MARKET TRANSFORMATION PROGRAMME Supporting UK Government policy on sustainable products

2008/2009 Energy Label Market Picture Testing – **Domestic Washer/Driers**

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Executive Summary

This report outlines the results of energy efficiency label tests carried out on a range of domestic washer/driers to provide market intelligence for Defra's Sustainable Consumption and Production (SCP) Programme through the Market Transformation Programme (MTP).

24 Products tested were selected from ranges of Washer/Driers available on the UK market and purchased anonymously from the consumer retail market.

All tests were carried out between December 2008 and March 2009 in a UKAS accredited test laboratory.

8 of the 24 appliances tested performed in accordance with all the declarations on their labels.

- 6 out of the 24 appliances tested (25%) did not perform in accordance with the energy class declared on the label due to their total measured energy consumption used to calculate the class being above that allowed by the tolerance limits in the standard, resulting in a lower class than that declared.
- 6 out of the 24 appliances tested (25%) did not perform in accordance with the values for energy consumption declared on the label due to their total measured energy consumption being above that allowed by the tolerance limits in the standard. In addition, of these, 3 appliances did not dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available. This means their total energy consumption and consequent energy efficiency classes are unverifiable. However the energy consumption measured in the drying cycle is already above the upper limit allowed by the standard, so further drying would take the energy consumed further above the limit, reinforcing the assertion that the products are not performing in accordance with the values declared on the label.
- A further 4 appliances had measured total energy consumption levels within the limit allowed by the standard but due to their inability to dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available, their total energy consumptions and consequent energy efficiency classes were unverifiable so it

was not possible to confirm that the products were performing in accordance with the values declared on the label.

- 1 out of the 24 appliances tested (4%) did not perform in accordance with the wash cycle energy consumption declaration on the label due to its energy consumption being above that allowed by the tolerance limits in the standard.
- 20 out of the 24 appliances tested using the CLS reference machine (83%) achieved lower wash performance than that declared by the manufacturer.(See below*)
- 5 out of the 24 appliances tested (21%) did not perform in accordance with the maximum spin speed declaration on the labels due to their maximum spin speed being below that allowed by the tolerance limits in the standard.
- 5 out of the 24 appliances tested (21%) did not perform in accordance with the values for water consumption declared on the label due to their measured water consumption being above that allowed by the tolerance limits in the standard. In addition, of these, 2 appliances did not dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available. This means their water consumptions are unverifiable. However the water consumption measured in the drying cycle is already above the upper limit allowed by the standard, so further drying would take the water consumed further above the limit reinforcing the assertion that the products were not performing in accordance with the values for water consumption declared on the label.
- A further 5 appliances had measured water consumption levels within the limit allowed by the standard but due to their inability to dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available, their water consumptions were unverifiable so it was not possible to confirm that the products were performing in accordance with the values declared on the label.

* A major area of concern was wash performance, where according to the Defra Market Picture testing, 20 out of the 24 appliances tested did not achieve the declared wash performance class. Discussions with manufacturers and the test laboratories revealed that the differences in results for wash performance were most probably because the Defra Market Picture tests and an unknown number of the manufacturer's tests were conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively. In the past this was not considered to be a problem as the two different test reference machines were believed to have equivalent performance. However, recent industry tests have indicated

that the newer CLS reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

This in turn means that many models shown in the Defra Market Picture testing to be not achieving their declared wash performance are likely to achieve this performance when measured against the older machine and a number of manufacturers have shown this to be the case.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

However the older reference machine is due to be phased out when the more recent version of the standard is adopted early in 2010. When this version is eventually published in the Official Journal, manufacturers will have to ensure that for legal compliance, all models they supply perform in accordance with their declared wash performance when measured with the CLS reference machine.

A further major issue is that 7 of the appliances failed to dry to the required level using any of their wash/dry programmes. This means that where the energy and water consumption were measured during the wash/dry cycle and were within the tolerances allowed, there is still uncertainty as to whether they are the maximum levels required to dry adequately and so no sensible comparison can be made with the declared values.

1. Selection and Purchase of Test Samples

The brand selection covers the top selling brands in terms of units sold based on 2007 data. The models were selected from these brands listed in 2007 GFK Market Data and broadly reflected the range of appliances in that brand in terms of proportion of sales and time on market. The top 21 brands selected cover 91% of the market and each had one sample appliance tested. The top three brands represent 62% of the market and had an additional appliance of a different type tested. In total 24 appliances were tested

These top brands are part of a few small groups e.g. Indesit, Hotpoint, Servis are all one group as are Electrolux, Zanussi and Tricity Bendix.

To avoid testing the same basic design machines with different fascias and brand labels, a variety of wash/dry load capacities were selected for brands of common ownership.

Also some built in units have been selected to broaden the range of types and avoid duplication. Some brands with a small share of the market were included to broaden the scope and a trade brand model from John Lewis was also selected.

Research was subsequently carried out by visiting on-line purchasing sources to check availability of these models and in some cases they were substituted for newer models to avoid issues with obsolescence or availability. The newer models selected were, where possible, identified as the most popular current seller

All brands tested by the MTP in 2005 were retested this time too, but using different models.

1.1 Sampling Plan

For legal compliance purposes the standard requires one sample of the model to be tested initially. If the results show the sample to be achieving its declared performance, then the model is considered compliant. If any of the measurements fall outside the tolerances allowed by the standard, then a further three samples must be tested. If the averaged measurements from these three samples are within the allowed tolerances then the model is considered compliant. The Defra testing was carried out to gain a market picture of the current status of energy labelling, not for the purposes of legal enforcement, so only one sample of each model was measured. If any of the measurements fell outside the tolerances allowed by the standard, then the sample was considered

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not to have achieved the performance declared on the energy label for the purpose of this Market Picture testing. However this is not meant to imply that the model does not comply with the legal energy labelling requirements as a further three samples would need to be tested to ascertain this. In the event that a single sample failed to achieve its declared performance, manufacturers were offered the opportunity to carry out testing on a further three samples of the model at their own cost and if considered valid and appropriate these results were to be published alongside the Defra results. These samples were to be purchased from a retail outlet and tested at an accredited laboratory. If the averaged measurements of the performance parameters from these three samples are within the allowed tolerances then the model is achieving the performance declared on the energy label and complies with the legal requirements. (See Section 3)

2. Selection of Test Laboratory

2.1 Defining the Measurement Standards to be used

The testing of appliances to determine and verify energy label parameters for washer /driers is governed by Commission Directive 96/60/EC of 19th September 1996 implementing Council Directive 92/75/EEC as transposed into UK law by the Energy Information (Combined Washer-driers) Regulations 1997. Testing to determine energy label parameters in the UK is carried out in accordance with the UK regulations and to measure the parameters, the regulations require the use of harmonized standards, which are published in the Official Journal of the European Communities for this purpose,

The standard currently referenced in a Commission Communication of January 2001 and published in Journal entry 2002/C 49/06 is EN 50229:2001. This standard was superseded in 2004 by EN 50229:2007

On this basis, the market picture testing was carried out according to the following standards:

• EN 50229:2007 Electric clothes washer driers for household use – Methods of measuring the performance.

The following standards referenced in EN 50229:2007 were also used for measurement purposes:

- EN 60456:2005 with A11:2006 (Washing Machine standard) for measurement of the wash performance
- EN 61121:2005 (Tumble dryer standard) for the measurement of drying performance

2.2 The Tender Specifications and Selection Criteria

As a result of the new Defra policy of naming the manufacturers whose products have been tested, it was essential that laboratories selected should be able to demonstrate the highest possible level of confidence in the validity of their results. It was decided that the best way of achieving this was to seek laboratories within the EU that were accredited by their national accreditation body against the test and calibration laboratory competence and management system standard ISO 17025:2005 and who had the required energy labelling performance test standards listed on their accreditation schedule. This would mean that the laboratory had been assessed for competence in carrying out the actual tests and measurements required in addition to having had its quality system audited. It was recognised early on that finding a large number of such laboratories would be difficult so having such an accreditation was not made an absolute requirement. Laboratories with less appropriate levels of third party accreditation such as the ISO 9001 or ISO 14001 would also be considered in exceptional circumstances and this was reflected in the tender specification.

