

Accuracy results from the 10 latest SKUP evaluations of blood glucose systems for self-monitoring of blood glucose (SMBG)



Accuracy results from the latest SKUP evaluations of SMBG systems are shown in the table below. In some cases, it may be difficult to compare earlier reports with more recent reports, since SKUP evaluations are under continuous development. For all evaluations, a glucose hexokinase method is used as comparison method. The trueness of the comparison method is documented by means of standard reference material (SRM 965b) from National Institute of Standards & Technology (NIST). The method of each evaluation is given at www.skup.org.

Assessment of accuracy for SMBG systems according to the quality goal in ISO 15197:2013 ^a and a stricter quality goal ^b , as performed by biomedical laboratory scientists (BLS) and people with diabetes.						
SMBG system	Manufacturer	Year/SKUP evaluation no.	Measurements performed by	n ¹	Results within ISO 15197:2013 limits (%)	Results within stricter quality limits (%)
Accu-Chek Instant	Roche Diagnostics	2017/113	BLS	85	Yes (100)	Yes (99)
			People with diabetes	85	Yes (99)	No (91)
Accu-Chek Guide	Roche Diagnostics	2017/112	BLS	89	Yes (100)	Yes (96)
			People with diabetes	88	Yes (100)	No (85)
Accu-Chek Aviva	Roche Diagnostics	2014/105	BLS	88	Yes (99)	No (78)
			People with diabetes	88	Yes (95)	No (81)
mylife Unio	Bionime Corporation	2013/100	BLS	81	Yes (100)	Yes (96)
			People with diabetes	81	Yes (99)	No (93)
Accu-Chek Mobile	Roche Diagnostics	2013/99*	BLS	90	Yes (96)	No (78)
Mendor Discreet	Mendor Oy	2012/95	BLS	79	Yes (100)	No (94)
			People with diabetes	80	Yes (96)	No (88)
Contour XT	Bayer Healthcare	2012/94	BLS	81	Yes (100)	Yes (96)
			People with diabetes	82	Yes (100)	No (91)
Accu-Chek Performa	Roche Diagnostics	2011/93*	BLS	89	Yes (99)	No (88)
OneTouch Verio	LifeScan, Johnson & Johnson	2011/86	BLS	87	Yes (99)	No (86)
			People with diabetes	87	No (91)	No (78)
FreeStyle Lite	Abbott Diabetes Care	2010/89*	BLS	90	Yes (100)	No (90)

^aMinimum requirement: 95 % of the results shall fall within $\pm 0,83$ mmol/L of the average measured values of the reference measurement procedure at glucose concentrations $< 5,55$ mmol/L or within ± 15 % at glucose concentrations $\geq 5,55$ mmol/L

^bMinimum requirement: 95 % of the results shall fall within $\pm 0,42$ mmol/L at glucose concentrations $< 4,2$ mmol/L or within ± 10 % at glucose concentrations $\geq 4,2$ mmol/L vs a comparison method

¹Number of results included in the assessment of accuracy

*The evaluation was performed only under optimal conditions