

Comparison of blood glucose testing meters and strips

October 2018

This table shows some of the key features of the available blood glucose testing meters and the comparative cost of their associated blood glucose testing strips, to assist healthcare professionals in the selection of appropriate devices for patients who self-monitor their blood glucose levels.







Those with a cost of £9.00/50 strips or less are considered cost-effective choices.




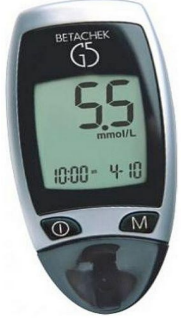


The need for a meter for newly diagnosed diabetics should be assessed by a healthcare professional and, if required, a suitable meter supplied to the patient. These meters will be provided free of charge from GP surgeries or diabetic clinics. Patients should be dissuaded from buying their own meter or doing so without consulting their specialist first. **Prescribing of strips and lancets for meters purchased by patients should not be supported.**





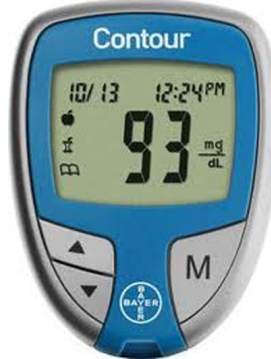

Patients, who purchase a meter where a strip that is not considered cost-effective is used, should expect to purchase the strips as well. Community pharmacists should not sell blood glucose meters to patients with diabetes who fit the criteria to test, without prior discussion and approval from the patient's diabetes healthcare professional. Practices should dispose of, or not accept, free samples of meters without cost-effective testing strips from drug companies.







There is currently limited evidence to support the use of FreeStyle Libre® and consequently, it is not considered to be cost-effective in all patients. NHS England announced on 14th November 2018 that from April 2019, patients with type 1 diabetes will be able to receive FreeStyle Libre® on prescription if they qualify for it in line with NHS clinical guidelines. The NHS Clinical guidelines are yet to be specified.

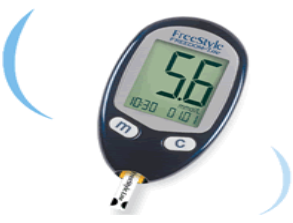





<https://www.england.nhs.uk/2018/11/nhs-to-provide-life-changing-glucose-monitors-for-type-1-diabetes-patients/>






Name of meter	Accu-Chek Active	Accu-Chek Aviva	Accu-Chek Aviva expert	Accu-Chek Aviva Nano	Accu-Chek Compact Plus	Accu-Chek Mobile
Product photo						
Compatible test strips	Active test strips	Aviva test strips	Aviva test strips	Aviva test strips	Compact Plus test strips (Drums)	Mobile test cassette
Cost of 50 test strips	£10.03	£16.21	£16.21	£16.21	£16.65 (3 x drums of 17 strips)	£9.99
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	500 results (date & time)	500 results + 20 control results (date & time)	1,000 results	500 results (date & time)	500 results	2000 results
Ketone testing	x	x	x	x	x	x
Measurement range (mmol/L)	0.6 - 33 mmol/L	0.6 - 33 mmol/L	0.6 - 33 mmol/L	0.6-33 mmol/L	0.6 - 33.3 mmol/L	0.6 – 33.3 mmol/L
Haematocrit range* (%)	Unknown	10 - 65%	10 - 65%	10 - 65%	25% - 65%	25 - 55%
Sample volume	1 - 2 microlitres	0.6 microlitres	0.6 microlitres	0.6 microlitres	1.5 microlitres	0.3 microlitres (min) - 5.0 microlitres (max)







Name of meter	Accu-Chek Perfoma Nano	Advocate Redi- Code+	Autosense, Autosense Voice	Betachek G5	BGStar	Breeze2
Product photo						
Compatible test strips	Perfoma test strips	Advocate Redi-Code+ test strips	Autosense test strips	Betachek G5 test strips	BGStar test strips	Breeze2 test strips
Cost of 50 test strips	£9.95	£9.95	£9.00	£14.19	£14.73	£15.00 (5 discs of 10 strips each)
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	500 results (date & time)	Over 500 results	500 results	Unlimited memory	1,865 results	420 results
Ketone testing	x	x	x	x	x	x
Measurement range (mmol/L)	0.6 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	0.5 – 27.7 mmol/L	1.1 - 33.3 mmol/L	0.6 – 33.3 mmol/L
Haematocrit range* (%)	10-65%	Unknown	Unknown	Unknown	20 – 60%	Unknown
Sample volume	0.6 microlitres	1 microlitre	0.5 microlitres	1-2 microlitres	0.5 microlitres	0.1 microlitres