All tests were carried out between December 2008 and February 2009 in an accredited test laboratory selected according to the above criteria.

3. Assessment Criteria for Washer/Driers Used in These

Results

The label requires 6 performance parameters to be declared. Of these, 5 are directly measurable according to the standard and 1, the energy efficiency class, is calculated from the measured energy consumed in the complete wash dry cycle divided by the weight of the wash load.

3.1 Assessment Criteria of Measured Parameters

The standard allows tolerances (or variances) in the measurement of these criteria compared to the declared values.

Measured values that fall within these tolerances indicate that the declared performance parameter has been achieved.

Measured values that fall outside these tolerances indicate that the declared performance parameter has not been achieved.

3.2 Assessment Criteria of Energy Efficiency Class

Where the class calculated from the measured energy is the same as or better than that declared and the measured energy is within the tolerances allowed by the standard, this is considered to have verified the declared energy efficiency class.

Where the class calculated from the measured energy is the same as or better than that declared but the measured energy is outside the tolerances allowed by the standard, this is considered to have verified the declared energy efficiency class.

Where the class calculated from the measured energy is lower than that declared but the measured energy is within the tolerances allowed by the standard, this is considered to have verified the declared energy efficiency class.

Where the class calculated from the measured energy is lower than that declared but the measured energy is outside the tolerances allowed by the standard, it is considered that the declared energy class has not been achieved.

4. Testing Results and Tables

4.1 Overall Summary of Test Results

Table 1. Numbers of Produc	cts Tested Pe	rforming/No	t Performing in	Accordance
wi	th Declaratio	ns on the Lal	bel	
Label Declaration	Number of Products where declaration could not be verified due to inadequate drying	Number of products tested that performed as declared on their label	Number of products tested that did not perform as declared on their label	% of products tested that did not perform as declared on their label
Energy Efficiency Class	4	13	6	25
Energy consumption in complete cycle	4	13	6	25
Energy consumption in wash cycle	0	22	1	4
Wash performance*	0	**	*	*
Max Spin speed	0	18	5	21
Water consumption	5	13	5	21

1 out of the 24 appliances tested, the Baumatic MEGA10WD, was supplied with the wrong type of label so no comparisons between declared and measured performance could be made.

20 appliances had a lower wash performance than that declared by the manufacturer when tested using the CLS reference machine (See below)

**3 appliances performed in accordance with their declared wash performance when tested using the CLS reference machine.

- 6 out of the 24 appliances tested (25%) did not perform in accordance with the energy class declared on the label due to their total measured energy consumption used to calculate the class being above that allowed by the tolerance limits in the standard, resulting in a lower class than that declared.
- 6 out of the 24 appliances tested (25%) did not perform in accordance with the values for energy consumption declared on the label due to their total measured energy consumption being above that allowed by the tolerance limits in the standard. In addition, of these, 3 appliances did not dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available. This means their total energy consumption and consequent energy efficiency classes are unverifiable however the energy consumption measured in the drying cycle is already above the upper limit allowed by the standard, so further drying would take the energy consumed further above the limit, reinforcing the assertion that the products are not performing in accordance with the values declared on the label.
- A further 4 appliances had measured total energy consumption levels within the limit allowed by the standard but due to their inability to dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available, their total energy consumptions and consequent energy efficiency classes were unverifiable so it was not possible to confirm that the products were performing in accordance with the values declared on the label.
- 1 out of the 24 appliances tested (4%) did not perform in accordance with the wash cycle energy consumption declaration on the label due to its energy consumption being above that allowed by the tolerance limits in the standard.
- 20 out of the 24 appliances tested using the CLS reference machine (83%) achieved lower wash performance than that declared by the manufacturer.(See below*)
- 5 out of the 24 appliances tested (21%) did not perform in accordance with the maximum spin speed declaration on the labels due to their maximum spin speed being below that allowed by the tolerance limits in the standard.
- 5 out of the 24 appliances tested (21%) did not perform in accordance with the values for water consumption declared on the label due to their measured water consumption being above that allowed by the tolerance limits in the standard. In addition, of these, 2 appliances did not dry to the required moisture content level when using either any of the automatic

drying programmes or the timer durations available. This means their water consumptions are unverifiable. However the water consumption measured in the drying cycle is already above the upper limit allowed by the standard, so further drying would take the water consumed further above the limit reinforcing the assertion that the products were not performing in accordance with the values for water consumption declared on the label.

 A further 5 appliances had measured water consumption levels within the limit allowed by the standard but due to their inability to dry to the required moisture content level when using either any of the automatic drying programmes or the timer durations available, their water consumptions were unverifiable so it was not possible to confirm that the products were performing in accordance with the values declared on the label.

* A major area of concern was wash performance, where according to the Defra Market Picture testing, 20 out of the 24 appliances tested did not achieve the declared wash performance class. Discussions with manufacturers and the test laboratories revealed that the differences in results for wash performance were most probably because the Defra Market Picture tests and an unknown number of the manufacturer's tests were conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively. In the past this was not considered to be a problem as the two different test reference machines were believed to have equivalent performance. However, recent industry tests have indicated that the newer CLS reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

This in turn means that many models shown in the Defra Market Picture testing to be not achieving their declared wash performance are likely to achieve this performance when measured against the older machine and a number of manufacturers have shown this to be the case.

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However the older reference machine is due to be phased out when the more recent version of the standard is adopted early in 2010. When this version is eventually published in the Official Journal,

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manufacturers will have to ensure that for legal compliance, all models they supply perform in accordance with their declared wash performance when measured with the CLS reference machine.

A further major issue is that 7 of the appliances failed to dry to the required level using any of their wash/dry programmes. This means that where the energy and water consumption were measured during the wash/dry cycle and were within the tolerances allowed, there is still uncertainty as to whether they are the maximum levels required to dry adequately and so no sensible comparison can be made with the declared values.

4.2 Brand Performance

The following table shows how well the brands selected and tested performed against their declared values for energy efficiency class, total energy consumption, wash cycle energy consumption, wash performance, max spin speed and water consumption.

 Table 2. Indicating where Brands are Achieving/not Achieving the Declarations on the Label

X indicates that the product did not achieve the performance values and/or energy efficiency class declared on the label

? Indicates where the appliance was unable to dry to the required level resulting in measured values for energy and water consumption that although within the tolerances allowed by the standard could not be compared with the declared performance.

* Indicates where the appliance achieves a lower wash performance than that declared by the manufacturer when tested with the CLS reference machine

Brand	Model		Label P	erforma	nce Para	ameters	
		Energy Class	Total Energy Consumption	Wash Cycle Energy Consumption	Wash Performance	Max Spin Speed	Water Consumption
John Lewis	JLWD 1609				*	Х	
Smeg	WDF16BAX1				*	Х	
Hotpoint	AQGMD 149	Х	Х		*		Х
Bosch	WVD2452S	?	?				?
CDA	CI 830WH	Х	Х		*		Х
Baumatic	MEGA10WD	Х	Х	Х	Х	Х	Х
Fagor	FUS 6116	Х	Х		*	Х	
Siemens	WD12D520	?	?				?
Miele	WT 2760				*		
Zanussi	ZWD 12270W				*	Х	Х
Neff	V5340X2 GB				*		

LG	WD-12316RDK				*		
Hoover	HDB284-80				*		
Hotpoint	WDL 540	?	?		*	Х	?
Candy	CMD 146	х	х		*		?
Indesit	WIDXL 126(UK)			Х			
Zanussi	ZWD16270W1				*		
Indesit	IWDE12				*		
Hoover	HNWL7146	Х	Х		*		
Zanussi	ZWD14270W1				*		
Whirlpool	AWZ412	?	?		*		Х
Tricity Bendix	WDR1242W				*		Х
De Dietrich	DLZ692JU1	Х	Х		*		
AEG Electrolux	L14850				*		

The summary table above indicates that 8 of the 24 appliances tested performed in accordance with all the declarations on their labels.

