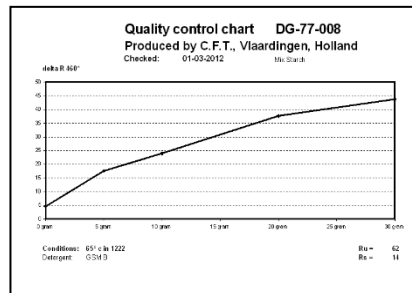
DM-77

Discriminative Power²: **7,4**
 Reproducibility Ratio: **9,1**
 Reliability Ratio: **8,2**
 Dynamic Range: **65,9**



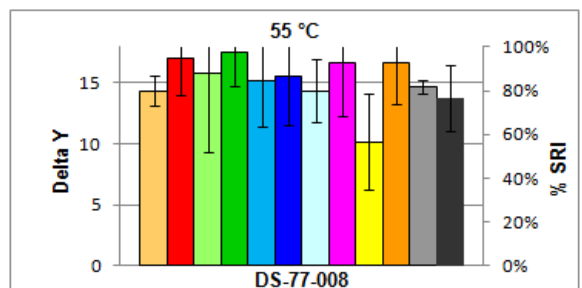
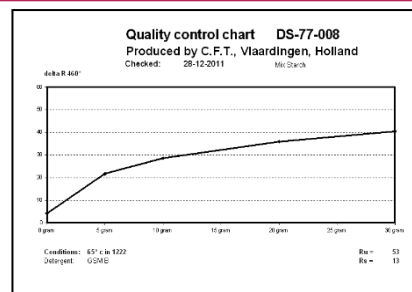
DG-77

Discriminative Power²: **7,4**
 Reproducibility Ratio: **9,2**
 Reliability Ratio: **7,7**
 Dynamic Range: **88,7**



DS-77

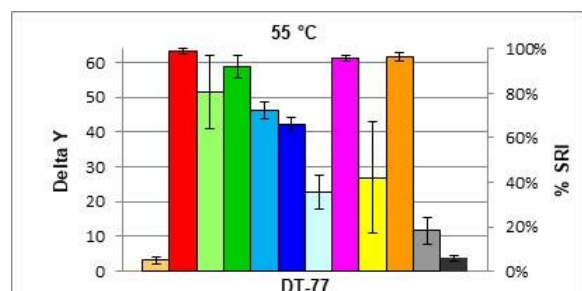
Discriminative Power²: **3,9**
 Reproducibility Ratio: **7,0**
 Reliability Ratio: **6,5**
 Dynamic Range: **37,5**



DT-77

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph unavailable



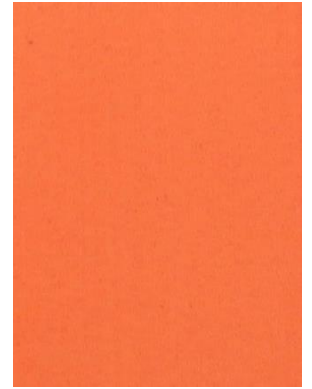
DM-177

Mixed (corn/rice) starch, coloured, extra severe ★^A



Extra aged version of DM-77 coloured mix (corn/rice) starch tile. More stubborn and less easy to remove than DM-77. For measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods.

On rough surface.



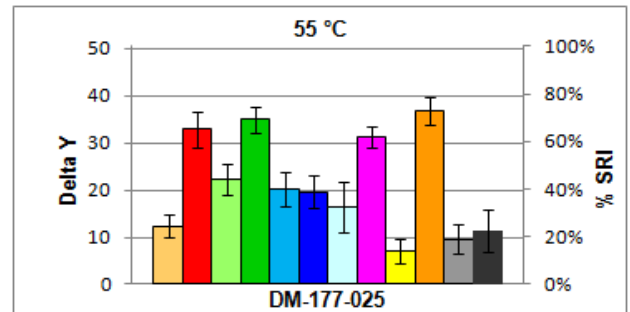
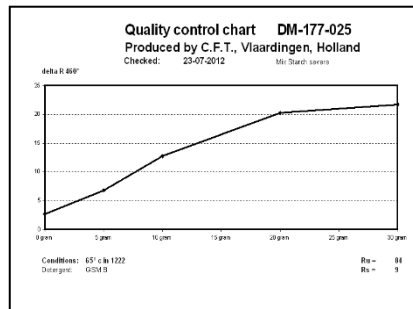
Order code:	Substrate:	Size	Ru:
DM-177	Melamine	10 x 12 cm	83
DG-177	Glass	10 x 12 cm	54
DT-177	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

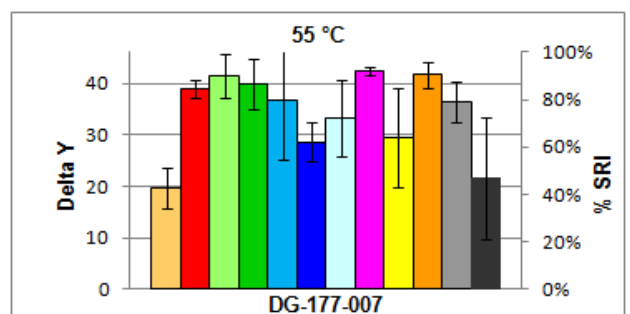
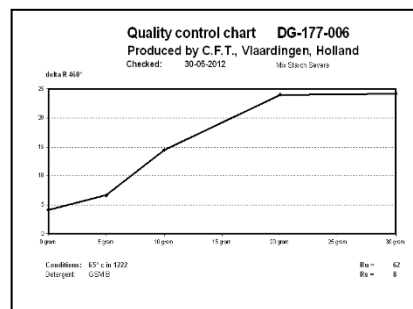
DM-177

Discriminative Power²: **6,9**
 Reproducibility Ratio: **8,0**
 Reliability Ratio: **7,5**
 Dynamic Range: **57,7**



DG-177

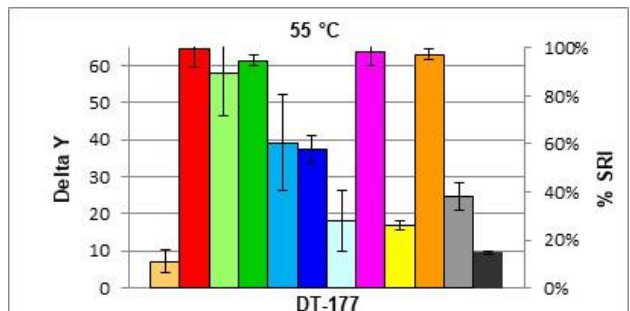
Discriminative Power²: **6,2**
 Reproducibility Ratio: **7,6**
 Reliability Ratio: **6,4**
 Dynamic Range: **46,9**



DT-177

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph
unavailable



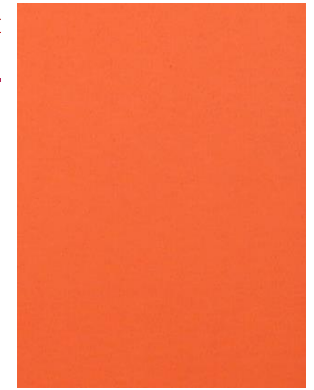
DM-277

Mixed (corn/rice) starch, coloured, double soil load ★



Double soiled coloured mixed (corn/rice) starch tile. More stubborn and less easy to remove than DM-77. For measuring performance of amylase enzymes in dishwasher detergents. Especially suitable for objective screening methods. Due to the double amount of starch it presents a bigger challenge to the enzymes.

On rough surface.

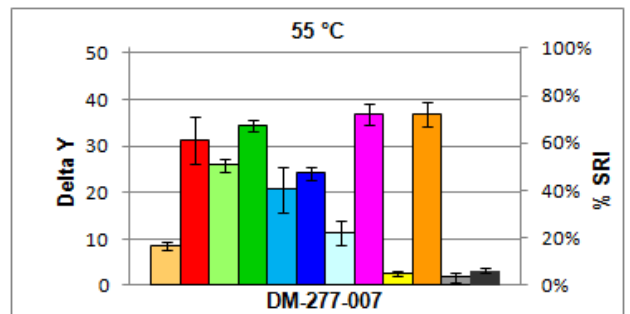
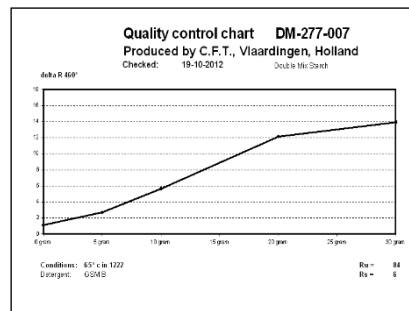


Order code:	Substrate:	Size	Ru:
DM-277	Melamine	10 x 12 cm	83
DG-277	Glass	10 x 12 cm	54
DT-277	Technical Porcelain	10 x 12 cm	92



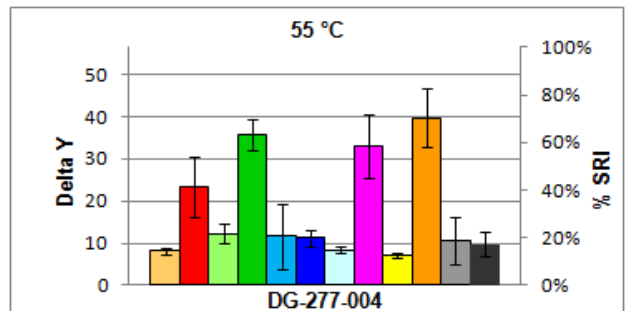
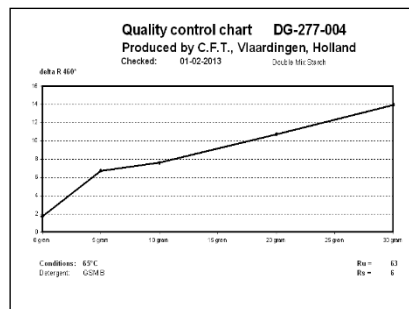
DM-277

Discriminative Power²: **7,7**
 Reproducibility Ratio: **8,1**
 Reliability Ratio: **8,4**
 Dynamic Range: **68,2**



DG-277

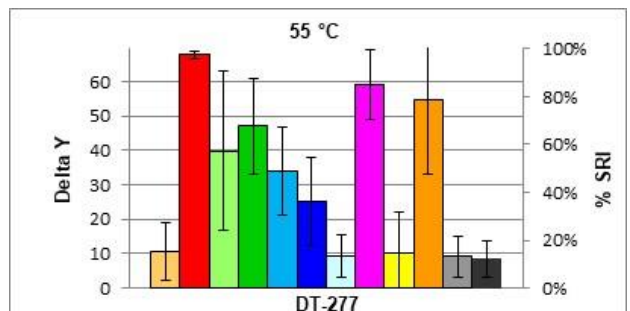
Discriminative Power²: **7,7**
 Reproducibility Ratio: **8,1**
 Reliability Ratio: **8,4**
 Dynamic Range: **68,2**



DT-277

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph
unavailable

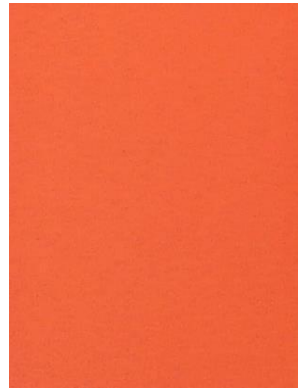


DM-377 Mixed (corn/rice) starch, coloured, triple soil load ★^A



Triple soiled coloured mixed (corn/rice) starch tile. More stubborn and less easy to remove than DM-77. For measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods. Due to the triple amount of starch it presents a bigger challenge to the enzymes.

On rough surface.