Name of meter	CareSens Dual	CareSens N	CareSens N Pop	CareSens N Voice	Contour	Contour Next USB
Product photo						
Compatible test strips	CareSens Pro test strips & KetoSens	CareSens N test strips	CareSens N test strips	CareSens N test strips	Contour test strips	Contour Next test strips
Cost of 50 test strips	£9.95 (& £9.95 for 10 ketone strips)	£12.75	£12.75	£12.75	£9.95	£15.04
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	1,000 results	1,000 results	1,000 results	1,000 results	480 results	2,000 entries
Ketone testing	✓	x	x	x	x	x
Measurement range (mmol/L)	1.11 - 33.3 mmol/L	1.11 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	0.6 – 33.3 mmol/L	1.1 – 33.3 mmol/L
Haematocrit range* (%)	15 - 65%	15 - 65%	15 - 65%	15 - 65%	34 - 49%	34 - 49%
Sample volume	0.4 microlitres	0.5 microlitres	0.5 microlitres	0.5 microlitres	0.6 microlitres	0.6 microlitres






Name of meter	Contour TS	Contour XT	Dario Smart	Element	Finetest Lite	Freestyle freedom insulin X
Product photo						
Compatible test strips	Contour TS test strips	Contour Next test strips	Dario test strips	Element test strips	Finetest lite test strips	Freestyle Lite test strips
Cost of 50 test strips	£9.50	£15.04	£14.95	£9.89	£5.95	£16.10
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	250 results	480 results	Memory is limited to smart mobile device memory	500 results	500 results	Up to 165 days - assuming average of 3 tests and 3 insulin logs per day
Ketone testing	x	x	x	x	x	x
Measurement range (mmol/L)	0.6 - 33.3 mmol/L	0.6 - 33.3 mmol/L	0.6 - 33.3 mmol/L	0.55 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 27.8 mmol/L (20 to 500 mg/dL)
Haematocrit range* (%)	0 - 75%	34 - 49%	20 - 60%	20 - 60%	20 - 65%	15 - 65%
Sample volume	0.6 microlitres	0.6 microlitres	0.3 microlitres	0.3 microlitres	0.5 microlitres	0.3 microlitres







Name of meter	Freestyle Freedom Lite	Freestyle Optium NEO	GlucoDock	GlucoLab	GlucoMen Areo	GlucoMen GM
Product photo						
Compatible test strips	Freestyle Lite test strips	Freestyle Optium test strips & Ketone test strips	GlucoDock Glucose test strips	Glucolab test strips	GlucoMen Areo sensor test strips	GlucoMen Sensors GM test strips
Cost of 50 test strips	£16.10	£16.00 (& £21.53 for 10 ketone strips)	£14.90	£9.89	£9.95	£9.95
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	400 results	Up to 1000 results, including blood glucose, blood ketone, and control solution	According to connected Apple device	500 results	730 results	250 results
Ketone testing	x	✓	x	x	x	x
Measurement range (mmol/L)	1.1 - 27.8 mmol/L	Glucose 1.1 - 27.8 mmol/L Ketone 0.0 - 8.0 mmol/L	20 - 600 mg/dL (1.1 – 33.3 mmol/L)	0.5 - 33.3 mmol/L	1.1 - 33.3 mmol/L	0.6 - 33.3 mmol/L
Haematocrit range* (%)	15 - 65%	Unknown	30 – 55 %	20 - 60%	10 - 70%	Unknown
Sample volume	0.3 microlitres	0.6 microlitres	0.6 microlitres	1 microlitre	0.5 microlitres	0.3 microlitres