4.3 Summary Tables of Test Results by Brand

Red Italics indicate that the product is not performing in accordance with the performance values

and/or energy efficiency class declared on the label

Label Parameter Maximum Variance Allowed from Declared Value	Ene Effi Cla	ergy ciency ss	Ene Cor in V Cyc (kW +159	ergy Isump Vash/I le /h/Cyc %	tion Dry :le)	Ener Cons in W (kW	gy sumpt 'ash C h/Cyc	ion ycle le)	Was Perf -0.0	sh forma 3	nce	M Sp Sp (R Th sm of or 10	ax. Din Dee PN PN e alle -10% -	d 1) r 6	Wat Cons +15%	er sumpt	ion
	Declared	Measured	-ewis (Electrolux				Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Jol	nn Lew	vis (Elect	rolux) JL'	WD1	609									
Market Picture Testing Results	В	С	5.5	5.77	+5%	1.19	1.16	-2%	A >1.03	0.976*	-0.054	1600	1480	-120	97	109	+12%
*The model tested model also failed to Manufacturer's Res The manufacturer a report extract from Manufacturer's results based on	Image: IntermediateBC 5.5 5.77 $+5\%$ 1.19 1.16 -2% F_{0} F_{0} 0												low). The				
testing 3 samples of JLWD1609									A >1.(1.02			149	-10			
The manufacturer's performing fully in a It was agreed that tests were conduct Both types are curre recent industry test standard using the the older MPLab typ The version of the s wash performance obtained using the legal wash perform current legal requir However the older this version is event perform in accordan	test re accord differe ed usir ently s s have newer to be refe tandar to be r newer ance re ement referen cually p nce wir	esults and r ance with i nces in resu g different pecified as indicated t CLS type of erence maci rd currently measured u CLS referen equirement s. nce machin published ir th their dec	nethoo ts decla ults for types standa hat the refere sing th nee ma ts. The e is du the O lared v	dology w ared was wash pe of refere rd refere e newer ence mac enced in e older N ichine, ca manufac e to be p fficial Joo wash per	ere review th perform erformand nace mach ence appl type of re- thine wou the Offici MPLab ref annot be cturers' du thased ou urnal, ma formance	wed. The nance b ce were hine, the iances a efference al Journ ference used to eclared t when nufacture when r	e averag ut just f because newer machira a lower al for th machina verify w wash pe the mor rers will neasure	ged resu ails to a e the De CLS made e until re e wash wash pe e purpo e, which hether t erformar re recent have to ed with t	Its for t chieve r fra app chine ar ecently es clean erforma ses of v is beco the moo he ratio t versio ensure the CLS	he thre maximu ointed a nd the c conside her. This nce resu- rerificat oming o dels tes- ngs are n of the that for referen	e samp m spin accredit lder M red equ means ult thar ion of e bsolete ted per therefo standa r legal ce mac	les te spee ted la PLab ual in that that that that that that that tha	ester ed. abor mai wa: t a m estec y lal nseq in a consir adc oblian	d ver atory chine sh pe nachi I to t bellin uent ccorr derec pted	ify that y and the respece- reforma- ne teste- he same- g perfo- ly, the E dance we d in com- l early in ll mode	the mod e manut tively. nce. How ed to the e standa rmance Defra res vith the o npliance n 2010. N	lel is facturer's vever, rd using requires ults, current with the When upply

Label Parameter	Ene Effi Cla	ergy ciency ss	Ene Cor in V Cyc (kW	ergy Isump Vash/I le /h/Cyc	tion Dry :le)	Ener Cons in W (kW	rgy sumpt /ash C h/Cyc	tion ycle le)	Was Perf	sh forma	ince	M Sp Sp (R	lax. Din Dee PIV	d 1)	Wat Con	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%	5		-0.0	3		Th sm of or 10	e iallei -10% - Orpr	r % m	+15%	5	
	Declared	Measured	Declared Measured Variance			Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance

Manufacturer's Comments:

The functionality of the Electrolux washer & dryers tested by Defra can be divided into two main functional groups, considering the technical characteristics and software of the products. Each group has the same washing cycle parameters but different final spin speeds and mechanical structure.

Group A

• John Lewis JLWD1609

• AEG L14850

- Group B
 - Zanussi 12270W
 - Zanussi ZWD14270W1
 - Zanussi ZWD16270W1
 - Tricity Bendix WDR1242W

Group A test results are represented by the LGA 1 test report for model JLWD1609.

The manufacturer has already introduced a corrective action program to address the maximum spin speed issues. The manufacturer had previously identified an inconsistency in the spin speed declared values and those obtained in recent internal appliance performance audits. Modifications to the design have been made and will be introduced into production by week 46, 2009.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isump Vash/I le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh Torma	nce	M Sp Sp (R	ax. in eeo PM	k)	Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		The sm: of - or - 100	e aller 10% - Drpm	1	+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Sm	eg	WDF	16B/	AX1												
Market Picture Testing Results	В	С	4.05	4.20	+4%	1.1	1.11	+1%	A >1.03	0.99*	-0.040	1600	1450	-150	90	89	-1%

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). The model also failed to achieve its minimum spin speed

Manufacturer's Response:

Manufacturer declined to retest.

Defra Comments:

The manufacturer offered no test results to support its claim that the maximum spin speed is achieved on this model but acknowledged the failure to achieve the wash performance.

The Defra testing was carried out by an independent accredited test laboratory so no doubt can be thrown on the accuracy of the results. They will be within acceptable measurement uncertainties. However they were carried out according to the newer version of the correct standard using the newer CLS reference machine to measure wash performance. It appears that the manufacturer's wash performance results have been obtained using the older reference machine and this will have contributed to the difference in measured performance between the Market Picture testing and the manufacturer's results.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

However the older reference machine is due to be phased out when the more recent version of the standard is adopted early in 2010. When this version is eventually published in the Official Journal, manufacturers will have to ensure that for legal compliance, all models they supply perform in accordance with their declared wash performance when measured with the CLS reference machine.

Manufacturer's Comments:

The product in question is no longer in production and therefore further testing is not feasible.

The test results from the factory using five different machines showed maximum spin speed within the parameters of standard EN50229:2007.

The Defra data on wash performance (on one machine only) showed a shortfall of less than 1% which we acknowledge, and we confirm that new technology is being applied in successor models to ensure that the standard is always met.

Further, we understand that Defra used the wrong standard for the tests and because of that the wrong reference machine WASCALOTOR-CLS was used instead of MP-lab. This clearly throws doubt on the accuracy of your test results relative to the standard.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isumpt Vash/[le /h/Cyc	tion Dry le)	Ener Cons in W	gy sumpt ash C	tion ycle	Was Perf	sh ^T orma	ince	Ma Sp Sp (RI	ax. in eec PM)	Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%	+15%			-0.0	3		The sma of - or - 100	iller 10% rpm	1	+15%			
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Hot	point	t (Ind	desit)	AC	(GMI	0 14	9									
Market Picture Testing Results	A	С	5.44	6.77	+24 %	1.46	1.5 5	+6%	A >1.03	0.964*	-0.036	1400	1350	-50	97	122	+26%

The model tested failed to achieve its declared performance for energy efficiency class, total energy consumption and water consumption. *The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). In addition it was unable to dry to the required moisture content using any of its programmes.

Even though this model was unable to dry to the required moisture content level and the maximum energy consumption for the wash and dry cycle could not be determined, the value of the energy consumption measured was already higher than that specified by the tolerance in the standard. So it is considered that the appliance is not achieving its declared energy consumption nor, consequently, its declared energy efficiency class.

Manufacturer's Response:

The manufacturer challenged the results but declined to retest or offer previously obtained test results.