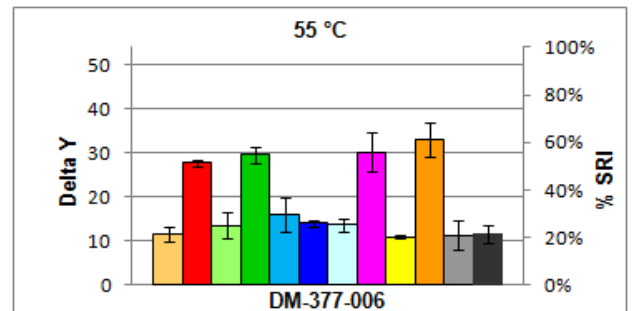
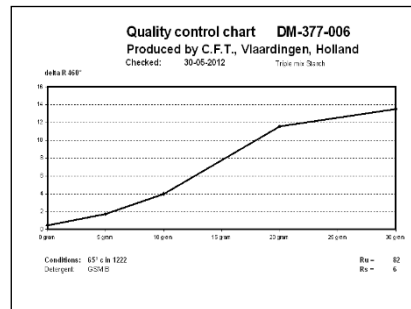
Order code:	Substrate:	Size	Ru:
DM-377	Melamine	10 x 12 cm	83
DG-377	Glass	10 x 12 cm	54
DT-377	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

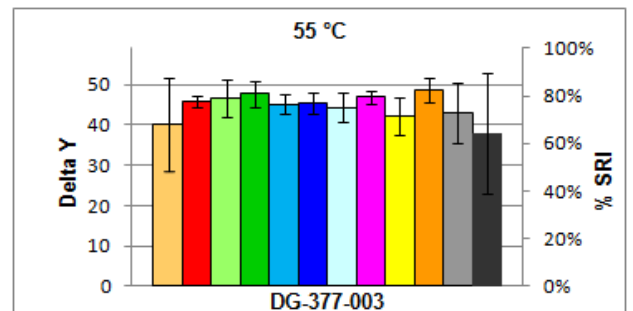
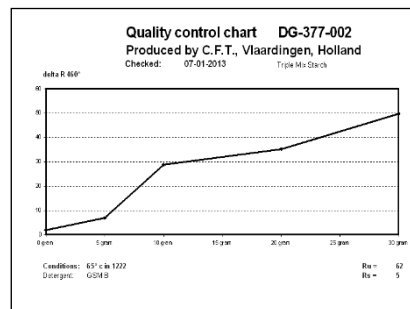
DM-377

Discriminative Power²: **6,3**
 Reproducibility Ratio: **8,2**
 Reliability Ratio: **8,1**
 Dynamic Range: **40,3**



DG-377

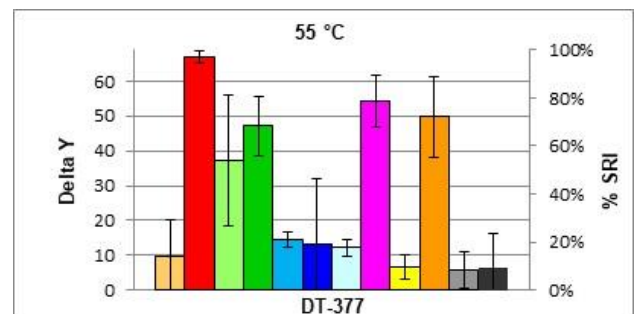
Discriminative Power²: **4,5**
 Reproducibility Ratio: **8,0**
 Reliability Ratio: **6,9**
 Dynamic Range: **18,0**



DT-377

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph
unavailable



DM-78

Rice starch, coloured



Standard soiled coloured rice starch tile for measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods.

On rough surface.



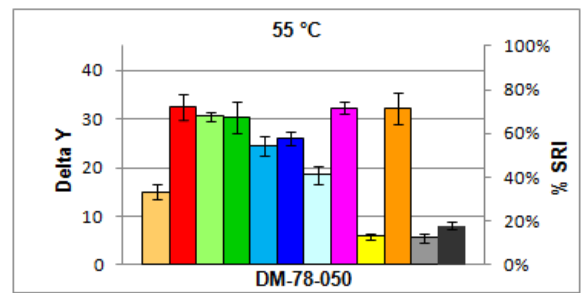
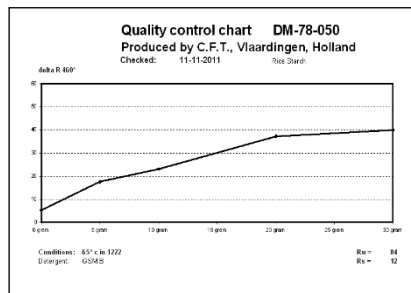
Order code:	Substrate:	Size	Ru:
DM-78	Melamine	10 x 12 cm	83
DG-78	Glass	10 x 12 cm	54
DS-78	Stainless steel	10 x 12 cm	51
DT-78	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

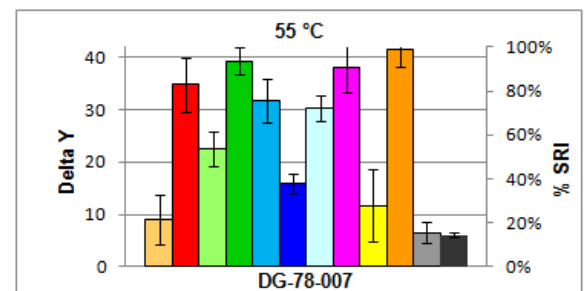
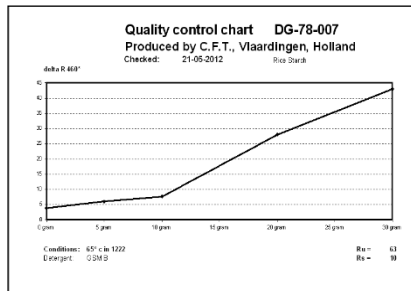
DM-78

Discriminative Power²: **7,9**
 Reproducibility Ratio: **7,9**
 Reliability Ratio: **8,8**
 Dynamic Range: **60,6**



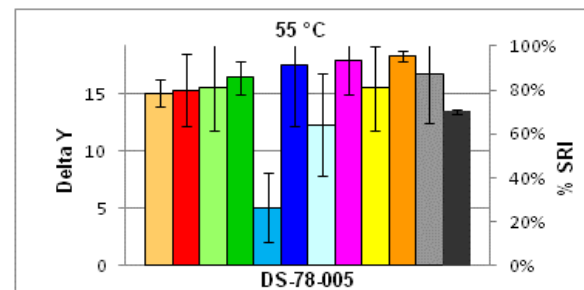
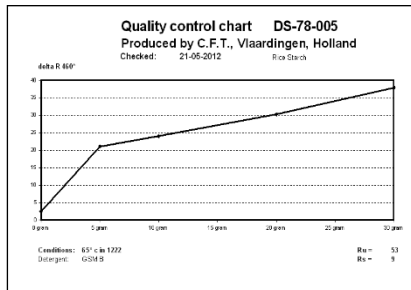
DG-78

Discriminative Power²: **7,5**
 Reproducibility Ratio: **8,0**
 Reliability Ratio: **5,7**
 Dynamic Range: **81,5**



DS-78

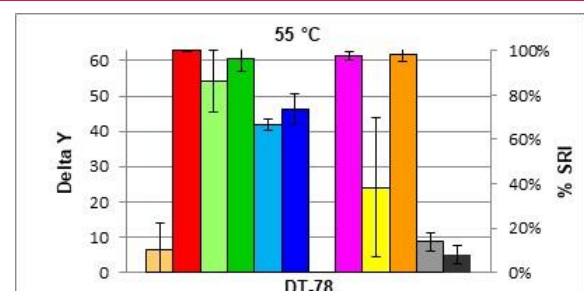
Discriminative Power²: **4,8**
 Reproducibility Ratio: **8,1**
 Reliability Ratio: **5,3**
 Dynamic Range: **66,8**



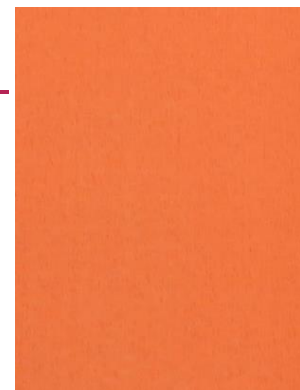
DT-78

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph
unavailable



DM-178 Rice starch, coloured, extra severe



Extra aged version of DM-78 coloured rice starch tile. More stubborn and less easy to remove than DM-78. For measuring performance of amylase enzymes in dishwasher detergents. Especially suitable for objective screening methods.

On rough surface.

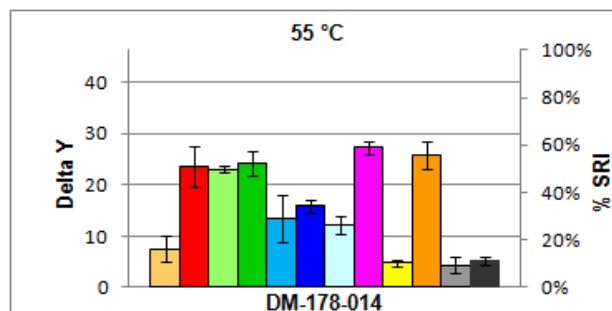
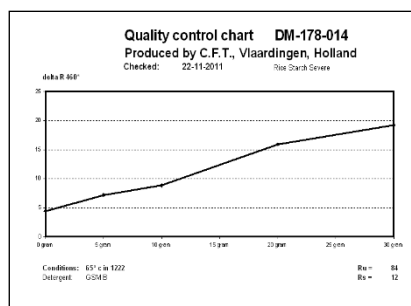
Order code:	Substrate:	Size	Ru:
DM-178	Melamine	10 x 12 cm	83
DG-178	Glass	10 x 12 cm	54
DT-178	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

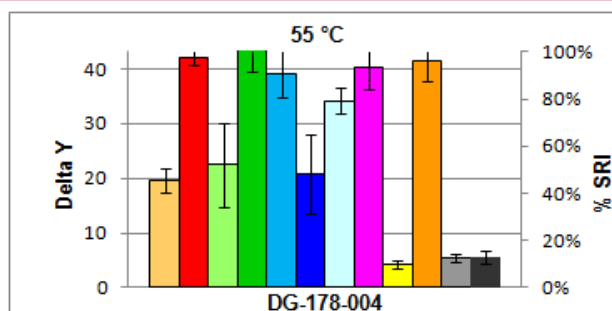
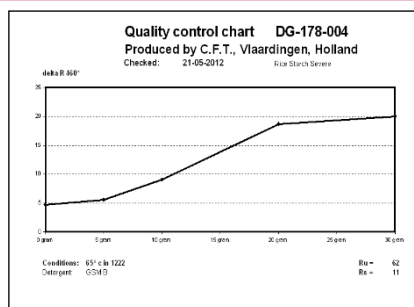
DM-178

Discriminative Power²: **6,5**
 Reproducibility Ratio: **7,6**
 Reliability Ratio: **8,4**
 Dynamic Range: **51,0**



DG-178

Discriminative Power²: **6,5**
 Reproducibility Ratio: **7,6**
 Reliability Ratio: **8,4**
 Dynamic Range: **51,0**



DT-178

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph unavailable

DM-278 Rice starch, coloured, double soil load



Double soiled rice starch tile. More stubborn and less easy to remove than DM-78. For measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods. Due to the double amount of starch it presents a bigger challenge to the enzymes.

On rough surface.

