

Glucose Meter Ranges – Quality Controls and Adult Ranges

CAPT_GLU_0600JA1

Quality Control Ranges ⁽¹⁾:

- QC Control 1 : 2.6 - **3.4** – 4.2 mmol/L
- QC Control 3: 13.9 – **16.7** – 19.4 mmol/L

Linearity Ranges ⁽²⁾:

- Level 1: 0.56 - 0.98 - 1.39 mmol/L
- Level 2: 2.6 - 3.4 - 4.2 mmol/L
- Level 3: 5.0 - 6.1 - 7.2 mmol/L
- Level 4: 13.9 - 16.7 -19.4 mmol/L
- Level 5: 23.3 - 27.8 - 32.2 mmol/L

Bio-Rad Meter Trax QC (Mid Level) ⁽³⁾: 9.3 mmol/L (dev \pm 3.0)

Glucose Meter Adult Ranges; Normal, Out, Critical and Out of Reportable Range ⁽⁴⁾:

	NORMAL RANGE	CRITICAL RESULTS
Adult (>17 years old)	4.0 to 11.0 mmol/L	<2.6 mmol/L >25.0 mmol/L

Medical Approval: Refer to QMS History

Medical Approval Date: Refer to QMS History

Revision: 1.3

Last Approved Time: 4/14/2021 3:41:50 PM

Folder Name: CA PT Point of Care Testing02 Glucose Meter Whole Blood Glucose

This is a controlled document for BCCA use only. Any printed copies are uncontrolled unless specified. Please refer to Lab QMS.

Meter Range: 0.6 – 33.3 mmol/L Outside Range <0.6 mmol/L & >33.3 mmol/L

Vancouver General Biological (Analyzer) Reference Glucose Ranges *provided by VGH

Reference ranges for random glucose:

Age	Reference Range
0 to <3 days	2.6-5.6 mmol/L
3 days to <20 years	3.3-11.0 mmol/L
≥20 years	3.6-11.0 mmol/L

The ranges are the same for both plasma and whole blood glucose.

Any glucose result <2.0 mmol/L or >30.0 mmol/L is considered critical.

Reference intervals established as clinical targets are based on accepted guidelines or consensus statements.

Canadian Diabetes Guideline⁽⁵⁾

Reference range reflects euglycemia, which takes into account:

- The threshold for hypoglycemia, defined by a random glucose level <4.0 mmol/L
- The threshold for diabetes, defined by a random glucose level ≥11.0 mmol/L

Diabetes Canada (formerly the Canadian Diabetes Association) suggests the following blood glucose ranges as a general guide ⁽⁶⁾.

Most adults (non-pregnant)

Medical Approval: Refer to QMS History

Medical Approval Date: Refer to QMS History

Revision: 1.3

Last Approved Time: 4/14/2021 3:41:50 PM

Folder Name: CA PT Point of Care Testing02 Glucose Meter Whole Blood Glucose

This is a controlled document for BCCA use only. Any printed copies are uncontrolled unless specified. Please refer to Lab QMS.

- Blood Glucose:
 - Fasting and before meals: 4.0 to 7.0 millimoles per litre (mmol/L)
 - 2 hours after meals: 5.0 to 10.0 mmol/L

References:

1. Nova StatStrip Xpress vials
2. Nova Linearity Vials
3. Bio-Rad Insert
4. PHSA Specific Supplemental Training Resource
5. Canadian Diabetes Guidelines (<http://guidelines.diabetes.ca/cpg>)
6. HealthLinkBC <https://www.healthlinkbc.ca/health-topics/aa135726#aa135726-sec>

Medical Approval: Refer to QMS History

Medical Approval Date: Refer to QMS History

Revision: 1.3

Last Approved Time: 4/14/2021 3:41:50 PM

Folder Name: CA PT Point of Care Testing02 Glucose Meter Whole Blood Glucose

This is a controlled document for BCCA use only. Any printed copies are uncontrolled unless specified. Please refer to Lab QMS.