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance between the Market Picture testing and the manufacturer's results.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy nsumpt Vash/[le /h/Cyc	tion Dry le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh Torma	nce	M Sp Sp (R	ax. oin oee .PIV	d 1)	Wat Cons	er sumptic	on
Maximum Variance Allowed from Declared Value			+159	%		+15%	•		-0.0	3		Th sm of or 10	e Iallei - 10% - Orpn	r 6 n	+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Bos	ch W	'VD2	452S													
Market Picture Testing Results	С		4.56	#		0.90	0.86	-5%	A >1.03	A 1.02	-0.01	1200	1170	-30	106	#	
Measured Perform # The measured val unable to dry to the and water consump	ance: ues for a e required otion wer	ll label p d moistu e indete	oarame ire cont erminat	ters were tent using e and cou	within the second se Second second s Second second s	he tolera ts progra e compa	ances al ammes. ired with	lowed ir Therefo n the de	the more the clared v	easurer energy (values.	nent st efficien	anda cy cl	rd b ass,	ut th total	e mode energy	l tested w consumpt	as tion

Manufacturer's Response: The manufacturer (BSH) declined to retest

Label Parameter Maximum Variance Allowed from	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW +159	ergy Isump Vash/[le /h/Cyc %	tion Dry le)	Ener Cons in W +15%	gy sumpt 'ash C	ion ycle	Was Perf -0.0	sh forma 3	nce	M Sp Sp (R Th sm of	ax. Din Deed PM e aller -10%	d)	Wat Cons +15%	er sumpt	ion
Declared Value												10	0rpm	ı			
	Declared	Variance Var					Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	CDA	(De	Diet	rich)	CI83	0WH											
Market Picture Testing Results	В	D	4.85	5.81	+20 %	1.14	1.06	-7%	A >1.03	0.943*	- 0.087	1100	1040	-60	105	121	+15.2%
Measured Perform The model tested fa *The model tested	ance: ailed to a using the	chieve it CLS ref	s decla erence	red perfo machine	ormance i achieved	for ener I lower v	gy effici wash pe	ency cla rforman	ss, tota ce than	l energy that de	/ consu eclared	mpti by tl	on a ne m	nd w anuf	vater co facturer	nsumpti (see bel	on. ow).
Manufacturer's Res The manufacturer, must be made at 23 different 230V mod	sponse: De Dietri 30V, in ac el were c	ch, state cordanc offered.	ed that t e with t In futur	they had the stanc re they w	carried o lard. Re-t ill be ship	out their test resu oping the	labellin Ilts were e 230V v	g tests a e not sup versions	t 240V oplied b to the l	for UK i ut resu UK	models Its from	. The n a pi	y agr revio	eed us te	that the	e measu ed out o	rement n a
Manufacturer's Results	С	С	4.85	5.57	+14. 8%	1.14	1.13	+1.0 1%	A >1.03	1.007	+0.07	1100			105	107	+1.02%
Comments: Manufacturer's rest given by the manuf However, if the man	ults are fi acturer to nufacture	rom test o show t er's resu	s on on hat the lts for v	e sample Defra re vash peri	e only of a sults for formance	a Fagor I the C18 have be	LS6E mo 30WH n een obta	idel. Or nodel m ained us	n this ba ay be di ing the	asis, no iscounte older re	valid aj ed. eferenc	oproj	priato	e tes e. th	st evider is will h	nce has l ave con	been tributed

However, if the manufacturer's results for wash performance have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isump Vash/[le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt ash C	ion ycle	Was Perf	sh Torma	ince	Ma Sp Sp (RI	ax. in eeo PM	k (Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		The sma of - or - 100	aller 10% Irpm	I	+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Bau	matio	c M	EGA1	LOWD)											
Market Picture Testing Results				9.6			1.49			F 0.89			1020				181
Measured Perform	ance:																

The energy label for this model was supplied in an incorrect format and the declared values could not be matched and compared with the measured values.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isump ⁻ Vash/[le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh Torma	nce	Mi Sp Sp (R	ax. in ee PM	d I)	Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		The sm: of - or - 100	e aller 10% Orpn	6	+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Fago	or (D	e Di	etricł	n) FU	S611	.6										
Market Picture Testing Results	В	D	4.85	5.85	+21%	1.14	1.06	-7%	A >1.03	0.965*	-0.065	1100	970	-130	105	117	+12%
Measured Perform	ance:																

The model tested failed to achieve its declared performance for energy efficiency class, total energy consumption and maximum spin speed. *The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below).

Manufacturer's Response:

The manufacturer, De Dietrich, stated that they had carried out their labelling tests at 240V for UK models. They agreed that the measurement must be made at 230V, in accordance with the standard. Re-test results were not supplied but results from a previous test carried out on a different 230V model were offered. In future they will be shipping the 230V versions to the UK.

Manufacturer's Results	С	С	4.85	5.57	+14. 8%	1.14	1.13	+1.0 1%	A >1.03	1.007	+0.07	1100		105	107	+1.02%

Comments:

Manufacturer's results are from tests on one sample only of a Fagor LS6E model. On this basis, no valid appropriate test evidence has been given by the manufacturer to show that the Defra results for the FUS6116 model may be discounted.

However, if the manufacturer's results for wash performance have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isumpt Vash/E le /h/Cyc	tion Dry le)	Ener Cons in W	ˈgy sumpt 'ash C	ion ycle	Was Perf	sh Torma	nce	M Sp Sp (R	ax. oin oee PM	d I)	Wat Cons	er sumptio	on
Maximum Variance Allowed from Declared Value			+159	%		+15%	•		-0.0	3		The sm of or 10	e aller -10% - Orpn	6 n	+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Sien	nens	WI	D12D	520												
Market Picture Testing Results	C		4.56	#	#	0.9	0.86	-5%	A >1.03	B >1.006	-0.024	1200	1150	-50	106	#	#
Measured Perform	ance:		ramot	orsworo	within th	o tolora		awod in	tho mo	acurom	ont cta	ndar	d bu	it the	modol	tostod wa	

wed in the measurem ard but the mo unable to dry to the required moisture content using any of its programmes. Therefore the energy efficiency class, total energy consumption and water consumption were indeterminate and could not be compared with the declared values. Manufacturer's Response: Manufacturer (BSH) declined to retest

Label Parameter Maximum Variance Allowed from Declared Value	Enerr Effici Class	gy ency	Ene Cor in V Cyc (kW +15'	ergy hsump Wash/[le /h/Cyc %	tion Dry le)	Ener Cons in W +15%	gy sumpt 'ash C	ion ycle	Was Perf -0.0	sh Torma 3	ince	M Sp Sp (R Th sm of or 10	ax. Din Dee PN e alle -10% -	d 1) r %	Wat Cons +15%	er sumpt	ion
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Mie	le W	T267	70					·								
Market Picture Testing Results	A	В	3.4	3.87	0.85	0.88	+4%	A >1.03	0.982*	-0.048	1600	1600	0	65	66	+2%	
Market Picture Testing Results A B 3.4 3.87 +14% 0.85 0.88 +4% V <t< td=""></t<>																	
Manufacturer's Results (Average of 3 reports	A	В	3.4	3.68	+8%	0.85	0.84	-1%	A >1.03	1.068	+0.038	1600	1584	-16	65	64.4	-1%
Defra Comments: The manufacturer's the Defra appointed CLS machine and th Both types are currr recent industry test standard using the the older MPLab typ The version of the s wash performance obtained using the legal wash perform current legal requir However the older this version is event perform in accordar	test rest d accredi e older N ently spe s have in newer CL be refere tandard to be me newer CL ance req ements. referenc. tually pul nce with	ults and ted labo APLab m cified as dicated .S type o nce mac currentl asured u .S refere uiremen e machir blished ii their de	method ratory a bachine standa that th f refere chine. y refere using th nce ma ts. The ne is du n the O clared v	dology wa and the r respectiv rd refere e newer r ence mace mace in t e older N icchine, ca manuface e to be p fficial Jou wash per	ere review manufactu vely. ence appli type of re thine wou the Officia APLab ref annot be o turers' do hased ou urnal, ma formance	wed. It v urer's te iances a ference ild give a al Journ erence used to eclared t when nufactur when r	vas agre sts were machina a lower al for th machine verify w wash pe the mor rers will neasure	ed that e conduct e until re e wash wash pe e purpo e, which hether t rformar e recent have to d with t	differer cted usi ecently o es clean rformal ses of v is beco he moc nce ratin t version ensure he CLS	nces in ng diffe conside er. This nce res erificat ming o dels tes ngs are n of the that fo referen	results erent ty red equ s means ult thar ion of e bsolete ted per therefo e standa or legal ice mac	for w pes c ual in s that n if te nerg corr form form ore co ard is comp hine.	vash of re t a m estec y lal iseq in a consid adc olian	perfi ferer sh pe nachi d to t bellin uent derec opted ace, a	ormanc nce mac erforma ine teste he same ly, the E dance w d in com l early in ll mode	e were the shine, the shine, the second to the estanda remance Defra respiration the constraint the constraint the shift and the shift she shift she y	vever, rd using requires ults, current with the When upply

