

Multitrade SA
08750 Calle del Pla 19
Molins del Rei – España



TEST P224151-2
WASHING EFFICACY EVALUATION

Laundry Detergents



GENERAL INFORMATION:

Reference test Nr.: P224151-2
Report author: Tommaso Zago
Test start date: 17/09/2024
Test end date: 19/09/2024
Report issue date: 23/09/2024
Sampling: sampled by customer

AIM OF THE TEST: To assess the washing efficacy of laundry detergents using AISE protocol guidelines.

PRODUCTS:

Name	Producer	Batch	Dosage
1) Felce Azzurra lavatrice per bianchi e colorati	Pagliari spa	061 ZFA 07:22	49 ml
2) Nobac Pro Detergente Ecologico En tiras	Multitrade	2417-42517	1 sheet (4.8g)

CONDITIONS:

Washing machine: Miele Novotronic W506
Temperature: 30 °C
Cycle: Cotton
Water hardness: 29°f
Repetitions: 4
Ballast load: 3.5 Kg
Ballast soil: 4 SBL

INTERNAL METHOD MP-1.1.1: Heavy duty laundry detergent performance.

Remark: The results and statistical evaluations of this report refer only to the samples, soils and stains used and tested in the above described conditions.

The statistically significant differences might be not relevant or noticeable by consumers. Key performance indicators are not obtained with statistical calculations and serve only as an overall indication of the behavior of the products.

**TESTED STAINS:**

Tab 1

		Y initial value
01WFK10J (bleach)	Tea	60.31
02CFTKCH109 (bleach)	Coffee	39.64
03WE5RW (bleach)	Red Wine	34.62
04CFTCS15 (bleach)	Blueberry	24.39
05WE5TP (bleach)	Tomato	21.79
06CFTCS406 (bleach)	Salad dress. Bals.	24.43
07WE5FSM (bleaenzym)	Mustard	65.35
08WFK10Z (enzymatic)	Chocolate	63.85
09TEST164 (bleaenzym)	Grass	52.11
10WE5GM (bleaenzym)	Grass Mud	18.66
11WE5DASB (enzymatic)	Blood	7.39
12TEST106 (detergency)	Motor oil	24.17
13WE5BBPC2 (detergency)	Beef fat	62.97
14TEST143 (detergency)	Make up	77.49

Washing areas

Next to the name is indicated the responding wash area

Bleach = blachable stains

Bleaenzym = bleachable and enzymatic

Enzymatic = mainly responding to enzymes

Detergency = fat stains



RESULTS: Mean results in terms of Y Values (whiteness degree).

Tab 2 Y mean values

Code	Felce Azzurra	Multitrade sheet
01WFK10J (bleach)	57.41	57.48
02CFTKCH109 (bleach)	42.42	42.16
03WE5RW (bleach)	47.36	47.42
04CFTCS15 (bleach)	53.56	51.54
05WE5TP (bleach)	54.61	52.98
06CFTCS406 (bleach)	32.49	32.08
07WE5FSM (bleaenzym)	62.86	63.62
08WFK10Z (enzymatic)	69.25	67.40
09TEST164 (bleaenzym)	55.98	55.07
10WE5GM (bleaenzym)	40.37	39.90
11WE5DASB (enzymatic)	49.69	57.46
12TEST106 (detergency)	33.32	35.12
13WE5BBPC2 (detergency)	73.99	62.26
14TEST143 (detergency)	84.05	82.98

Tab 3 standard deviations

Code	Felce Azzurra	Multitrade sheet
01WFK10J (bleach)	1.26	0.97
02CFTKCH109 (bleach)	1.55	4.25
03WE5RW (bleach)	1.04	0.37
04CFTCS15 (bleach)	0.76	1.09
05WE5TP (bleach)	1.33	0.88
06CFTCS406 (bleach)	1.67	0.88
07WE5FSM (bleaenzym)	1.71	0.54
08WFK10Z (enzymatic)	1.42	1.05
09TEST164 (bleaenzym)	0.74	0.60
10WE5GM (bleaenzym)	3.26	1.56
11WE5DASB (enzymatic)	1.37	2.82
12TEST106 (detergency)	0.69	2.07
13WE5BBPC2 (detergency)	0.68	1.45
14TEST143 (detergency)	0.50	1.28



STATISTICAL ANALYSIS – An.O.VA.

Significant differences are highlighted in green (with 95% confidence level)

Tab 4 PValues of TStudent test

Code	2vs1	Outcome
01WE5LT (bleach)	0.929	Parity
02WE5EC (bleach)	0.910	Parity
03WE5RW (bleach)	0.914	Parity
04CFTCS15 (bleach)	0.011	Felce Azzurra is better
05WE5TP (bleach)	0.082	Parity
06CFTCS406 (bleach)	0.677	Parity
07WE5FSM (bleaenzym)	0.437	Parity
08WFK10Z (enzymatic)	0.090	Parity
09WE5SG (bleaenzym)	0.061	Parity
10WE5GM (bleaenzym)	0.772	Parity
11WE5DASB (enzymatic)	0.000	Nobacpro is better
12TEST106 (detergency)	0.206	Parity
13WE5BBPC2 (detergency)	0.000	Felce Azzurra is better
14WE5FM2 (detergency)	0.094	Parity

COMMENTS / CONCLUSIONS

The objective of the test was to assess the washing efficacy of a detergent sheet in comparison with a liquid detergent.

The global results, in terms of Y values, are reported on Table 2.

The statistical analysis of Table 4 brings to the conclusion that the performances are very similar, with only 3 stains on which the difference is significant, once in favour of Multitrade sheet, and twice in favour of the liquid detergent Felce Azzurra. Products can be considered globally in parity.

End of report P224151-2