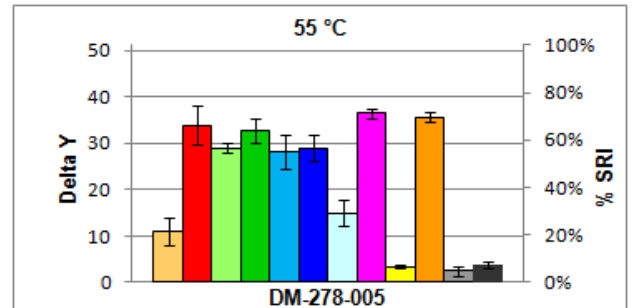
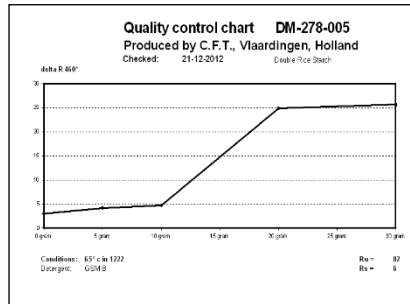


Order code:	Substrate:	Size	Ru:
DM-278	Melamine	10 x 12 cm	83
DG-278	Glass	10 x 12 cm	54
DT-278	Technical Porcelain	10 x 12 cm	92



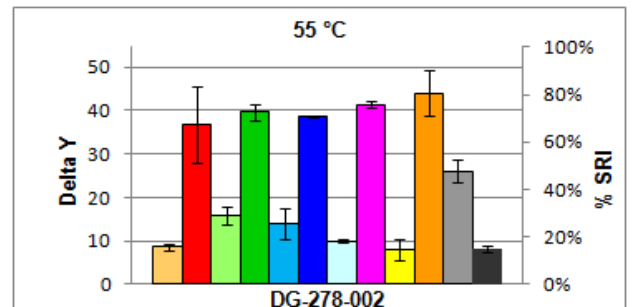
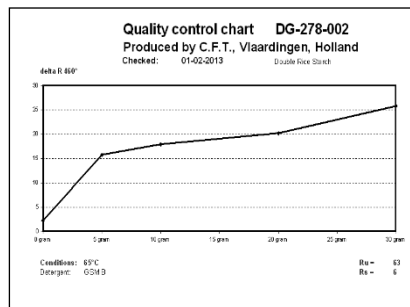
DM-278

Discriminative Power²: **7,5**
 Reproducibility Ratio: **8,3**
 Reliability Ratio: **8,4**
 Dynamic Range: **66,5**



DG-278

Discriminative Power²: **7,5**
 Reproducibility Ratio: **8,3**
 Reliability Ratio: **8,4**
 Dynamic Range: **66,5**



DT-278

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph unavailable

DM-378 Rice starch, coloured, triple soil load



Triple soiled rice starch tile. More stubborn and less easy to remove than DM-78. For measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods. Due to the triple amount of starch it presents a bigger challenge to the enzymes.

On rough surface.

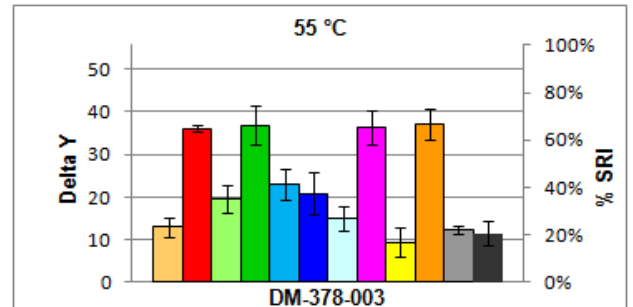
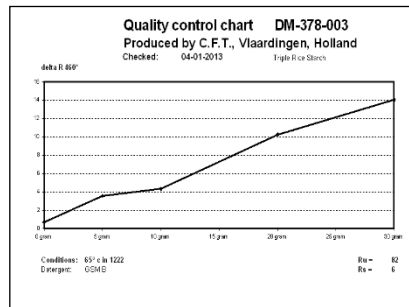
Order code:	Substrate:	Size	Ru:
DM-378	Melamine	10 x 12 cm	83
DG-378	Glass	10 x 12 cm	54
DT-378	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

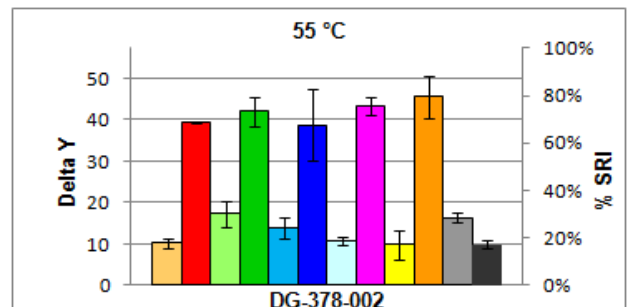
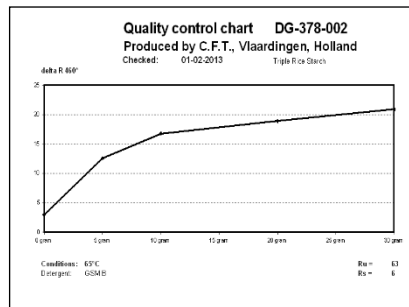
DM-378

Discriminative Power²: **7,0**
 Reproducibility Ratio: **6,9**
 Reliability Ratio: **7,5**
 Dynamic Range: **50,0**



DG-378

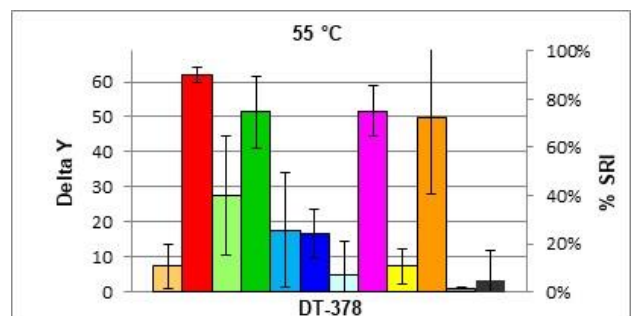
Discriminative Power²: **7,0**
 Reproducibility Ratio: **6,9**
 Reliability Ratio: **7,5**
 Dynamic Range: **50,0**



DT-378

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph
unavailable



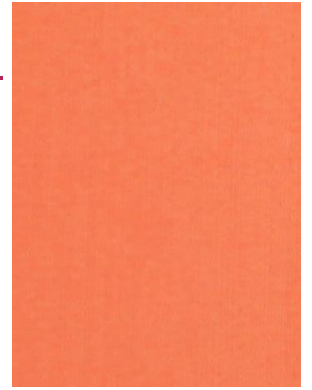
DM-79

Potato starch, coloured



Standard soiled coloured potato starch tile for measuring performance of amylase enzymes in dishwash detergents. Especially suitable for objective screening methods.

On rough surface.



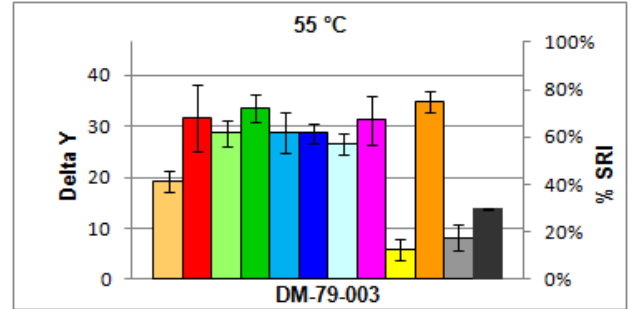
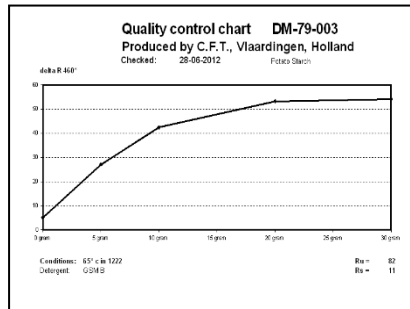
Order code:	Substrate:	Size	Ru:
DM-79	Melamine	10 x 12 cm	83
DT-79	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-79

Discriminative Power²: **6,5**
 Reproducibility Ratio: **8,9**
 Reliability Ratio: **8,0**
 Dynamic Range: **61,2**



DT-79

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graph unavailable

DM-81

Coffee



Standard soiled coffee tile for measuring bleach performance of dishwash detergents and hard surface cleaners. Especially suitable for objective screening methods.

On rough surface.

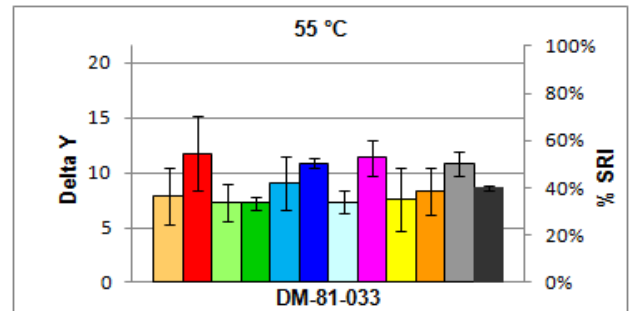
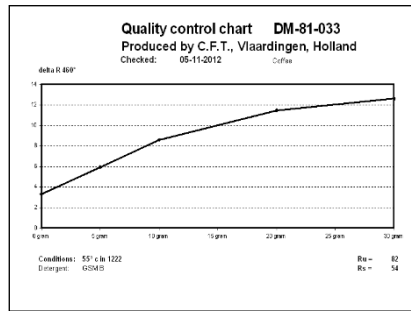
Order code:	Substrate:	Size	Yu:
DM-81	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-81

Discriminative Power²: **4,0**
 Reproducibility Ratio: **9,1**
 Reliability Ratio: **9,1**
 Dynamic Range: **22,0**



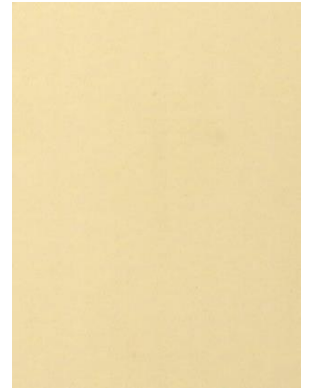
DM-82

Espresso coffee



Standard soiled espresso coffee tile for measuring bleach performance of dishwash detergents and hard surface cleaners. Especially suitable for objective screening methods.

On rough surface.

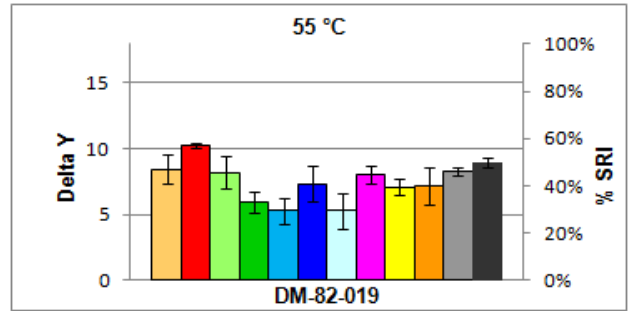
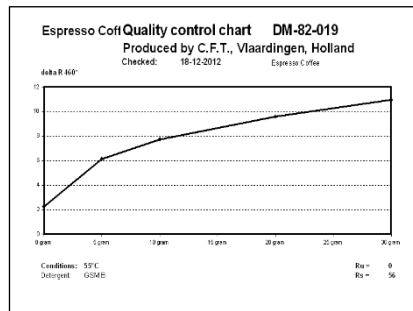


Order code:	Substrate:	Size	Yu:
DM-82	Melamine	10 x 12 cm	81



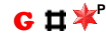
DM-82

- Discriminative Power²: **4,0**
- Reproducibility Ratio: **8,1**
- Reliability Ratio: **9,1**
- Dynamic Range: **25,2**



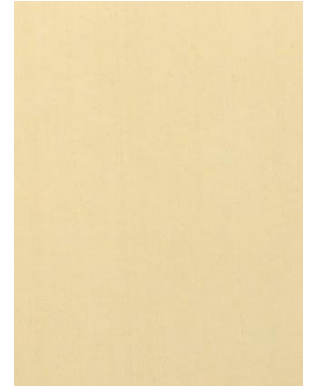
DM-83

Coffee with milk



Coffee tiles like DM-81 but with added milk, for measuring bleach performance of dishwasher detergents and hard surface cleaners. Is also slightly responsive to protease enzymes. Especially suitable for objective screening methods.