Name of meter	GlucoMen LX	GlucoMen Lx Plus	GlucoRx GO	GlucoRx HCT & Ketone	GlucoRx Q
Product photo					
Compatible test strips	GlucoMen Sensor LX test strips	GlucoMen LX sensors & GlucoMen LX β -Ketone sensors test strips	GlucoRx Nexus test strips	GlucoRx HCT Glucose & Ketone Test Strips	GlucoRx Q Test Strips
Cost of 50 test strips	£15.76	£15.76 (and £21.06 for 10 ketone strips)	£9.95	£9.95 (and £9.95 for 10 ketone strips)	£5.45
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter				
Memory	400 results	1000 results	Stores 999 non-deletable results	1000 non-deletable results	450 non-deletable results with date and time
Ketone testing	x	✓	x	✓	x
Measurement range (mmol/L)	1.1 - 33.3 mmol/L	Glucose 1.1 - 33.3 mmol/L Ketone 0.1 – 8.0 mmol/L	1.1 – 33.3 mmol/L	Glucose 0.5 - 35 mmol/L Ketone 0.1 - 8.0 mmol/L	1.1 – 33.3 mmol/L
Haematocrit range* (%)	Unknown	25 - 60%	30 - 60%	Glucose 0 – 70% Ketone 10 – 70%	30 - 55%
Sample volume	0.3 microlitres	Glucose 0.3 microlitres Ketone 0.8 microlitres	0.5 microlitres	1 microlitre	0.7 microlitre








Name of meter	GlucoRx Nexus	GlucoRx Nexus mini ultra	GlucoRx Nexus voice	GlucoRx HCT Connect	GlucoZen.auto	GluNeo
Product photo						
Compatible test strips	GlucoRx Nexus test strips	GlucoRx Nexus test strips	GlucoRx Nexus test strips	GlucoRx HCT Glucose & Ketone Test Strips	GlucoZen auto test strips	GluNeo test strips
Cost of 50 test strips	£9.95	£9.95	£9.95	£9.95 each	£7.64	£9.89
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	1,000 results	1,000 results	Stores 450 non-deletable results	Unlimited results	500 results/ 5 user memory	500 results
Ketone testing	x	x	x	✓	x	x
Measurement range (mmol/L)	1.1 – 33.3 mmol/L	1.1 – 33.3 mmol/L	1.1 – 33.3 mmol/L	Glucose 0.5 - 35 mmol/L Ketone 0.1 - 8.0 mmol/L	Unknown	0.6 - 33.3 mmol/L
Haematocrit range* (%)	30 - 60%	30 - 60%	30 - 60%	Glucose 0 – 70% Ketone 10 – 70%	Unknown	20 - 60%
Sample volume	0.5 microlitres	0.5 microlitres	0.5 microlitres	0.7 microlitres	Unknown	0.5 microlitres

Name of meter	iBGStar	iHealth	IME-DC	KEYA Smart	MediTouch2	Mendor Discreet
Product photo						
Compatible test strips	BGStar test strips	Ihealth test strips	IME-DC test strips	KEYA Smart test strips (one strip for both glucose and ketones)	MediTouch2 test strips	Mendor Discreet test strips
Cost of 50 test strips	£14.73	£9.49	£14.10	£15.86	£12.49	£14.75 Biosensor Discs
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	300 results	Unlimited	100 results	1200 results each	480 results	250 results
Ketone testing	x	x	x	✓	x	x
Measurement range (mmol/L)	1.1 - 33.3 mmol/L	20 mg/dL - 600 mg/dL (1.1 - 33.3 mmol/L)	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	Unknown	1.1 - 33.3 mmol/L
Haematocrit range* (%)	20 – 60%	Unknown	Unknown	20 - 60%	Unknown	20 - 60%
Sample volume	0.5 microlitres	0.7 microlitres	2 microlitres	0.5 microlitres	0.6 microlitres	0.5 microlitres