Label Parameter Maximum Variance Allowed from	Ene Effi Clas	ergy ciency ss	Ene Cor in V Cyc (kW +159	ergy Isump Vash/I Ie /h/Cyc %	tion Dry :le)	Ener Cons in W +15%	gy sumpt 'ash C	ion ycle	Was Perf -0.0	ih forma	ince	M Sp Sp (R Th sm of	ax. pin pee PM e aller	d I)	Wat Cons +15%	er sumpt	ion
Declared Value												or 10	- Orpn	า			
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Zaı	nussi	(Elec	trolu	x) 12	270V	V										
Market Picture Testing Results	С	D	5.5	6.14	+12%	1.02	0.98	-4%	A >1.03	0.985*	-0.045	1200	1090	-110	104	121	+16%
Measured Perform The model tested fa *The model tested All other label para	A C																
Manufacturer's Res The manufacturer a (an independent ac	sponse sserts credite	: that the r ed laborat	nodel ty ory) bas	pe meet ed upon	s the star three sar	ndard re mples pu	quireme urchased	ents for d indepe	Wash P endently	erform /.	ance as	shov	wn b	y a r	eport e>	ktract fro	om LGA
Manufacturer's Results (Based on testing 1 sample of 12270W)									A >1.03	1.025	-0.005	1200	1124	-76	104	114	+9.6%
Manufacturer's Results (Based on testing 3 samples of 14270W)							1.19		A >1.03	>1.03			1336	+136			
Defra Comments: The manufacturer's performing fully in a measured during th that the Defra resul It was agreed that of tests were conducts Both types are currer recent industry test standard using the the older MPLab typ The version of the s wash performance obtained using the legal wash perform current legal require However the older this version is event perform in accordan	test re accorda e testi ts may lifferen ed usin ently sp s have newer to be n newer ance re ements referen cually p newer unce with	esults and ance with ng of the be discou- nces in res g differen pecified a indicated CLS type of rence ma d current neasured CLS refere equirement s. nce machi- published th their de	method its decl single 1: unted. ults for it types s standa that th of refere chine. ly refere using th ence ma nts. The ne is du in the O	dology w ared was 2270W n wash pe of refere rd refere e newer enced in the older N the older N the older N the older N the older S manuface e to be p fficial Jou wash per	ere review h perform nodel so t rformanc nce mach ence appl type of re- chine wou the Offici MPLab re- annot be cturers' du hased ou urnal, ma formance	wed. The nance a the result inne, the iances a eference ald give a al Journ ference used to eclared t when nufactur	e averag nd maxi lts do no because newer nd were machine verify w wash pe the mor rers will neasure	the Def CLS made until re wash pe e purpo e, which hether t erforman e recen have to d with t	Its for t in spee that the chine ar ecently es clean erforma ses of v is beco the moc nce ratio t version ensure he CLS	he thre d. How e mode inted a id the c conside er. This nece res erificat ming o lels tes ngs are n of the that for referen	e samp ever to l achiev lder M red equ s means ult thar ion of e bsolete ted per therefo	ed las te tal w ves it ed la las that n if te energe compose co ard is comp chine	estec ater s dec bora mac was : a m sted y lak sseq in a consic ado	l ver cons clared tory chine achi to tl bellin uentl ccore derec pted cc, a	ify that sumptio d water and the respect rforman ne teste he same g perfol ly, the D dance w d in com early ir Il mode	the moc on was of consum e manufa tively. nce. How ed to the e standa rmance Defra res vith the of apliance of 2010. N Is they s	lel is nly acturer's acturer's vever, rd using requires ults, current with the When upply

Manufacturer's Comments:

The functionality of the Electrolux washer & dryers tested by Defra can be divided into two main functional groups, considering the technical characteristics and software of the products. Each group has the same washing cycle parameters but different final spin speeds and mechanical structure.

Group A

- John Lewis JLWD1609
- AEG L14850

Group B

- Zanussi 12270W
- Zanussi ZWD14270W1
- Zanussi ZWD16270W1
- Tricity Bendix WDR1242W

Group B test results are represented by the LGA 2 test report for model ZWD14270W1.

The manufacture has already introduced a corrective action program to address the maximum spin speed issues. The manufacturer has previously identified an inconsistency in the spin speed declared values and those obtained in recent internal appliance performance audits. Modifications to the design have been introduced across this model range in Week 41, 2009. No external independent accredited laboratory tests are available at present for this design update, but we are confident that this issue has been resolved.

Label Parameter	Enerr Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isump Vash/I le /h/Cyc	tion Dry :le)	Ener Cons in W	ˈgy sumpt /ash C	ion ycle	Was Perf	sh orma	nce	Ma Spi Spe (RF	n eed PM)		Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		The sma of -1 or - 100	ller 10% rpm		+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	NEF	¹ / ₂ <td></td>															
Market Picture Testing Results	В	C	4.05	4.17	+3%	1.1	1.08	-1%	A >1.03	0.987*	-0.043	1400	1330	-70	95	90	-6%
Measured Perform *The model tested All other label para Manufacturer's Res	ance: using the meter de	e CLS refe eclared v	erence values v	machine vere achi	achievec eved.	llower	wash pei	rforman	ce than	that de	eclared	by the	e ma	anuf	acturer	(see be	low).
None																	
No information was performance but if difference in measu Differences in result conducted using dif Both types are currer recent industry test standard using the the older MPLab ty	s offered the man ired wasl ts for wa ferent ty ently spe is have in newer CL pe refere	by the n infacture in perform sh perform pes of re- crified as indicated S type of ence made	nanufac er's resu mance. rmance eference standa that th f refere chine.	cturer ab ults have e will aris e machir ird refere e newer ence mac	out the te been obt e where the, the ne ence appl type of re thine wou	esting st ained u the Defr wer CLS iances a eference ild give	andard sing the a Marke machin nd were a machin a lower y	and met older re e and th until re e washe wash pe	thodolo eference e testin ne older ccently c es clean rformai	gy used e machi g and tl MPLak conside er. This nce resu	I to sup ne, this ne man machi red equ means ult thar	ufactu ufactu ine res ual in v that a i if tes	heir ave pect wash a ma ted t	dec con s te tivel n pe achin to th	laration tribute sts have y. rformal ne teste ne same	n of was d to the e been nce. How ed to the e standa	h vever, e rd using

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Ener Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy nsump Vash/I le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt ash C	ion ycle	Was Perf	sh orma	ince	M Sp Sp (R	ax. oin oee PM	d I)	Wat Con	er sumpt	ion
Maximum Variance Allowed from Declared Value			+15	%		+15%			-0.0	3		The sm of or 100	e aller -10% - Orpn	6 n	+15%	5	
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	LG	WD-:	1231	L6RD	K												
Market Picture Testing Results	В	C	6.48	7.07	+9%	1.36	1.42	+4%	A >1.03	0.985*	-0.045	1200	1340	+140	144	141	-2%
Measured Performance: *The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). All other label parameter declared values were achieved. Manufacturer's Response: The Manufacturer gueried the wash performance results. Following discussion with Defra																	
Manufacturer's Res The Manufacturer of performance tests p	sponse: Jueried t previousl	he wash y carriec	perfor d out by	mance re v their int	esults. Fol ernal lab	lowing o oratory.	liscussic	on with	Defra, tl	he man	ufactur	er of	fere	d res	sults fro	ım wash	
Manufacturer's Results									A >1.03	>1.09	+0.06						
Defra Comments: The manufacturer's the Defra appointed CLS machine and th Both types are curro recent industry test standard using the i the older MPLab tyj The version of the s wash performance obtained using the i legal wash perform current legal requir However the older this version is event perform in accordat	test resi d accredi e older N ently spe s have in hewer Cl be refere tandard to be me newer Cl ance req ements. reference tually pul nee with	ults and ted labo MPLab m cified as idicated .S type o ence mac currentl asured u .S refere uiremen e machir blished in their de	method ratory a lachine standa that th f refere shine. y refere using th nce ma ts. The ne is du n the O clared v	dology w and the r respecti- urd refere e newer ence mace enced in f e older N icchine, ca manufac e to be p fficial Jou wash per	ere revien nanufactr vely. ence appl type of re the Offici MPLab ref nnot be trurers' de hased ou urnal, ma formance	wed. It v urer's te iances a iference al Journ: ference used to eclared t when t nufacture when r	vas agre sts were machina a lower al for th machine verify w wash pe the mor rers will neasure	eed that e condu e until re wash wash pe e purpo e, which hether to erformal re recen have to ed with t	differer cted usi ecently o es clean erforman ses of v is beco the moc nce ratin t version ensure he CLS	nces in ng diffe conside er. This nce resi erificat ming o lels tesi ngs are n of the that for referen	results erent ty red equ s means ult thar ion of e bsolete ted per therefo e standa or legal ce mac	for w pes c ual in that that that n if te nerg com form form form form form form thine.	vash of rei was a m sted y lab sequ in a onsic ado blian	perfi feren sh pe aachi l to t bellin uent ccoro derec pted cc, a	ormanc nce mad rforma ne teste he sam g perfo ly, the I dance w d in con early in Il mode	e were b chine, th nce. How ed to the e standa rmance Defra res vith the o npliance n 2010. N els they s	because e newer vever, rd using requires ults, current with the When upply
performs fully in acc testing performance This approach can a ensure our product	cordance e – the o ppear co labelling	e with th ne used onfusing complie	e value by LG a for con es with	s on the is well as sumers a Europea	label. LG the one i and LG th n Standar	recognis more re erefore ds.	ses that cently ir welcom	Europea htroduce es Defra	an Direc ed and u a's move	tives al used for es to hi	low two r the De ghlight	o diff efra/I this a	erer Mark ambi	nt rei ket P iguity	ference icture T y and w	models esting R ill contir	for eport. nue to