On rough surface.



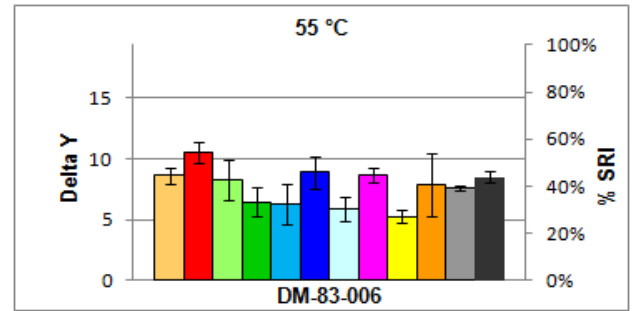
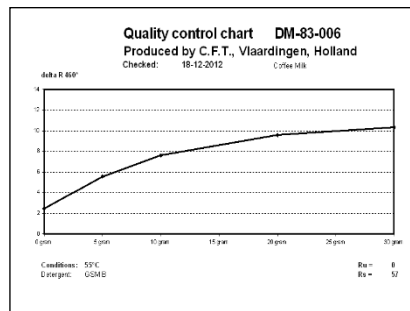
Order code:	Substrate:	Size	Yu:
DM-83	Melamine	10 x 12 cm	81



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-83

Discriminative Power²: **3,9**
 Reproducibility Ratio: **8,4**
 Reliability Ratio: **9,0**
 Dynamic Range: **27,4**



DM-91

Minced meat



Standard soiled minced meat tile for measuring overall and protease enzyme performance of dishwasher detergents and hard surface cleaners. Especially suitable for objective screening methods.

On smooth surface.



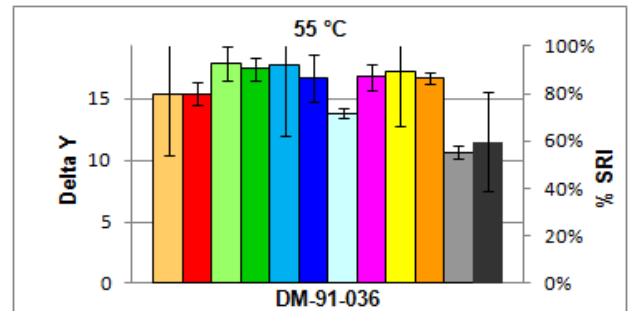
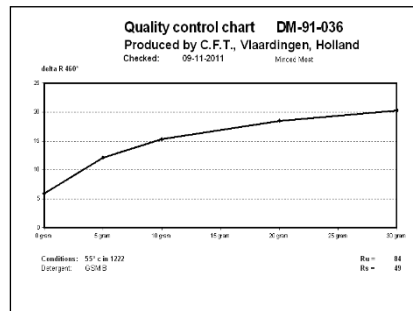
Order code:	Substrate:	Size	Yu:
DM-91	Melamine	10 x 12 cm	82
DT-91	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-91

Discriminative Power²: **4,2**
 Reproducibility Ratio: **8,5**
 Reliability Ratio: **8,7**
 Dynamic Range: **34,6**



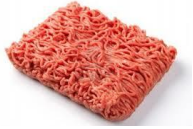
DT-91

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-92

Minced meat, double soil load



Double soiled minced meat tile for measuring overall and protease enzyme performance of dishwasher detergents and hard surface cleaners. Double soiled to make the stain darker and more discriminative.

On smooth surface.



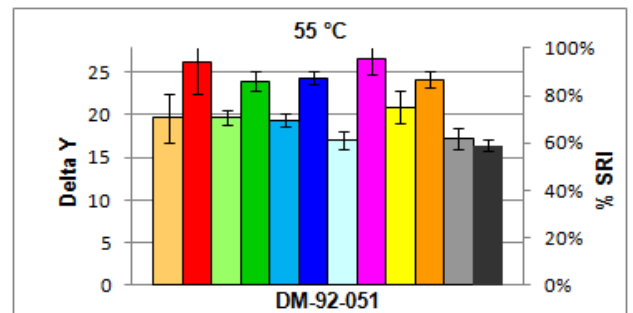
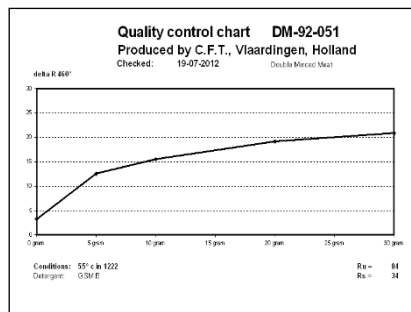
Order code:	Substrate:	Size	Yu:
DM-92	Melamine	10 x 12 cm	82
DT-92	Technical Porcelain	10 x 12 cm	92



A1 A2 B1 B2 C1 C2 D F H1 H2 J L

DM-92

Discriminative Power²: **4,9**
 Reproducibility Ratio: **9,0**
 Reliability Ratio: **9,3**
 Dynamic Range: **38,1**



DT-92

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-93

Minced meat, triple soil load

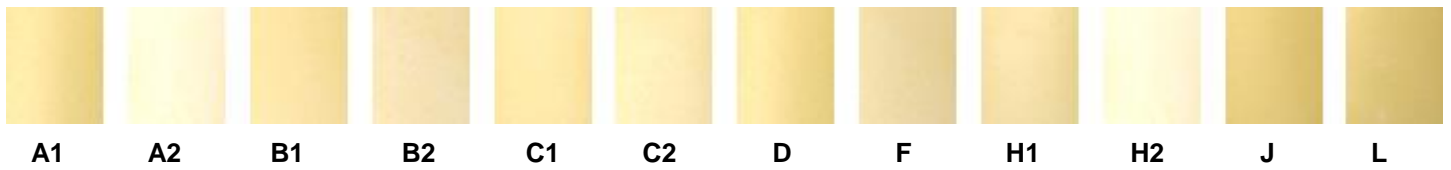


With the detergent tabs improving, for some test set-ups the improved minced meat (DM-92) was not stubborn enough. Hence this triple soiled version to make the stain even darker and more discriminative. Also usable to compare newest generation dishwasher detergents.

On smooth surface.

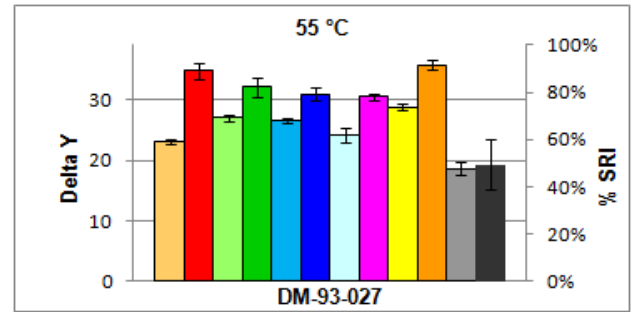
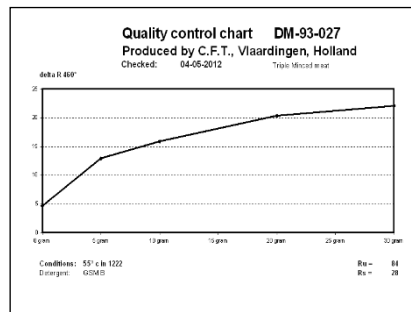


Order code:	Substrate:	Size	Yu:
DM-93	Melamine	10 x 12 cm	82
DT-93	Technical Porcelain	10 x 12 cm	92



DM-93

Discriminative Power²: **5,6**
 Reproducibility Ratio: **9,1**
 Reliability Ratio: **8,9**
 Dynamic Range: **45,0**



DT-93

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable

DM-96

Minced meat with fat, triple soil load

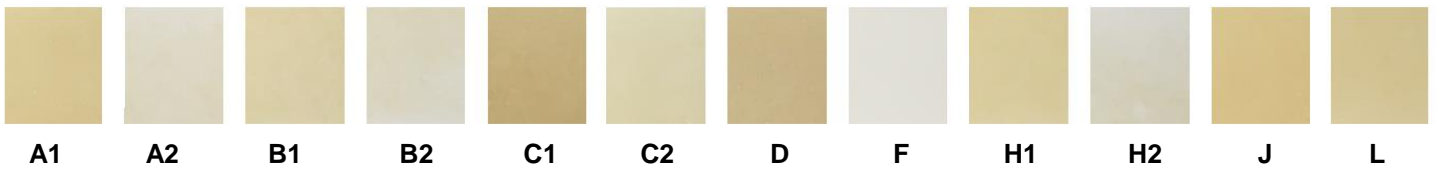


Same soil load as DM-93, but with added fat. Heavy soil to be able to compare newest generation dishwasher detergents.

On smooth surface.

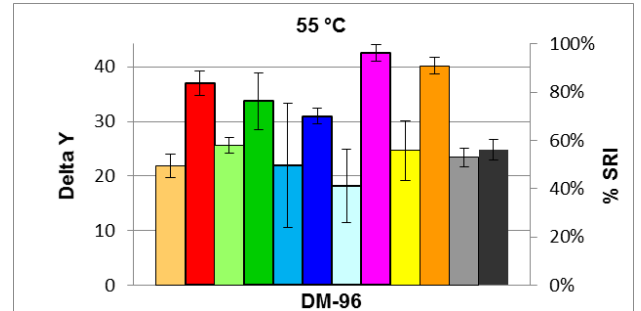
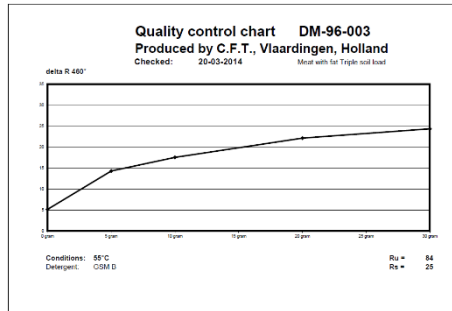


Order code:	Substrate:	Size	Yu:
DM-96	Melamine	10 x 12 cm	82
DT-93	Technical Porcelain	10 x 12 cm	92



DM-96

Discriminative Power²: **5,5**
 Reproducibility Ratio: **9,1**
 Reliability Ratio: **7,7**
 Dynamic Range: **54,9**



DT-96

Discriminative Power²: **n/a**
 Reproducibility Ratio: **n/a**
 Reliability Ratio: **n/a**
 Dynamic Range: **n/a**

Graphs unavailable



Hard surface cleaning

Next to automatic dishwash and related tests some of the CFT tiles can also be used in hard surface cleaning tests. This is still a relatively new part of our business. Industrial standards prescribe a lot of in-house soiling. We aim to continue development on these commercially available hard surface cleaning testmaterials so that we can help you to increase your test efficiency and reproducibility. Customized soiled hard surfaces are available on request. The pictures show wash results from a test with the Sheen washability tester with a consumer detergent. The grams to the left of the picture show the amount of pressure, the numbers below are the number of from and to movements with the Sheen washability tester.

