

# M K I S



Calibration Company

Milton Keynes Instrumentation Services  
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## CERTIFICATE OF CALIBRATION

CERTIFICATE NO: 31873

DATE OF ISSUE: 25.04.07

<b>Customer:</b>	DJB Labcare Limited	<b>Order Number:</b>	15763
<b>Location:</b>	Newport Pagnell	<b>Serial Number:</b>	53390198
<b>Instrument Type:</b>	Fluke 77 Multimeter	<b>Adjustment Required:</b>	No

All measurements were made using equipment whose values are referenced directly or by approved ratiometric procedures to laboratory standards whose values are traceable to National Standards.

The ambient temperature and relative humidity throughout the test was  $20\text{ }^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and  $50\% \pm 20$  respectively.

The calibration was carried out in accordance with the general requirements of BS EN ISO/IEC 17025: 2005.

This is to certify that the above listed instrument meets or exceeds as defined by our established calibration procedures, the published manufacturers specification.

The uncertainties refer to the applied values only with no account being taken of the instruments ability to maintain its calibration.

The uncertainties did not exceed:

VOLTS DC

1  $\mu\text{V}$  to 1000 mV

$\pm (0.002\% \text{ setting} + 0.0015\% \text{ range} + 4 \mu\text{V})$

1 V to 1000 V

$\pm (0.004\% \text{ setting} + 0.001\% \text{ range})$

VOLTS AC

10 mV to 1000 V

40 Hz to 10 kHz

$\pm (0.08\% \text{ setting} + 0.005\% \text{ range} + 10 \mu\text{V})$

CURRENT DC

10 nA to 1000 mA

$\pm (0.02\% \text{ setting} + 0.005\% \text{ range} + 50 \text{ nA})$

1 A to 10 A

$\pm (0.025\% \text{ setting}) + \text{DC volts error at } 10 \text{ V}$

CURRENT AC

100  $\mu\text{A}$  to 1000 mA

$\pm (0.05\% \text{ setting} + 0.005\% \text{ range})$

1 A to 10 A

$\pm (0.05\% \text{ setting}) + \text{AC Volts error at } 10 \text{ V}$

OHMS

100  $\Omega$  to 1 M $\Omega$

$\pm (0.005\% \text{ setting} + 0.35 \Omega)$

10 M $\Omega$

$\pm (0.01\%)$

Calibration procedure used MKIP 206

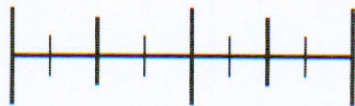
Applicable UKAS certificates 29197

The following results were obtained (see results sheet).

Signed:

Uncertainties are for a confidence probability of not less than 95%.

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## TEST RESULTS

**Certificate No.:** 31873  
**Date of Issue:** 25.04.07

**Customer :** DJB Labcare Limited  
**Instrument Type:** Fluke 77 Multimeter  
**Serial Number:** 53390198

Function	Range	Applied Value	Indicated Value		
DC Volts	300 mV	300 mV	299.9 mV		
		-300 mV	-299.8 mV		
	3 V	2.7 V	2.701 V		
		10 V	10.00 V		
		20 V	20.01 V		
		30 V	30.02 V		
		300 V	270.1 V		
		1000 V	1001 V		
	AC Volts	3 V	2.7 V @ 100 Hz	2.717 V	
			2.7 V @ 500 Hz	2.706 V	
30 V		27 V @ 100 Hz	27.18 V		
		270 V @ 100 Hz	271.7 V		
		750 V @ 100 Hz	754 V		
		@ 1 kHz	758 V		
Resistance	300 $\Omega$	100 $\Omega$	100.1 $\Omega$		
	3000 $\Omega$	1000 $\Omega$	1001 $\Omega$		
	30 k $\Omega$	10 k $\Omega$	10.01 k $\Omega$		
	300 k $\Omega$	100 k $\Omega$	100.0 k $\Omega$		
	3 M $\Omega$	1 M $\Omega$	1.001 M $\Omega$		
	30 M $\Omega$	10 M $\Omega$	10.01 M $\Omega$		
	Current	30 mA	10 mA	<b>DC</b> 9.98 mA	<b>AC @ 100 Hz</b> 10.04 mA
300 mA				100 mA	99.8 mA
10 A		10 A	10.02 A	10.07 A	