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy nsump Vash/[le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh orma	ince	M Sp Sp (R	ax. oin oee PM	d I)	Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		The sm of or 100	e aller - 10% - Drpn	6 n	+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Ноо	ver	HD	3284-	-80												
Market Picture Testing Results	В	С	4.86	5.23	+8%	1.02	1.08	+5%	A >1.03	0.950*	-0.08	1400	1350	-50	135	110	-18%

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). All other label parameter declared values were achieved.

Manufacturer's Response:

The manufacturer declined to retest

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isump Vash/I le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh Torma	ince	M Sp Sp (R	lax. Din Dee RPIV	d I)	Wat Cons	er sumpt	ion	
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		Th sm of or 10	e nallen -10% - Orpn	- 6 n	+15%			
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Variance Declared Measured			
Brand and Model	Hot	poin	t (Ind	desit)	WDL	540)											
Market Picture Testing Results	В	#	5.67	#	#	1.33	1.33	0%	A .>1.03	0.979*	-0.051	1400	1200	-200	195	#	#	
Measured Perform	ance:										•				1			

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). The model tested failed to achieve its declared maximum spin speed.

#The measured values of the other label parameters were within the tolerances allowed in the measurement standard but the model tested was unable to dry to the required moisture content using any of its programmes. Therefore the energy efficiency class, total energy consumption and water consumption were indeterminate and the declared values could not be verified.

Manufacturer's Response:

The manufacturer challenged the results but declined to retest or offer previously obtained test results.

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this may have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label	Ener	gy	Ene	ergy		Ener	ЗУ		Was	sh		Μ	ax.		Wat	er	
Parameter	Effici	ency	Cor	sump	tion	Cons	sumpt	ion	Perf	orma	ince	Sp	oin		Cons	sumpt	ion
	Class		in V	Vash/[Dry	in W	ash C	ycle				Sp	ee	d			
			Сус	le								(R	ΡN	1)			
			(kW	/h/Cyc	le)												
Maximum			+159	%		+15%			-0.0	3		Th	e eller		+15%)	
Variance												of	-10%	۲ 6			
Declared Value												or	-				
Declarea value												10	Orpr	n			
													d				
	ed	Ired	ed	Ired	e	ed	Ired	e	ed	Ired	ce	arec	ure	ance	ed	Ired	e
	clar	easu	clar	easu	rian	clar	easu	rian	clar	easu	rian	becl	leas	/aria	clar	easu	rian
	De	ž	De	ž	Va	De	ž	Va	De	Ě	Va		2	_	De	ž	Va
Brand and	Can	dv (CMD	146													
Model		,															
Market Picture	В	D	4.86	5.94	+22	1.14	1.12	-1%		*					135		
Testing Results					%				A 1.03	066	0.04	400	300	-70			
									^	0.	Ŧ	-	1				

The model tested failed to achieve its declared energy efficiency class and total energy consumption.

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). #The measured value for water consumption was within the tolerance allowed in the measurement standard but the model tested was unable to dry to the required moisture content using any of its programmes. Therefore the water consumption was indeterminate and the declared value could not be verified.

Even though this model was unable to dry to the required moisture content level and the maximum energy consumption for the wash and dry cycle could not be determined, the value of the energy consumption measured was already higher than that specified by the tolerance in the standard. So it is considered that the appliance is not achieving its declared energy consumption nor, consequently, its declared energy efficiency class.

Manufacturer's Response:

The manufacturer (Hoover) declined to retest.

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy nsump Vash/[le /h/Cyc	tion Dry :le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh Torma	nce	M Sp Sp (R	ax. oin oee PM	d I)	Wat Cons	er sumpt	ion
Maximum Variance Allowed from Declared Value			+15	%		+15%			-0.0	3		Th sm of or 10	e aller -10% - Orpn	6 n	+15%	,	
	Declared	Measured	Declared Measured Variance			Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Inde	esit N	WID:	XL 12	6(UK))			•			•					
Market Picture Testing Results	В	С	4.77	5.00	+5%	1.02	1.27	+24 %	A >1.03	1.01	-0.02	1200	1150	-50	86	72	-16%
Measured Perform The model tested fa	ance ailed to a	chieve it	ts decla	red wash	n cycle en	ergy cor	nsumpti	on. All c	other lab	Del para	meters	achi	eved	d the	ir decla	red valu	es.

Manufacturer's Response The manufacturer challenged the results but declined to retest or offer previously obtained test results.

Label Parameter Maximum Variance Allowed from Declared Value	Ener Effici Class	gy ency	Ene Cor in V Cyc (kW +155	ergy hsump Vash/[le /h/Cyc %	tion Dry le)	Ener Cons in W +15%	gy sumpt 'ash C	ion ycle	Was Perf -0.0	ih forma 3	nce	M Sp Sp (R The sm of or 100	ax. pin pee PM e aller -10% - Drpn	d 1) ~	Wat Cons +15%	er sumpt	ion
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Zan	ussi	(Eleo	ctrolu	ıx) ZV	VD16	5270	W1									
Market Picture Testing Results	B C 4.85 4.98 +3% 1.02 1.01 -1% $<$ $\stackrel{\text{m}}{\overset{\text{m}}{,}}$ $\stackrel{\text{O}}{\overset{\text{O}}{,}}$ $\stackrel{\text{O}}{\overset{\text{O}}{,}$ $\stackrel{\text{O}}{\overset{\text{O}}{,}}$ $\stackrel{\text{O}}{\overset{\text{O}}{,}$												-3%				
Measured Perform *The model tested All other label parar	ance: using the meters a	nce: sing the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). eters achieved their declared values. Honse: serts that the model meets the standard requirements for Wash Performance as shown by a report extract from LGA (an														low).	
Manufacturer's Res The manufacturer a independent accrec	sponse: sserts th lited labo	at the m pratory)	iodel m based ι	eets the upon thre	standard ee sample	require es purch	ments for ased inc	or Wash lepende	n Perform ently.	mance	as shov	vn by	a re	eport	extract	from LC	GA (an
Manufacturer's Results (Based on testing 14270W)									A >.1.03	>1.03							
Defra Comments: The manufacturer's performing fully in a It was agreed that of tests were conducted Both types are curror recent industry test standard using the i the older MPLab typ The version of the s wash performance obtained using the legal wash performance current legal require However the older this version is event perform in accordan	test rest accordan lifference ed using ently spe s have in hewer CL be refere tandard to be me newer CL ance req ements. reference ually pul-	ults and i ce with i es in resu different cified as idicated .S type o noce mac currently asured u .S refere uiremen e machire blished in their deo	method its decla ults for types of standa that the f refere- hine. y refere- issing th nce ma ts. The ne is durn the O clared v	dology wa ared was wash per of refere rrd refere e newer ence din f e older N cchine, ca manufac e to be p fficial Jou wash per	ere review h perform rformanc nce mach ence appli type of re hine wou the Offici /IPLab ref nnnot be i turers' de hased ou urnal, ma formance	wed. The nance. e were b nine, the iances a ference al Journ: ference used to eclared t when r	e averag pecause e newer of machina a lower al for the machine verify w wash pe the mor rers will neasure	the Def CLS made until re- e washe wash pe e purpo e, which hether t rformar e recent have to d with t	Its for the ra appo chine an ecently of esclean erforman ses of vo is beco the mod the cratin ensure he CLS of	he thre inted a id the c conside er. This nce resu erificat ming o lels tes ngs are n of the that for referen	e samp ccredit ider M red equ s means ult thar ion of e bsolete ted per therefo standa r legal ce mac	les te ed la PLab Jal in that that that to form form ore co nrd is comp hine.	bora mac was a m sted y lat in a ponsic ado	d ver atory chine sh pe nachi l to t l to t derec derec derec ce, a	ify that and the respect rforman ne teste he same g perfo ly, the E dance w d in com early ir Il mode	the mode e manufa tively. Ince. How ed to the e standa rmance Defra res rith the o opliance o 2010. N Is they s	lel is acturer's e rd using requires ults, current with the When upply
Manufacturer's Con The functionality of characteristics and s structure. Group A John Lev AEG L14 Group B Zanussi 2 Zanussi 2 Group B test results	mments: the Elec software vis JLWD 850 12270W 2WD142 2WD162 endix WE are repo	trolux wa of the p 1609 70W1 70W1 DR1242V resented	asher & roducts v	dryers t s. Each gr	ested by roup has	Defra ca the sam	an be div e washii	vided in ng cycle 14270W	to two r parame	nain fu eters bi	nctiona ut diffei	l gro ent f	ups, inal	con: spin	sidering	the tecł and me	nnical chanical

