

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of 21 CFR 807.92

The assigned 510(k) number is k121214

**Submitted By:**

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**Date Prepared:**

June 12, 2013

**Device Name:**

Proprietary / Trade Name: Access AccuTnl+3 Reagent for use on the Access 2 Immunoassay Systems  
Common Name: Troponin I Enzyme Immunoassay  
Classification Name: Immunoassay, Troponin Subunits  
Classification Regulation: 21 CFR 862.1215  
Classification Product Code: MMI

Proprietary / Trade Name: Access AccuTnl+3 Calibrator  
Common Name: Calibrator  
Classification Name: Calibrator  
Classification Regulation: 21 CFR 862.1150  
Subsequent Product Code: JIT

Proprietary / Trade Name: Access 2 Immunoassay System  
Common Name: Discrete photometric chemistry analyzer for clinical use  
Classification Name: Discrete photometric chemistry analyzer for clinical use  
Classification Regulation: 21 CFR 862.2160  
Classification Product Code: JJE

**Predicate Devices:**

The Access AccuTnI+3 Reagent and AccuTnI+3 Calibrators claim substantial equivalence to the ADVIA Centaur TnI-Ultra™ Assay and ADVIA Centaur TnI-Ultra™ Calibrators for the Siemens ADVIA Centaur® System, FDA 510(k) Number K053020, cleared December 30, 2005.

The Access 2 Immunoassay System claims substantial equivalence to the Access 2 Immunoassay System (K922823/A007), cleared July 2, 2001.

**Device Description:**

The Access AccuTnI+3 reagents, AccuTnI+3 calibrators and the Access 2 Immunoassay System compose the Access Immunoassay System for the quantitative determination of cardiac troponin I (cTnI) in human serum and plasma.

The Access AccuTnI+3 reagent packs contain specific reagents for the *in vitro* diagnostic measurement of cTnI including:

- Paramagnetic particles coated with mouse monoclonal anti-human cardiac troponin I suspended in TRIS buffered saline, with surfactant, bovine serum albumin (BSA) matrix, <0.1% sodium azide, and 0.1% ProClin® 300.
- 0.1N NaOH.
- TRIS buffered saline, surfactant, <0.1% sodium azide and 0.1% ProClin 300.
- Mouse monoclonal anti-human cTnI alkaline phosphatase conjugate diluted in ACES buffered saline, with surfactant, BSA matrix, protein (bovine, goat, mouse), <0.1% sodium azide, and 0.25% ProClin 300.

The Access AccuTnI+3 Calibrator set contains multi-point calibrators for use with the Access AccuTnI+3 assay. Individual vials contain zero or approximately 0.3, 1.2, 5.0, 25 and 100 ng/mL (µg/L) of recombinant cardiac troponin I complex, respectively, in a buffered BSA matrix, with surfactant, <0.1% sodium azide, and 0.1% ProClin 300.

The Access 2 Immunoassay System is an *in vitro* diagnostic device used for the quantitative, semi-quantitative, or qualitative determination of various analyte concentrations found in human body fluids.

**Intended Use:**

The Access AccuTnI+3 Reagent is a paramagnetic particle, chemiluminescent immunoassay for the quantitative determination of cardiac troponin I (cTnI) levels in human serum and plasma using the Access 2 Immunoassay System to aid in the diagnosis of myocardial infarction.

The Access AccuTnI+3 Calibrators are intended to calibrate the Access AccuTnI+3 Reagent for the quantitative determination of cardiac troponin I (cTnI) levels in human serum and plasma using the Access 2 Immunoassay System to aid in the diagnosis of myocardial infarction.

The Access 2 Immunoassay System is an *in vitro* diagnostic device used for the quantitative, semi-quantitative, or qualitative determination of various analyte concentrations found in human body fluids.

**Comparison to the Predicates:**

The Access AccuTnI+3 Reagent and Access AccuTnI+3 Calibrators and the predicate device, ADVIA Centaur® TnI-Ultra™ Assay and ADVIA Centaur® TnI-Ultra™ Calibrators, were compared. The information for the predicate device was derived from the predicate device 510(k) Summary and product labeling.