DC-30

Highly discriminative soap scum

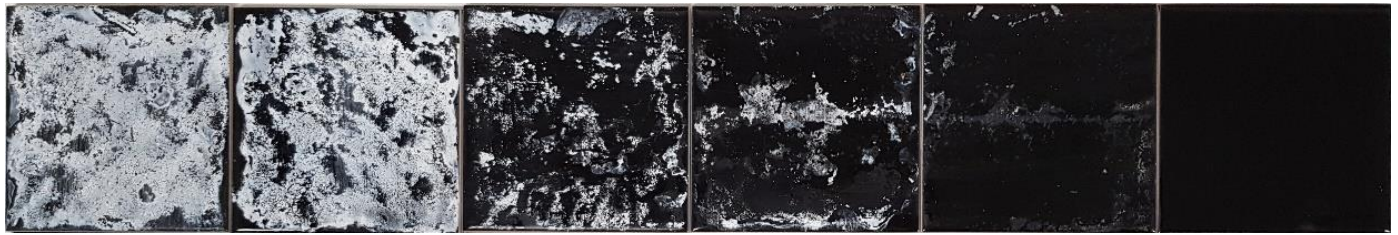


With the DC-20 we managed to make a standardized soap scum testmaterial, but we were not fully satisfied with the performance of the testmaterial. That is why we introduced the DC-30. The scum is soiled on a black tile for better visibility.

On smooth surface.



Order code:	Substrate:	Size	
DC-30	Black ceramics	10 x 10 cm	



Soiled tile

Water

Reference
bathroom cleaner
(pH 10,9)

Reference
bathroom cleaner
(pH 1,9)

Commercial Scale
remover
(pH 1,9)

Clean tile

DM-40

All-purpose cleaner soil based on IKW protocol

A relatively stubborn fatty soil with added carbon black. This soil is based on the soil used in the IKW Recommendation for the Quality Assessment of the Product Performance of All-Purpose Cleaners

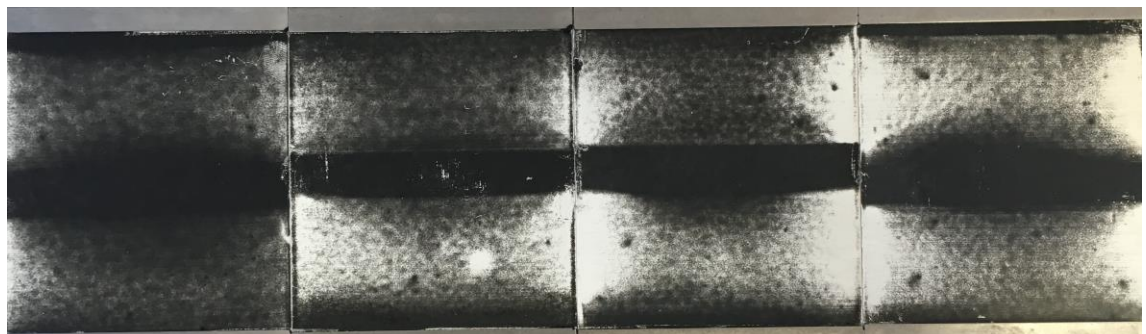
On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-40	Melamine	10 x 12 cm	82

300g

300g



10x

15x

20x

25x

DS-50

Corn oil



Corn oil on stainless steel tiles. Heated up to 180°C to polymerize the oil completely. Very hard to remove stain

Also available with olive oil (DS-50X), Soybean oil (DS-50Y) and sunflower oil (DS-50Z)

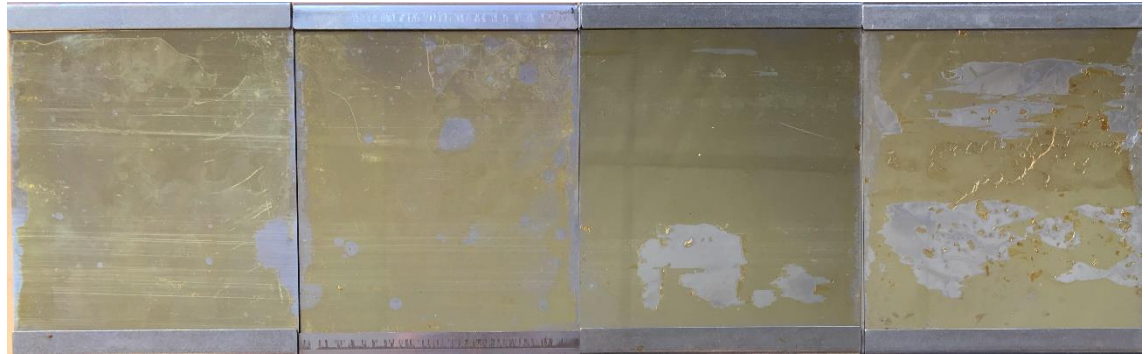
On extra smooth surface.



Order code:	Substrate:	Size	Yu:
DS-50	Stainless steel	10 x12 cm	72

300g

900g



5x

10x

15x

20x

DM-80

All-purpose cleaner soil



A mixture of fats and carbon black, representative for kitchen soil.

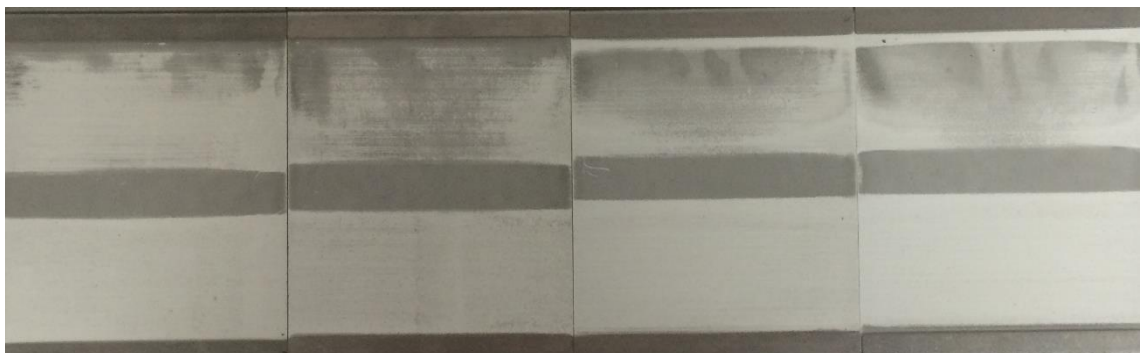
On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-80	Melamine	10 x12 cm	82
DS-80	Stainless steel	10 x 12 cm	54

300g

900g



5x

10x

15x

20x

DM-90 Beef fat, coloured with Sudan red



Homogeneously soiled tile with beef fat, coloured with Sudan red.
On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-90	Melamine	10 x12 cm	82

Images not available

DM-97 Red palm oil



Homogeneously soiled tile with red palm oil.
On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-90	Melamine	10 x12 cm	82

Images not available



Hand dishwash

Next to automatic dishwash and related tests some of the CFT tiles can also be used in hand dishwash cleaning tests. We started selling our tiles for this use when we recently started to sell the Sheen Washability Tester. In this chapter a selection of our dishwash range is shown. It could be that other tiles can also be applied for hand dish, for instance with enzyme tests. We also sell all kinds of tools and consumables for these kind of tests. These are listed in the next chapter. The pictures show wash results from a test with the Sheen washability tester with a consumer detergent. The grams to the left of the picture show the amount of pressure, the numbers below are the number of from and to movements with the Sheen washability tester.

DM-03 Shepherd's pie, baked

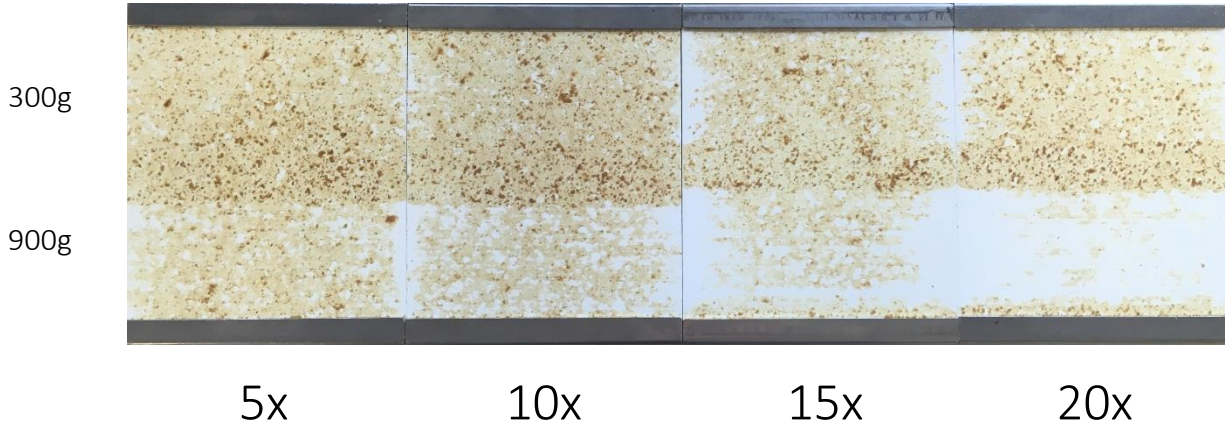


Complicated soil mix, challenging different aspects of the detergent. Contains potatoes (starch), egg yolk (protein) and minced meat (including fat).

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-03	Melamine	10 x 12 cm	81



DM-04A Carbonara sauce



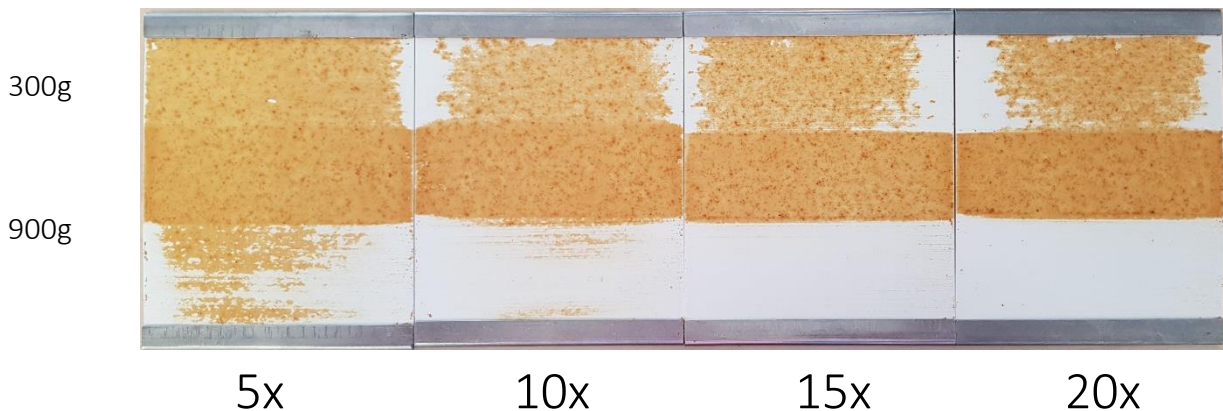
Complicated soil mix, challenging the protease enzymes in your detergent. Contains egg, cream, cheese and bacon.