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	ergy Isump [:] Vash/[le /h/Cyc	tion Dry le)	Ener Cons in W	gy sumpt 'ash C	ion ycle	Was Perf	sh Torma	nce	M Sp Sp (R	ax. oin oee PIV	d I)	Wat Con	er sumpt	ion
Maximum Variance Allowed from Declared Value			+159	%		+15%			-0.0	3		The sm of or 10	e alleı - 10% - Orpn	r 6 n	+15%	5	
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Inde	esit	IWDI	E12													
Market Picture Testing Results	В	С	4.34	4.6. 1	+6%	1.04	1.03	-1%	A >1.03	*66.0	-0.040	1200	1100	-100	96	92	-4%

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). All other label parameters achieved their declared values.

Manufacturer's Response:

The manufacturer challenged the results but declined to retest or offer previously obtained test results.

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter	Energ Effici Class	gy ency	Ene Cor in V Cyc (kW	Energy Consumption in Wash/Dry Cycle (kWh/Cycle)			Energy Consumption in Wash Cycle			sh Torma	ince	M Sp Sp (R	ax. bin bee PM	d I)	Water Consumption			
Maximum Variance Allowed from Declared Value			+15%			+15%			-0.03			smaller of -10% or - 100rpm			+15%			
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	
Brand and Model	Ноо	ver	HNW	NWL7146														
Market Picture Testing Results	В	D	4.86	5.91	+22%	1.14	1.22	+7%	A >1.03	0.98*	0.05	1400	1310	-90	135	#		

The model tested failed to achieve its declared energy efficiency class and total energy consumption.

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). #The measured value for water consumption was within the tolerance allowed in the measurement standard but the model tested was unable to dry to the required moisture content using any of its programmes. Therefore the water consumption was indeterminate and the measured value could not be compared with the declared value.

Even though this model was unable to dry to the required moisture content level and the maximum energy consumption for the wash and dry cycle could not be determined, the value of the energy consumption measured was already higher than that specified by the tolerance in the standard. So it is considered that the appliance is not achieving its declared energy consumption nor consequently its declared energy efficiency class

Manufacturer's Response:

Manufacturer declined to retest.

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter Maximum Variance Allowed from Declared Value	Energy Energy Energy Energy Energy Energy Energy Cor Class in V Cyc (kW +15'			Energy Consumption in Wash/Dry Cycle (kWh/Cycle) +15%			thergy Consumption in Wash Cycle +15%			Performance			Max. Spin Speed (RPM) The smaller of -10% or - 100rpm			Water Consumption +15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	
Brand and Model	Zanussi (Electrolux) ZWD14270W1																	
Market Picture Testing Results	С	C	5.3	5.5	+4%	1.02	0.95	-6%	A >1.03	0.99*	-0.04	1400	1340	-60	100	109	+9%	
Measured Perform *The model tested All other label para	ance: using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). meters achieved their declared values.													low).				
Manufacturer's Response: The manufacturer asserts that the model meets the standard requirements for Wash Performance as shown by a report extract from LGA (an independent accredited laboratory) based upon three samples purchased independently.																		
Manufacturer's Results (Based on testing 14270W)									A >1.03	>1.03								
Defra Comments: The manufacturer's performing fully in a It was agreed that of tests were conductor Both types are curror recent industry test standard using the u the older MPLab ty The version of the s wash performance obtained using the legal wash performance current legal requiri However the older this version is event perform in accordan	14270W)Defra Comments:The manufacturer's test results and methodology were reviewed. The averaged results for the three samples tested verify that the model is performing fully in accordance with its declared wash performance.It was agreed that differences in results for wash performance were because the Defra appointed accredited laboratory and the manufacturer's tests were conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.However the older reference machine is due to be phased out when the more recent version of the standard is adopted early in 2010. When this version is eventually published in the Official Journal, manufacturers will have to ensure that for legal compliance, all models they supply perform in accordance with their declared wash performance when m														lel is facturer's vever, rd using requires ults, current with the When upply			
Manufacturer's Con The functionality of characteristics and s structure. Group A John Lev AEG L14 Group B Zanussi 2 Zanussi 2 Group B test results	mments: the Elec software vis JLWD 850 12270W 2WD142 2WD162 endix WE s are repr	trolux wa of the p 1609 70W1 70W1 DR1242W resented	asher & roducts V by the	dryers t s. Each gr	ested by roup has st report	Defra ca the sam	an be div e washir	vided in ng cycle 14270W	to two r parame	main fu	nctiona ut diffei	Il grou rent f	ups, inal	cons spin	speeds	the tech	nnical chanical	

Label Parameter	Energ Effici Class	gy ency	Energy Consumption in Wash/Dry Cycle (kWh/Cycle)			Energy Consumption in Wash Cycle			Was Perf	sh ^T orma	ince	M Sp Sp (R	ax. oin oee .PIV	d 1)	Water Consumption			
Maximum Variance Allowed from Declared Value			+159	%		+15%	+15%			-0.03				r 6 n	+15%			
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	
Brand and Model	Whi	rlpo	ol A	WZ42	12													
Market Picture Testing Results	C		4.65	#		1.06	1.21	+14 %	A >1.03	*66.0	-0.04	1200	1210	+10	142	175	+23%	

The model tested failed to achieve its declared water consumption.

*The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). #The measured value for total energy consumption was within the tolerance allowed in the measurement standard but the model tested was unable to dry to the required moisture content using any of its programmes. Therefore the total energy consumption and consequently the energy efficiency class were indeterminate and the declared values could not be verified.

Even though this model was unable to dry to the required moisture content level and the maximum water consumption could not be determined, the value of the water consumption measured was already higher than that specified by the tolerance in the standard. So it is considered that the appliance is not achieving its declared water consumption.

Manufacturer's Response:

None

Defra Comments:

No information was offered by the manufacturer about the testing standard and methodology used to support their declaration of wash performance but if the manufacturer's results have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.

Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.

Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine.

The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab reference machine, which is becoming obsolete. Consequently, the Defra results, obtained using the newer CLS reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.

