

# Point of Care Cardiac Troponin I and T Assay Analytical Characteristics Designated by Manufacturer

## IFCC Committee on Clinical Applications of Cardiac Bio-Markers (C-CB) v012019

| Company/Platform/Assay   | LoB<br>( $\mu\text{g/L}$<br>unless noted) | LoD<br>( $\mu\text{g/L}$<br>unless noted) | % CV at<br>99 <sup>th</sup><br>Percentile | Conc at 20%<br>CV ( $\mu\text{g/L}$<br>unless noted) | Conc at<br>10% CV<br>( $\mu\text{g/L}$<br>unless noted) | Reference Population N, Ages, Sex             | Specimen Type   | 99 <sup>th</sup> Percentile<br>( $\mu\text{g/L}$ unless noted) | Percent Normals Measured $\geq$ LoD | Statistic Used to Calc 99 <sup>th</sup> Percentile | Epitopes Recognized by Antibodies      | Country of Package Insert: Version Date                       |
|--|---|---|---|--|---|---|---|--|-------------------------------------|--|--|---|
| Abbott i-STAT  | 0.02                                      | NP  | 16.5%                                     | 0.07   | 0.1   | Overall n = 162                               | Sodium and lithium heparinized whole blood and plasma     | Overall: 0.08  | NP                                  | NP   | NP                                     | US: Rev. Date: 01-Jul-13                                      |
| LSI Medience (formerly Mitsubishi) PATHFAST cTnI; commercial             | NP  | 1 ng/L                                    | < 6%                                      | 2 ng/L   | 3.1 ng/L  | Overall n = 474<br>18-86y<br>F: 236<br>M: 238 | Whole blood, plasma                                       | Overall:<br>15.48 ng/L<br>F: 11.46 ng/L<br>M: 16.91 ng/L       | Overall:<br>76.3%                   | Non-Parametric                                     | C: 41-49,<br>D: 71-116,<br>163-209     | WW except US & Japan:<br>Ver.5, Apr. 2014                     |
| LSI Medience (formerly Mitsubishi)<br>PATHFAST hs-cTnI /PATHFAST cTnI-II | 1.23 ng/L                                 | 2.33 ng/L                                 | 6.1%                                      | 4 ng/L   | 15 ng/L   | Overall n=734<br>Age >18<br>F: 352<br>M: 382  | Whole blood, plasma                                       | Overall:<br>27.9 ng/L<br>F: 20.3 ng/L<br>M: 29.7 ng/L          | Overall:<br>66.3%                   | Non-Parametric                                     | C:41-49,<br>D: 71-116,<br>163-209      | hs-cTnI : WW except US Ver.1, May 2018                        |
| LSI Medience (formerly Mitsubishi)<br>PATHFAST cTnI-II                   | NP  | NP  | 6.1%                                      | NP   | 0.019   | Overall n=333                                 | Whole blood, plasma                                       | Overall: 0.029   | NP                                  | Non-Parametric                                     | C: 41-49,<br>D: 71-116,<br>163-209     | US: Ver.4, Mar.2015   |
| Philips Electronics Nederland BV /Minicare I-20/ Minicare cTnI           | 0.0085                                    | 0.018                                     | 18.6%                                     | 0.038  | NP  | Overall n =750<br>18-86y<br>F: 377<br>M: 373  | Li-heparin whole blood, capillary whole blood and plasma  | Overall: 0.043   | Overall:<br>5.1% for capillary      | Non-Parametric                                     | C: 41-49<br>D: 20-100<br>anti cTnC MAb | IFU cTnI EN Issue #5122300 12922*2017-03 Document version 3.0 |
| Quidel/Alere Triage Cardiac Panel  | NP  | 0.050                                     | NP  | 16.3% at 0.120                                       | NP  | Overall n = 323<br>F: 168<br>M: 155           | EDTA whole blood or plasma                                | NP   | NP                                  | NP   | NP                                     | USA, 2014, rev. D   |
| Quidel/Alere Triage SOB  | NP  | 0.050                                     | NP  | 16.3% at 0.120                                       | NP  | Overall n = 323<br>F: 168<br>M: 155           | EDTA whole blood or plasma                                | NP   | NP                                  | NP   | NP                                     | USA, 2014, rev. D   |
| Quidel/Alere Triage Cardio   | 0.002                                     | 0.01                                      | NP  | 0.020  | 0.040   | Overall n = 989                               | EDTA whole blood or plasma                                | Overall: 0.020   | Overall:<br>11.8%                   | Non-Parametric                                     | NP                                     | USA, 2014, rev. D   |
| Radiometer AQT90 FLEX TnI  | NP  | 0.009                                     | 12.3%                                     | NP   | 0.027   | Overall n = 231<br>F: 106<br>M: 128           | EDTA and heparinized whole blood and plasma               | Overall: 0.023   | NP                                  | Non-Parametric                                     | C: 41-49,<br>190-196<br>D:137-149      | 990-872 InterNPtoNPI 201608X                                  |
| Radiometer AQT90 FLEX TnT  | NP  | 0.008                                     | 15.2%                                     | NP   | 0.026   | Overall n = 260<br>F: 132<br>M: 128           | EDTA and heparinized whole blood and plasma               | Overall: 0.017   | NP                                  | Non-Parametric                                     | C:125-131<br>D:136-147                 | 990-872 InterNPtoNPI 201608H                                  |
| Response Biomedical RAMP Troponin I                                      | NP  | 0.03                                      | 20.0%                                     | 0.10   | 0.21  | Overall n=180                                 | Only EDTA whole blood                                     | Overall: <0.10   | NP                                  | NP   | NP                                     | Eu IFU 90012-1.2  |
| Roche CARDIAC POC Troponin T – Roche cobas h 232                         | NP  | 0.04                                      | NP  | 0.04 – 2.0   | 9.3% between 0.04 – 0.2                                 | Overall n = 302                               | Heparinized whole blood                                   | NP   | NP                                  | NP   | D: 125-131<br>C: 136-147               | EU, 2016-05   |
| Siemens Stratus CS Acute Care cTnI test pack                             | <0.03                                     | NP  | 8.2%                                      | 0.03   | 0.06  | Overall n=101                                 | Whole blood (Li or NP heparin) or plasma Li or Na heparin | Overall: 0.07  | NP                                  | NP   | C: 27-32<br>D: 41-56                   | CE, 2008-04   |

LoB, limit of blank; LoD, limit of detection, NP, not provided; C, capture antibody; D, detection antibody; M, male, F, female; Conc, concentration; WW worldwide. All data have been listed as provided by the manufacturer, except assays in blue were abstracted from package insert due to lack of correspondence from manufacturer.