**Similarities between the Access AccuTnI+3 Reagent and Access AccuTnI+3 Calibrators and the Predicate**

Characteristic	Predicate Device ADVIA Centaur® TnI-Ultra™ K053020	New Device Access AccuTnI+3 Reagent and Access AccuTnI+3 Calibrators
Intended Use	An <i>in vitro</i> diagnostic method for the quantitative measurement of cardiac TnI in serum and plasma to aid in the diagnosis of myocardial infarction.	same
Assay Principle	Chemiluminescent sandwich immunoassay	same
Test System	Automated immunoassay instrument	same
Sample Type	Serum and heparinized plasma	same
Reagent Pack configuration	Reagents ready to use and separated in a single reagent pack	same
Primary Reagent Materials	Solid phase magnetic particles, anti-cTnI antibodies	same

**Differences between the Access AccuTnI+3 Reagent and Calibrator and the Predicate**

Characteristic	Predicate Device ADVIA Centaur® TnI-Ultra™ K053020	New Device Access AccuTnI+3 Reagent and Access AccuTnI+3 Calibrators
Sample Type	EDTA plasma	No EDTA plasma claim
Immunoassay Instrument	ADVIA Centaur	Access 2 Immunoassay System
Calibrator Materials	Bovine cTnI in goat serum	Recombinant troponin complex in buffered BSA
Calibrators: number and type	Two Lyophilized : high and low (use with Master Curve)	Six Liquid: approximately 0, 0.3, 1.2, 5.0, 25 and 100 ng/mL with no master curve

Characteristic	Predicate Device ADVIA Centaur® TnI-Ultra™ K053020	New Device Access AccuTnI+3 Reagent and Access AccuTnI+3 Calibrators
Specific Reagent Materials	Polyclonal goat anti-cTnI antibody labeled with acridinium ester, 2 biotinylated mouse monoclonal anti-cTnI antibodies, magnetic particles conjugated with streptavidin	Mouse monoclonal anti-human cTnI alkaline phosphatase conjugate, magnetic particles coated with mouse monoclonal anti-human cTnI
Sample Volume	100µl	55µl
Analytical Measuring Range	0.008 ng/mL to 50 ng/mL	0.02 ng/mL to 100 ng/mL
Acute Myocardial Infarction (AMI) Cutoff	0.9 ng/mL per WHO-defined cutoff	0.03ng/mL based on clinical trial outcome
Expected Results (Upper Reference Limit)	99 <sup>th</sup> percentile of 0.04 ng/mL; range of 0.02- 0.06 ng/mL	99 <sup>th</sup> percentile of 0.02 with a 95% Confidence Interval (CI) of 0.01- 0.05 ng/mL
Precision	Total CV of 10% at a level of 0.042 ng/mL	Total CV of ≤8% at concentrations >0.075 ng/mL. SD ≤0.006 at concentrations ≤0.075 ng/mL
Indications for Use Statement	<p>The ADVIA Centaur® TnI-Ultra (TnI Ultra) is for <i>in vitro</i> diagnostic use in the quantitative determination of cardiac Troponin in human serum and heparinized and EDTA plasma. Cardiac troponin I determinations aid in the diagnosis of acute myocardial infarction and in the risk stratification of patients with non-ST segment elevation acute coronary syndromes with respective to relative risk mortality, myocardial infarction or increased probability of ischemic events requiring urgent revascularization procedures.</p> <p>The ADVIA Centaur® TnI-Ultra Calibrator is for the in-vitro diagnostic use in the calibration of the TnI-Ultra assay on the ADVIA Centaur® System.</p>	<p>The Access AccuTnI+3 assay is a paramagnetic particle, chemiluminescent immunoassay for the quantitative determination of cardiac troponin I (cTnI) levels in human serum and plasma using the Access 2 Immunoassay System to aid in the diagnosis of myocardial infarction.</p> <p>The Access AccuTnI+3 Calibrators are intended to calibrate the Access AccuTnI+3 assay for the quantitative determination of cardiac troponin I (cTnI) levels in human serum and plasma using the Access 2 Immunoassay System to aid in the diagnosis of myocardial infarction.</p>

The Access 2 Immunoassay System and the previously cleared version of the Access 2 Immunoassay System were compared.