Also available with added spaghetti (DM-04B)

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-04A	Melamine	10 x 12 cm	81



DM-04B Spaghetti Carbonara



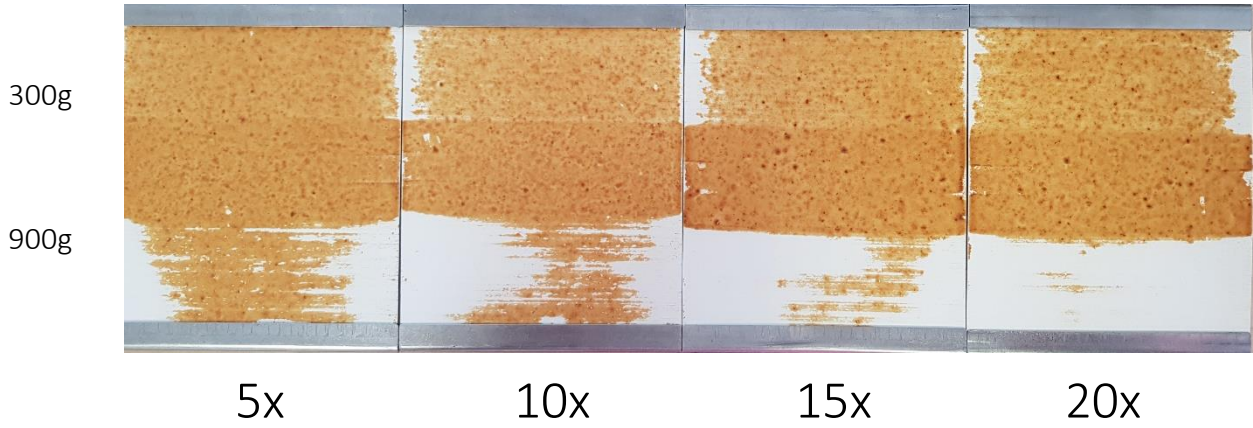
Complicated soil mix, challenging different aspects of the detergent. Contains potatoes (starch), egg, cream, cheese (proteins) and bacon.

Also available without spaghetti (DM-04A)

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-04A	Melamine	10 x 12 cm	81



DM-07 Spaghetti Bolognese

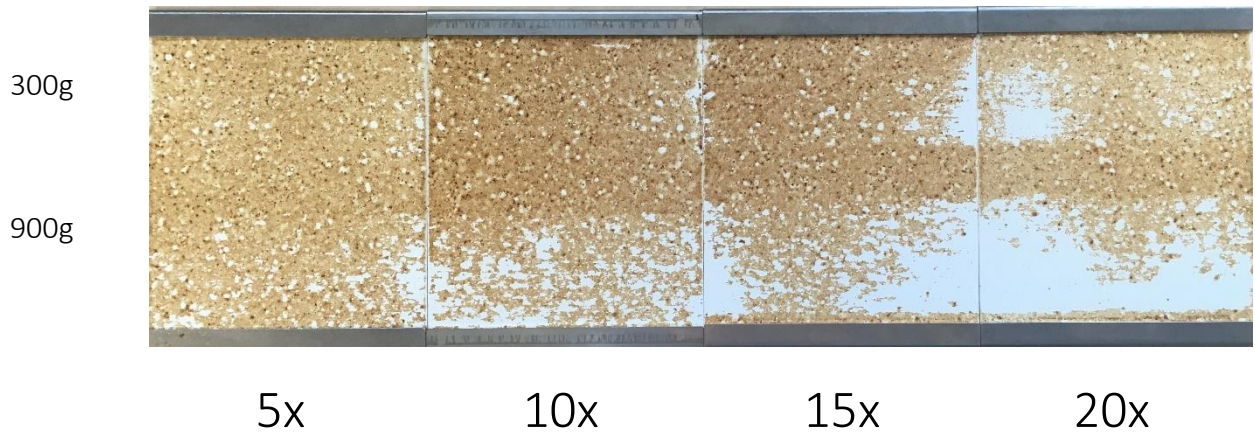


Complex, but interesting soil mix. Contains fats, starch and proteins.

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-07	Melamine	10 x 12 cm	81



DM-42

Blueberry yoghurt

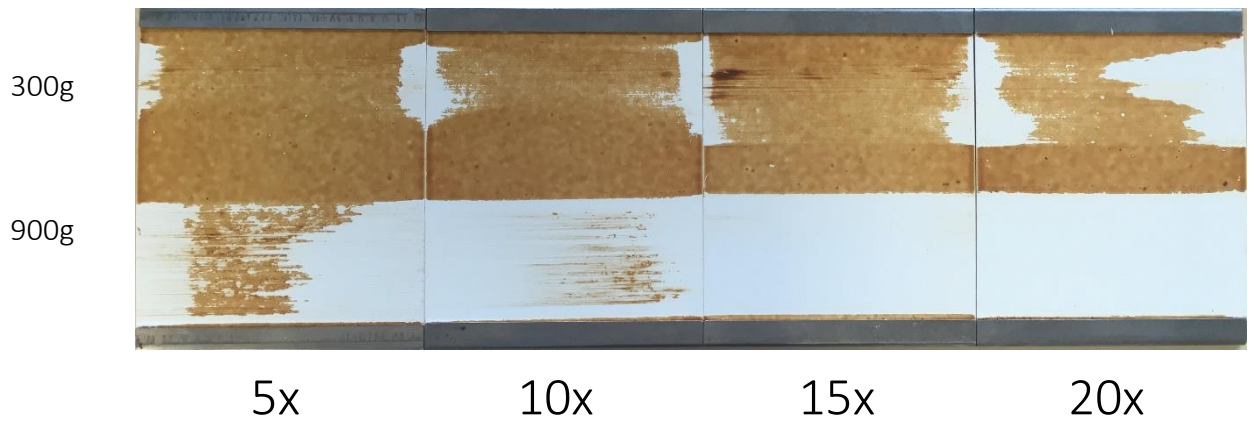


A blueberry yoghurt stain on melamine tiles.

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-42	Melamine	10 x 12 cm	81



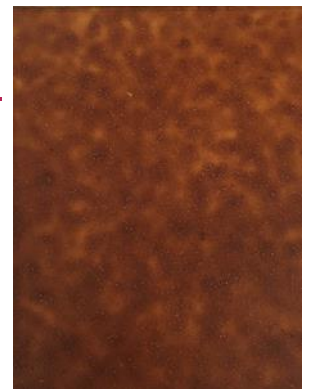
DM-54

Oatmeal, coloured with chocolate

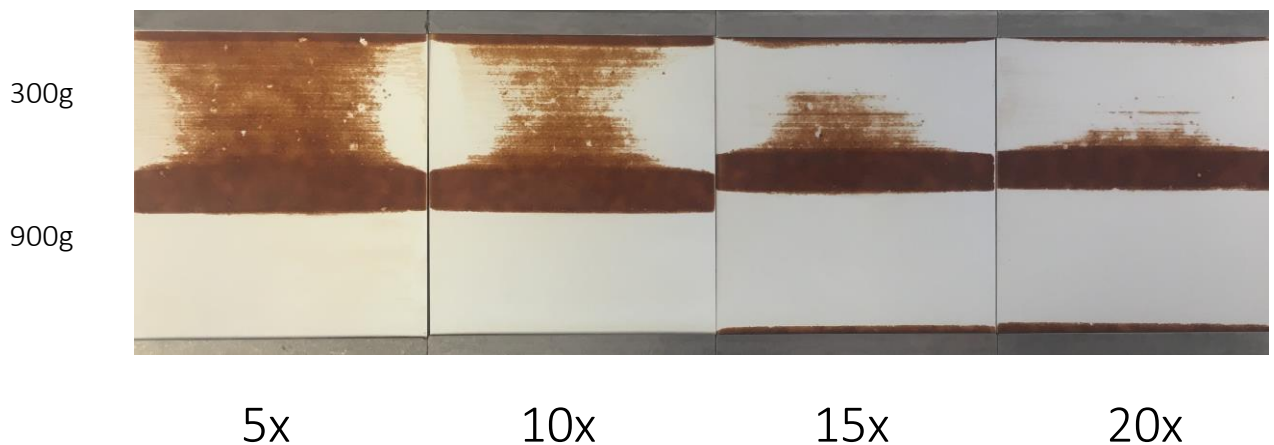


The oatmeal represents the cellulose soil group, the chocolate is added to colour the oatmeal and show visual effects. Especially suitable for objective screening methods.

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-54	Melamine	10 x 12 cm	81



DM-60 Spinach

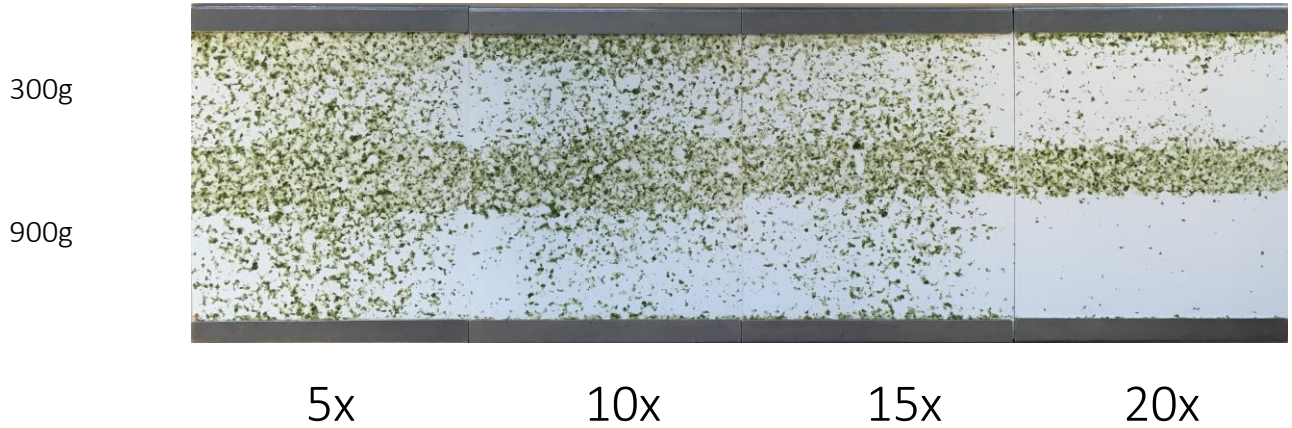


The spinach is not only suitable for cleaning comparison and particle removal. Especially suitable for objective screening methods.

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-60	Melamine	10 x 12 cm	81



DM-71 Mixed (corn/rice) starch, coloured with food colourant

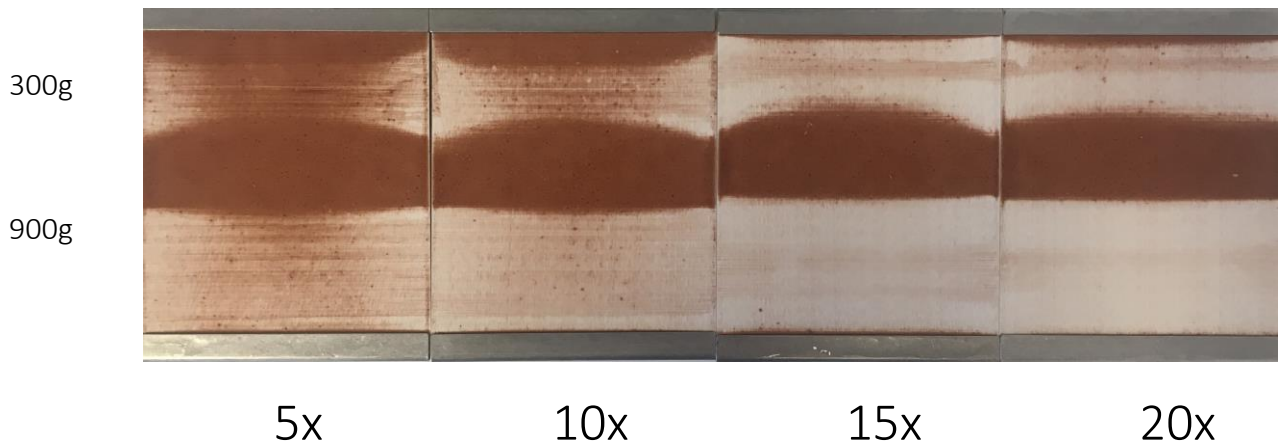


Tile soiled with mixed (corn/rice) starch. For measuring performance of amylase enzymes in hand dishwash detergents, coloured with a food relevant colourant. Very good correlation with IKW mixed starch plates. Especially suitable for objective screening methods.

On rough surface.