Label Parameter Maximum Variance Allowed from	Ene Effi Clas	ergy ciency ss	Ene Cor in V Cyc (kW +159	Energy Consumption in Wash/Dry Cycle (kWh/Cycle) +15%			Energy Consumption in Wash Cycle +15%			Performance			ax. pin pee PM e aller -10%	d I)	Water Consumption +15%		
		[[100rpm					
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	Tricity Bendix (Electrolux) WDR1242W																
Market Picture Testing Results	С	D	5.5	6.29	+14%	1.02	1.02	0%	A >1.03	0.98*	-0.05	1200	1130	-70	104	127	+22%
Measured Perform The model tested fa *The model tested	Image: Image: ailed to achieve its declared water consumption. using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below).																
Manufacturer's Res The manufacturer a independent accred	urer's Response: ifacturer asserts that the model meets the standard requirements for Wash Performance as shown by a report extract from LGA (an ent accredited laboratory) based upon three samples purchased independently.																
Manufacturer's Results (Based on testing 14270W)	× 21.03																
Defra Comments: The manufacturer's performing fully in a It was agreed that a tests were conducts Both types are curri- recent industry test standard using the full the older MPLab typ The version of the s wash performance obtained using the legal wash perform current legal requir However the older this version is event perform in accordan No results or comm Manufacturer's Con The functionality of characteristics and structure.	14270W) The manufacturer's test results and methodology were reviewed. The averaged results for the three samples tested verify that the model is performing fully in accordance with its declared wash performance. It was agreed that differences in results for wash performance were because the Defra appointed accredited laboratory and the manufacturer's tests were conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively. Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine would give a lower wash performance result than if tested to the same standard using the older MPLab type reference machine. The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab type formance requires declared wash performance ratings are therefore considered in compliance with the current legal equirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements. However the older reference machine is due to be phased out when the more recent version of the standard is adopted early in 2010. When this version is eventually published in the Official Journal, manufacturers will have to ensure that for legal compliance, all models they supply perform in accordance with their declared wash performance when measured with the CLS reference machine. No results or comments were offered to show t														el is acturer's /ever, rd using requires ults, .urrent with the Vhen upply		
John Lev AEG L14 Group B Zanussi : Zanussi : Tricity B Group B test results	structure. Group A John Lewis JLWD1609 AEG L14850 Group B Zanussi 12270W Zanussi ZWD14270W1 Zanussi ZWD16270W1 Tricity Bendix WDR1242W																

Label Parameter Maximum	Energ Effici Class	gy ency	Energy Consumption in Wash/Dry Cycle (kWh/Cycle) +15%			Energy Consumption in Wash Cycle +15%			Wash Performance -0.03			Max. Spin Speed (RPM)			Water Consumption +15%		
Variance Allowed from Declared Value												of -10% or - 100rpm					
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	De Dietrich DLZ692JU1																
Market Picture Testing Results	В	D	4.85	5.68	+17%	1.14	1.10	-4%	A >1.03	0.94*	-0.09	1100	1050	-50	105	120	+15%
Measured Performance: The model tested failed to achieve its declared performance for energy efficiency class and total energy consumption. *The model tested using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). All other label parameters achieved their declared values.																	
Manufacturer's Res The manufacturer, I must be made at 23 different 230V mod	sponse: De Dietri 80V in act el were o	ch, state cordance offered. I	d that t with t n futur	they had he stand e they w	carried o ard. Re-te vill be ship	out their est resul oping the	labellin Its were e 230V v	g tests a not sup versions	nt 240V oplied bi to the l	for UK ut resul UK.	models ts from	. The a pro	y ag evio	reed us te	that th st carri	e measu ed out o	rement n a
Manufacturer's Results	С	C	4.85	5.57	+14. 8%	1.14	1.13	+1.0 1%	A >1.03	1.007	+0.07	1100			105	107	+1.02%
Comments:Manufacturer's results are from tests on one sample only of a Fagor LS6E model. On this basis, no valid appropriate test evidence has been given by the manufacturer to show that the Defra results for the DLZ692JU1 model may be discounted.However if the manufacturer's results for wash performance have been obtained using the older reference machine, this will have contributed to the difference in measured wash performance.Differences in results for wash performance will arise where the Defra Market Picture testing and the manufacturer's tests have been conducted using different types of reference machine, the newer CLS machine and the older MPLab machine respectively.Both types are currently specified as standard reference appliances and were until recently considered equal in wash performance. However, recent industry tests have indicated that the newer type of reference machine washes cleaner. This means that a machine tested to the standard using the newer CLS type of reference machine.The version of the standard currently referenced in the Official Journal for the purposes of verification of energy labelling performance requires wash performance to be measured using the older MPLab type reference machine, cannot be used to verify whether the models tested perform in accordance with the current legal wash performance requirements. The manufacturers' declared wash performance ratings are therefore considered in compliance with the current legal requirements.However the older reference machine is due to be phased out when the more recent version of the standard is adopted early in 2010. When																	

Label Parameter	Energ Effici Class	gy ency	Energy Consumption in Wash/Dry Cycle (kWh/Cycle)			Energy Consumption in Wash Cycle			Was Perf	Max. Spin Speed (RPM)			Water Consumption				
Maximum Variance Allowed from Declared Value			+13%			713/0			-0.03			smaller of -10% or - 100rpm			+15%		
	Declared	Measured	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance	Declared	Measured	Variance
Brand and Model	AEG (Electrolux) L14850																
Market Picture Testing Results	С	С	5.9	5.81	-2%	1.19	1.13	-5%	A >1.03	0.97*	-0.06	1400	1360	-40	108	122	+13%
Measured Perform *The model tested All other label para	nance: d using the CLS reference machine achieved lower wash performance than that declared by the manufacturer (see below). ameters achieved their declared values.																
Manufacturer's Res The manufacturer a independent accrec	Response: er asserts that the model meets the standard requirements for Wash Performance as shown by a report extract from LGA (an credited laboratory) based upon three samples purchased independently.																
Manufacturer's results based on testing 3 samples of JLWD1609	1.023																
Defra Comments: The manufacturer's performing fully in a lt was agreed that of tests were conducte Both types are currer recent industry test standard using the the older MPLab typ The version of the s wash performance obtained using the legal wash performs current legal require However the older of this version is event this version is event the functionality of characteristics and structure.	test resu accordan lifference ed using ently spe s have in newer CL be refere tandard to be me newer CL ance req ements. reference cually put nce with mments: the Elec software vis JLWD 850 12270W 2WD142: 2WD162: endix WE s are rep	ults and n ce with it es in resu different cified as : dicated t S type of nce mach currently asured u: S referer uirement e machine oblished in their dec trolux wa of the pr 1609 70W1 70W1 pR1242W resented	nethod s decla Its for types of standa hat the refere sing th the or lared v sher & oducts	lology we ared was wash per of refere rd refere e newer f nce mac nced in t e older N chine, ca manufac e to be p fficial Jou vash per s. Each gr	ere review h perform formanc nce mach ince appli type of re hine wou the Offici. APLab ref nnot be turrers' de hased ou urnal, ma formance ested by roup has	ved. The nance. e were b ine, the ances a ference d give a al Journa erence used to eclared t when f t when f Defra ca the sam	e averag pecause newer of machine a lower wa al for the machine verify wi wash pe the mor- rers will <u>neasure</u> an be div e washin	ed resu the Def CLS mac until re e washe wash pe e purpos y which hether t rformar e recent have to d with t vided int ng cycle	Its for the ra appo chine an ecently c es clean rforman ses of v is beco che mod nee ratir ensure he CLS n to two r parame	ne thre inted a id the o conside er. This nee rest ming ol lels test ngs are that fo referen nain fu eters bu	e samp ccredit lder Mi red equ means ult thar ion of e bsolete ted per therefo e standa or legal cce mac	les te ed lal PLab Jal in i ftat i if te Con form ore cc ord is comp hine.	estec pora mac was a m sted y lat sequ in a ado olian ups, inal	d veri ntory chine sh pe achi l to the pellin uentl ccore derec pted cce, a cons spin	ify that and the respect rforman ne teste he same g perfoo y, the E dance w d in com early ir Il mode sidering speeds	the mod e manufa tively. nce. Hov ed to the e standa rmance Defra res vith the o ppliance n 2010. V Is they s the tech and me	lel is acturer's vever, rd using requires ults, :urrent with the When upply mical chanical