Name of meter	Microdot+	Myglucohealth	Mylife pura	Mylife Unio	Mystar Extra
Product photo					
Compatible test strips	Microdot+ test strips	Myglucohealth test strips	My life pura test strips	My life Unio test strips	BG star test strips
Cost of 50 test strips	£9.49	£15.50	£9.50	£9.50	£14.73
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter				
Memory	500 results	180 results	600 results	1000 results	1,865 results
Ketone testing	x	x	x	x	x
Measurement range (mmol/L)	1.1 – 29.2 mmol/L	0.6 - 33.3 mmol/L	0.6 – 33.3 mmol/L	0.6 – 33.3 mmol/L	1.1 – 33.3 mmol/L
Haematocrit range* (%)	Unknown	Unknown	30 – 60%	Unknown	20 - 60%
Sample volume	0.6 microlitres	0.3 microlitres	1.0 microlitres	0.7 microlitres	0.5 microlitres

Name of meter	On-Call Advanced	Omnitest 3	Omnitest 5	OneTouch Select plus	OneTouch Verio	OneTouch Verio IQ
Product photo						
Compatible test strips	On-Call Advanced test strips	Omnitest 3 test strips	Omnitest 5 test strips	OneTouch Select plus test strip	OneTouch Verio test strips	OneTouch Verio test strips
Cost of 50 test strips	£13.65	£9.89	£9.89	£9.99	£15.12	£15.12
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	Unknown	500 test results with date and time	500 results	500 results	750 results	500 results
Ketone testing	x	x	x	x	x	x
Measurement range(mmol/l)	1.1 - 33.3 mmol/L	0.6 - 33.3 mmol/L	0.6 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L
Haematocrit range* (%)	Unknown	20 – 60% within 10 – 150 mg/dL (0.6 – 8.3 mmol/L) 30 – 55% within 150 – 600 mg/dL (8.3 – 33.3 mmol/L)	20 - 60%	20 - 60%	20 - 60%	20 - 60%
Sample volume	0.8 microlitre	0.3 microlitre	0.5 microlitre	0.4 microlitre	0.4 microlitre	0.4 microlitre

Name of meter	OnTouch Select Verio flex	Palmdoc iCare Advanced	SD Codefree	SensoCard Plus	SURESIGN Resure	TEE2
Product photo						
Compatible test strips	OneTouch Verio test strips	Palmdoc iCare Advanced test strips	SD Codefree test strips	Sensocard test strips	SURESIGN Resure test strips	TEE2 test strips
Cost of 50 test strips	£15.12	£9.70	£6.99	£16.30	£8.49	£7.75
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter					
Memory	500 results	450 results	~500 results	500 results	480 results	500 results
Ketone testing	x	x	x	x	x	x
Measurement range (mmol/L)	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	0.6 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 35.0 mmol/L	1.1 - 33.3 mmol/L
Haematocrit range* (%)	20 - 60%	20 - 60%	20 – 60%	Unknown	Unknown	30 - 55%
Sample volume	0.4 microlitre	0.7 microlitre	0.9 microlitre	0.5 microlitre	0.6 microlitre	0.5 microlitre

Name of meter	TEE2+	TrueResult	TrueResult Twist	TRUEtrack	TRUEyou mini	VivaChek Ino	WaveSense Jazz
Product photo							
Compatible test strips	TEE2	Trueresult test strips	Trueresult test strips	Truetrack system test strips	Trueyou test strips	VivaChek Ino test strips	WaveSense Jazz test strips
Cost of 50 test strips	£7.75	£14.99	£14.99	£14.99	£9.92	£8.99	£8.74
Lancets	Prescribe the most cost-effective lancets – these are not necessarily the ones supplied with the meter						
Memory	1000 results	500 results	99 results	365 blood glucose results, 1 control test result	500 results with time and date	900 results	1,865 results
Ketone testing	x	x	x	x	x	x	x
Measurement range (mmol/L)	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	1.1 - 33.3 mmol/L	0.6 - 33.3 mmol/L	1.1 - 33.3 mmol/L
Haematocrit range* (%)	15 - 65%	20 - 60%	20 - 60%	30 - 55%	30 - 55%	20 - 70%	20 - 60%
Sample volume	0.5 microlitre	0.5 microlitre	0.5 microlitre	1 microlitre	0.5 microlitre	0.5 microlitre	0.5 microlitre