Order code:	Substrate:	Size	Yu:
DM-71	Melamine	10 x 12 cm	81



DM-77 Mixed (corn/rice) starch, coloured

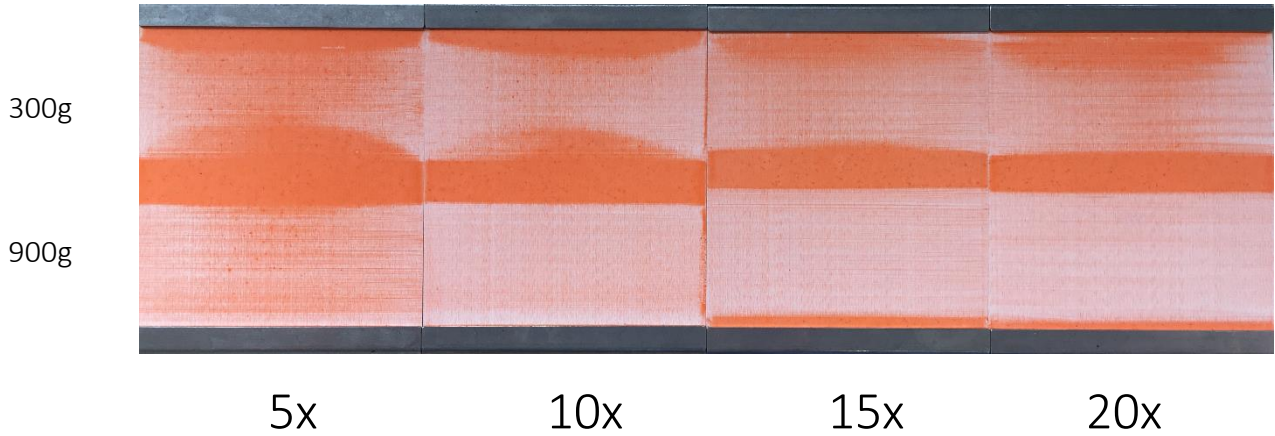


Standard soiled coloured mixed (corn/rice) starch tile for measuring performance of amylase enzymes in hand dishwash detergents. Especially suitable for objective screening methods.

On rough surface.



Order code:	Substrate:	Size	Yu:
DM-77	Melamine	10 x 12 cm	81

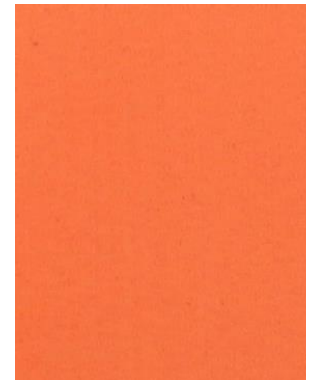


DM-177 Mixed (corn/rice) starch, coloured, extra severe

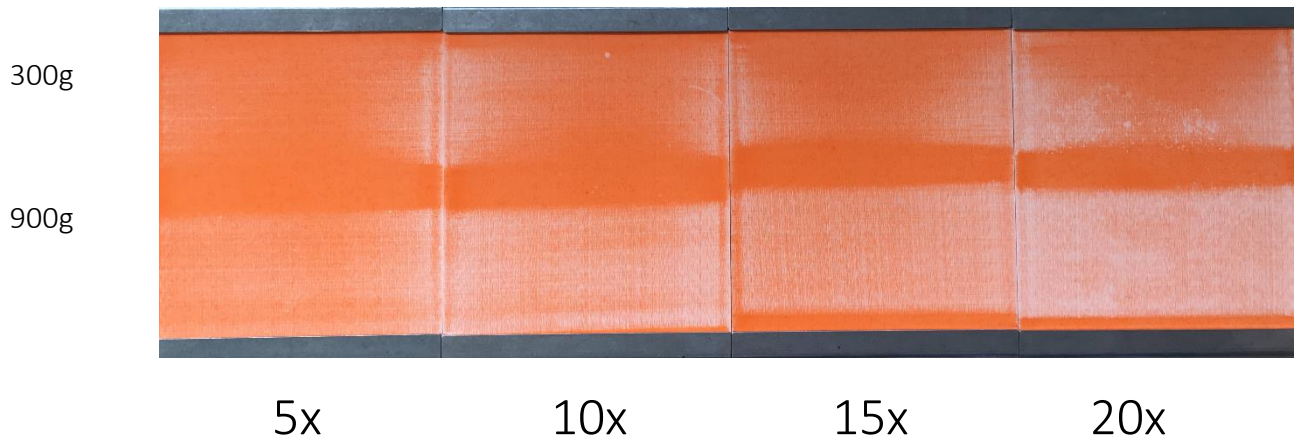


Extra aged version of DM-77 coloured mix (corn/rice) starch tile. More stubborn and less easy to remove than DM-77. For measuring performance of amylase enzymes in hand dishwash detergents. Especially suitable for objective screening methods.

On rough surface.



Order code:	Substrate:	Size	Yu:
DM-177	Melamine	10 x 12 cm	81



DM-277 Mixed (corn/rice) starch, coloured, double soil load

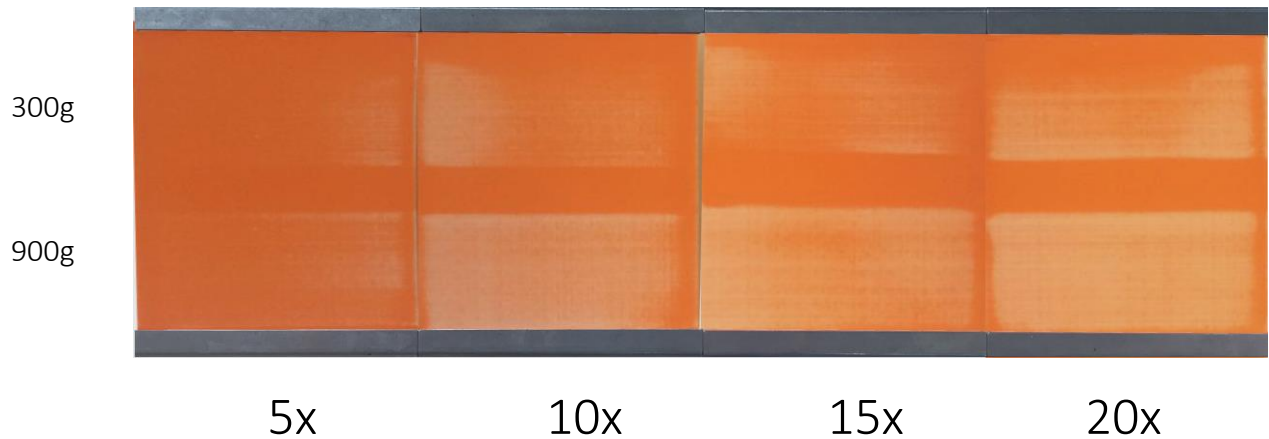


Double soiled coloured mixed (corn/rice) starch tile. More stubborn and less easy to remove than DM-77. For measuring performance of amylase enzymes in hand dishwash detergents. Especially suitable for objective screening methods. Due to the double amount of starch it presents a bigger challenge to the enzymes.

On rough surface.



Order code:	Substrate:	Size	Yu:
DM-277	Melamine	10 x 12 cm	81

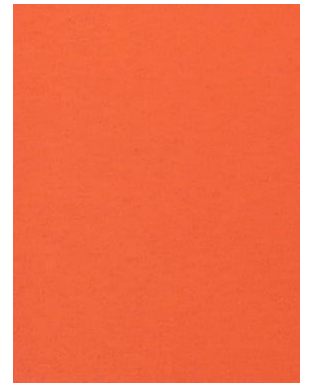


DM-377 Mixed (corn/rice) starch, coloured, triple soil load

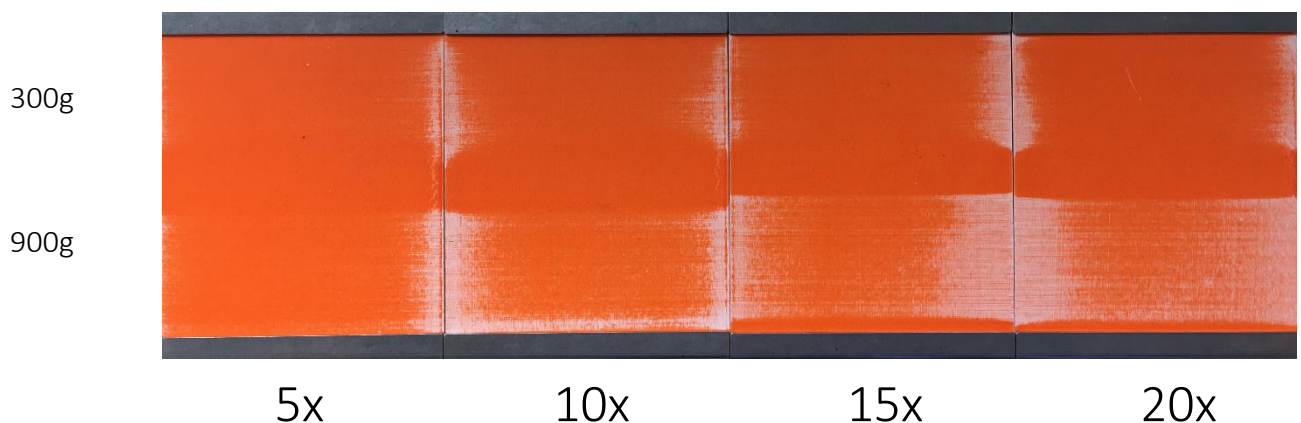


Triple soiled coloured mixed (corn/rice) starch tile. More stubborn and less easy to remove than DM-77. For measuring performance of amylase enzymes in hand dishwash detergents. Especially suitable for objective screening methods. Due to the triple amount of starch it presents a bigger challenge to the enzymes.

On rough surface.



Order code:	Substrate:	Size	Yu:
DM-377	Melamine	10 x 12 cm	81



DM-90 Beef fat, coloured with Sudan red



Tile soiled homogeneously with beef fat, coloured with Sudan red.
On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-90	Melamine	10 x12 cm	82

Images not available

DM-97 Red palm oil



Tile homogeneously soiled with red palm oil.
On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-97	Melamine	10 x12 cm	82

Images not available



Tools and consumables

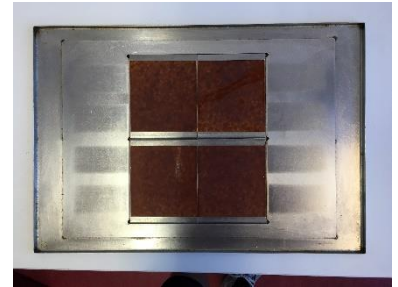
In this chapter you can find handy tools and consumables that will help you complete your tests. CFT tries to be an one stop shop for all kind of tests. That is why we developed some tools and sell some consumables for testing our DM-tiles. Some of the tools were developed to fix problems we encountered in our own research, others are developed with tips from customers who use the DM-tiles in their research.

TQC Sheen washability tester

The washability tester was designed in response to the detergent industry requirements for washability testing using cleaning agents applied directly to sponge (or other types of) scrubbing heads, to mimic hand dish & hard-surface cleaning movements in a standardized way. This machine is available with or without an internal pump system.

Sheen adapter

This adapter allows you to use the ready-to-use DM-tiles in the Sheen washability tester PG 903. With this adapter you can place up to four tiles in the Sheen.



CFT sponge

These sponges are the type of sponges CFT normally would use in research with a washability tester. These sponges are the very same as a consumer can buy in a shop. CFT buys large quantities of the sponges to ensure some form of standardization.



Spraying cabin

This spraying cabin is developed to test spray bottles with detergent solutions like an all-purpose cleaner or a cleaner for kitchen tops. With this set-up and the spray bottle, you can spray detergent on the tiles in a standardized way.



