



DCA Vantage Analyzer Product Specifications

Deliver optimal diabetes care with clinical confidence

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Overview	
System Description	Point-of-care immunoassay analyzer
Quantitative Tests	Hemoglobin HbA1c (whole blood): 2.5% to 14% (4 mmol/mol to 130 mmol/mol) Microalbumin/Creatinine (urine): Albumin: 5 to 300 mg/L; Creatinine: 15 to 500 mg/dL (1.3 to 44.2 mmol/L); Albumin-to-Creatinine Ratio: 1 to 2000 mg/g (0.11 to 226 mg/mmol)
Test Format	Self-contained immunoassay cartridges
Test Measurement	Automatic optical transmission
Test Results	HbA1c: % and IFCC mmol/mol units Albumin: mg/dL Creatinine: mg/dL or mmol/L A:C ratio: mg/dL or mmol/L
Calculated Results	Albumin-to-Creatinine Ratio: mg/g or mg/mmol Estimated Average Glucose (eAG)*: mg/dL or mmol/L
Test Method	HbA1c and Albumin: monoclonal antibody agglutination reaction; Creatinine: Benedict Behre chemical reaction
Time to Test Results	HbA1c: 6 minutes; A:C Ratio: 7 minutes

*Not available in the U.S.

Sample Volume	HbA1c: 1 µL whole blood; Microalbumin/Creatinine: 40 µL urine
Sample Preparation	No pretreatment; no pipetting required
Sample ID/Operator ID Entry	Optional; via touch screen or bar-code reader
Quality Control/Compliance	
Calibration	Lot-specific calibration card provides automatic calibration with every cartridge. Traceable to International Federation of Clinical Chemistry (IFCC) reference materials and test methods for measurement of HbA1c
Flexible QC Scheduling	None, Automatic Reminders, or Required
QC Testing	Optional lockout if schedule not followed, or QC fails
User/Operator Access	Restricted, if desired, to protect patient and QC data, and prevent unauthorized use
Matching Lab Results/Reference Method	Adjustable correlation to reference methods
Reference Ranges	User-definable reference ranges available for HbA1c

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Display	
Data	Color touch screen with 1/4 VGA resolution
Onboard Computer	
Storage Capacity/Memory	4000 patient and/or control records; Up to 1000 operator IDs
Data Export	Via USB flash drive to PC or direct to LIS/HIS or data manager, if interfaced
Connectivity Options	
Serial	RS232, ASTM protocol
Ethernet	ASTM or POCT1-A2 protocol
Bi-Directional	POCT1-A2 supports remote functions from LIS/HIS, RAPIDComm® Data Management System, or third-party data management system
Peripheral Interfaces	
USB Port	Standard USB 2.0
External Bar-code Reader (optional)	Serial (9 pin)
Onboard Printer	54 mm (2 in) width, thermal/label stock
External Printer	Supports standard PCL printer interface via USB port

General	
Dimensions	9.0 (h) x 11.5 (w) x 10.5 (d) inches 25.4 (h) x 28.7 (w) x 27.7 (d) cm
Weight	3.88 kg (9.0 lb)
Power Requirements	100 to 240 VAC; 50/60 Hz
Line Leakage Current	<0.3 mA in normal condition <0.5 mA in single fault condition
Maximum Power Input	70 VA; 30 watts
Ambient Operating Temperature	18°C to 30°C (64°F to 86°F) (Albumin) 15°C to 32°C (61°F to 88°F) (HbA1c)
Operating Temperature	5°C to 40°C (41°F to 104°F); 10% to 90% relative humidity
Safety	TUV SUD with CB Scheme, CSA-C22.2, EN60601, IEC 60601, UL60601
EMC Emissions/Immunity	FCC 47: Part 15 (Class B), EN60601-1-2 (Class B)

HbA1c Testing as Easy as 1-2-3



1

Collect sample



2

Scan cartridge



3

Load and pull tab

Calculated Result	Formula
HbA1c	% HbA1c = (HbA1c/Total Hemoglobin) x 100
Glomerular Filtration Rate (GFR)	$GFR = 186 \times (\text{plasma creatinine mg/dL})^{-1.154} \times (\text{patient age years})^{-0.203}$ x (0.742 if female patient) x (1.210 if African American patient)
Estimated Average Glucose* (eAG)	eAG (mg/dL) = 28.7 x HbA1c – 46.7 eAG (mmol/L) = 1.59 x HbA1c – 2.59

Dual Reporting Formula	From IFCC to % HbA1c	From % HbA1c to IFCC mmol/mol
NGSP	NGSP = (0.09148 x IFCC) + 2.152	IFCC = (10.93 x NGSP) – 23.50
JDS (Japan)	JDS = (0.09274 x IFCC) + 1.724	IFCC = (10.78 x JDS) – 18.59
Mono-S (Sweden)	Mono-S = (0.09890 x IFCC) + 0.884	IFCC = (10.11 x Mono-S) – 8.94

*Not available in the U.S.

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Product availability may vary from country to country and is subject to varying regulatory requirements. Please contact your local representative for availability.

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