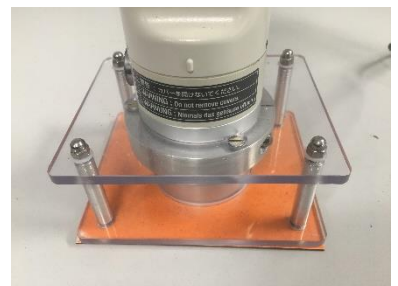
DM-S stainless steel holder

These stainless steel holders are very important to have when you are testing with the CFT DM tiles. The weight of the holders keeps the melamine tiles for flying around in ADW machine. You also need these holders to clamp the DM-tiles in the Sheen washability tester. Sold per pack of ten holders.



DM-holder for Konica Minolta CR-410

The Konica Minolta CR-410 colour measurement device is suitable to use with the DM-tiles, because it has a large 50mm opening. Some of the tiles will bend when they are washed, or when they are treated in the oven. This adapter can be used to flatten the surface of the tile. More information on the CR-410 can be found in our equipment folder and on our website. The holder is also available with a diafragma, to measure tiles cleaned with the TQC Sheen washability tester.





Industrial & Institutional cleaning

Next to automatic dishwash, hard surface cleaning, and other related tests, some of the CFT tiles can also be used in Industrial & Institutional (I&I) cleaning tests. We even developed a testmaterial for use in the I&I dishwasher: the DM-14 tea stain. This is a new part of our business. We aim to continue development on these I&I testmaterials so that we can help you to increase your test efficiency and reproducibility. We also sell a customised holder for the tiles to fit in an I&I dishwasher.

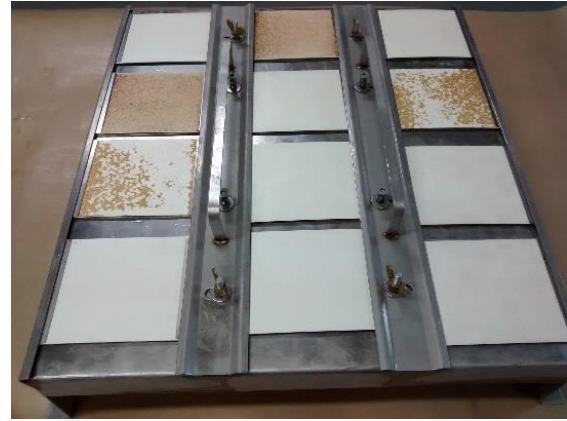
I&I AD I&I adapter for DM-tiles

Stainless steel adapter to place up to 12 DM-tiles in an I&I dishwasher



Order code:

I&I AD



DM-07 Spaghetti Bolognese sauce with cheese

Complex, but interesting soil mix. Contains fats, starch and proteins.

On smooth surface.



Order code:

DM-07

Substrate:

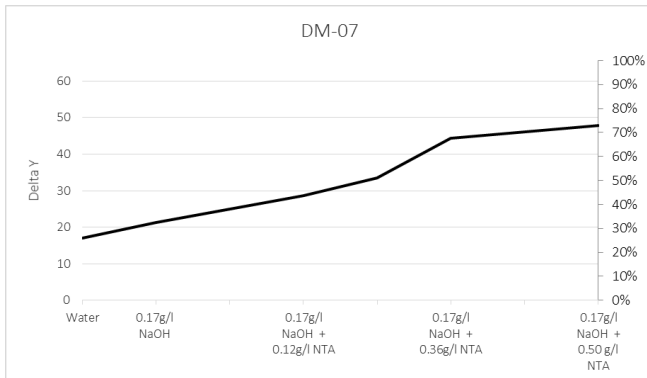
Melamine

Size

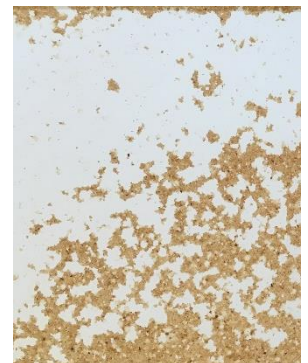
10 x 12 cm

Yu:

81



Water



0.17g/l NaOH + 0.50 g/l NTA

DM-14 Highly discriminative tea stain, also for I&I

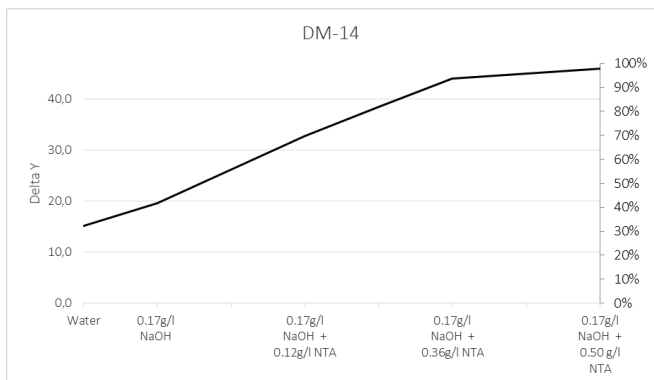


Developed in for testing in an I&I dishwasher, but also very useful for consumer dishwash testing. Shows good response to sequestrants.

On rough surface.



Order code:	Substrate:	Size	Yu:
DM-14	Melamine	10 x 12 cm	81



Water



0.17g/l NaOH + 0.50 g/l NTA

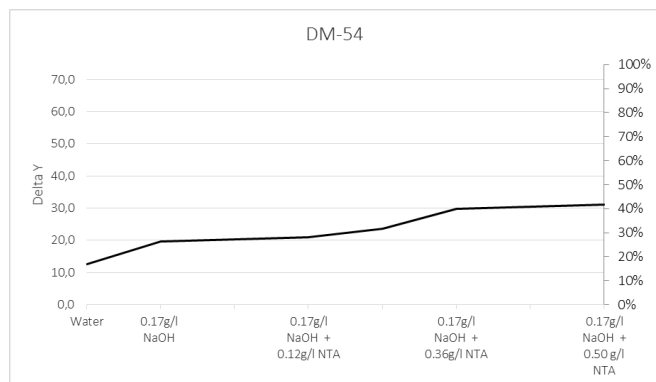
DM-54 Oatmeal, coloured with chocolate

The oatmeal represents the cellulose soil group, the chocolate is added to colour the oatmeal and show visual effects. Especially suitable for objective screening methods. Sometimes a burn-in effect of the soil is visible. The after wash results can be very inhomogeneous due to influence of agitation.

On smooth surface.



Order code:	Substrate:	Size	Yu:
DM-54	Melamine	10 x 12 cm	81





















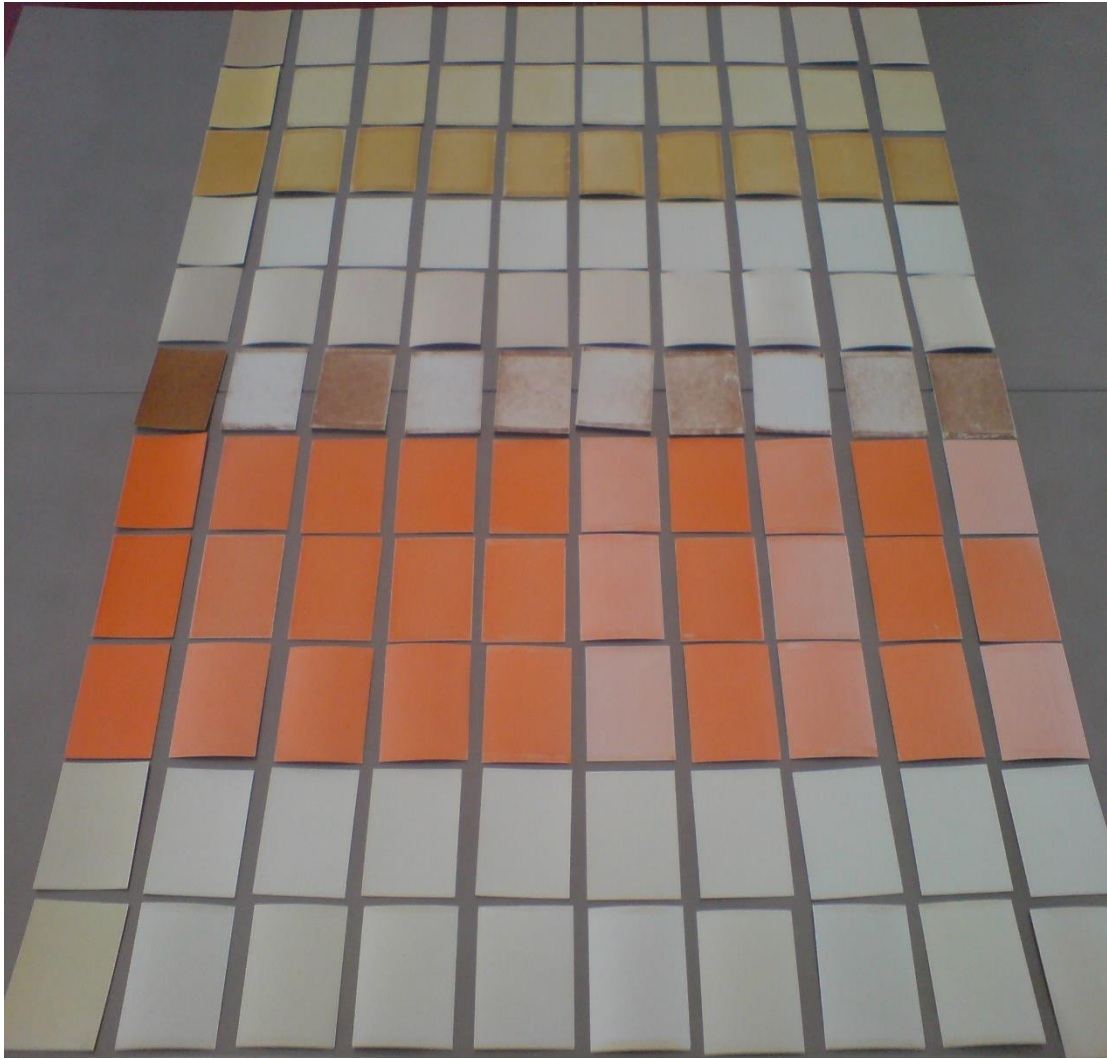
Water



0.17g/l NaOH + 0.50 g/l NTA

Application legend

	Measurement of General Detergency .
	Measurement of Proteolytic Enzyme activity.
	Measurement of Amylase Enzyme activity.
	Measurement of Lipase Enzyme activity.
	Measurement of the Enzyme Cocktail activity.
	Measurement of the Mannanase Enzyme activity.
	Measurement of Stain Removal , mostly difficult to remove.
	Measurement of Bleach Performance .
	Measurement of Oily Substances removal.
	Measurement of Particle removal.
	Especially suitable for Low Temperature performance measurement.
	Especially suitable for High Temperature performance measurement.
	Measurement of Builder Action .
	Measurement of Agitation influence.
	Suitable for Industrial Laundry .
	Measurement of the Burn-in Effect .
	Suitable for Hard Surface Cleaning tests.
	Ballast Soil .



All-in-One Tab - Detergent Legend	
A1	Classic version of Premium Brand Tab
A2	High-end version of Premium Brand Tab
B1	Classic version of Premium Brand Gel-Sachet
B2	High-end version of Premium Brand Gel-Sachet
C1	Classic version of Premium Brand Tab
C2	High-end version of Premium Brand Tab
D	Low-end Private Label Tab
F	High-end Private Label Tab
H1	Classic version of Premium Brand Tab
H2	High-end version of Premium Brand Tab
J	Low-end Private Label Tab
L	Reference Detergent GSM B (30g)