**Similarities between the Access 2 Immunoassay System  
and the Predicate**

<b>Characteristic</b>	<b>Predicate Device Access 2 System K922823/A007</b>	<b>New Device Access 2 Immunoassay System</b>
Indication for Use	The Access 2 Immunoassay system is an <i>in vitro</i> diagnostic device used for the quantitative, semi-quantitative, or qualitative determination of various analyte concentrations found in human body fluids.	same
Operating Principle	Micro computer controlled, random and continuous access	same
Assay Type	Enzyme immunoassays	same
Detection	Chemiluminescent	same
Modules	Carousel, pipettor, analytical, fluidic, electronic/systems computer/peripheral	same

**Differences between the Access 2 Immunoassay System  
and the Predicate**

<b>Characteristic</b>	<b>Predicate Device Access 2 Immunoassay System K922823/A007</b>	<b>New Device Access 2 Immunoassay System</b>
Thermal algorithm capability	Not present	Present
Assay Protocol File (APF)	AccuTnl APF	AccuTnl APF with addition of the thermal algorithm and "U" command
Software	Version 2.4-3.2	Version 3.3: added capability to implement the thermal algorithm and "U" Command; added result suppression when instrument internal case temperature is outside 18° to 36°C
Operating Temperature	18°C to 32°C ambient	18°C to 28°C ambient 18°C to 36°C instrument case temperature

*Conclusion:* The information provided above demonstrates that the new device, the Access AccuTnl+3 Reagent and Access AccuTnl+3 Calibrators, have the same intended use as the predicate device. The Access 2 instrument has the same intended use as the predicate device. In addition, verification and validation testing, the clinical and analytical data, the clinical use of the product reflected in current MI diagnostic guidelines, and other scientific information provided in this submission demonstrate that the Access AccuTnl+3 Reagent, Access AccuTnl+3 Calibrators on the Access 2 Immunoassay Systems is as safe and effective as the predicate devices. Taken together, this information establishes the substantial equivalence of Beckman Coulter's products to predicates.



Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center – WO66-G609  
Silver Spring, MD 20993-0002

June 14, 2013

Beckman Coulter, Inc.  
C/O Kerrie Oetter  
1000 Lake Hazeltine Drive  
CHASKA MN 55318-1084

Re: K121214

Trade/Device Name: Access AccuTnI+3 Reagent and Access AccuTnI+3 Calibrators for use on the  
Access 2 Immunoassay Systems

Regulation Number: 21 CFR 862.1215

Regulation Name: Creatine phosphokinase/creatin kinase or isoenzymes test system

Regulatory Class: II

Product Code: MMI, JIT, JJE

Dated: June 04, 2013

Received: June 06, 2013

Dear Ms. Oetter:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. ~~Please note: CDRH does not evaluate information related to contract liability~~ warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

Courtney  Lias, Ph.D.

Courtney H. Lias, Ph.D.  
Director  
Division of Chemistry and Toxicology Devices  
Office of In Vitro Diagnostics  
and Radiological Health  
Center for Devices and Radiological Health

Enclosure

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## Indications for Use Form

510(k) Number (if known): k121214

Device Name: Access AccuTnl+3 Reagent and Access AccuTnl+3 Calibrators  
for use on the Access 2 Immunoassay Systems

### Indications for Use:

The Access AccuTnl+3 Reagent is a paramagnetic particle, chemiluminescent immunoassay for the quantitative determination of cardiac troponin I (cTnl) levels in human serum and plasma using the Access 2 Immunoassay System to aid in the diagnosis of myocardial infarction.

The Access AccuTnl+3 Calibrators are intended to calibrate the Access AccuTnl+3 Reagent for the quantitative determination of cardiac troponin I (cTnl) levels in human serum and plasma using the Access 2 Immunoassay System to aid in the diagnosis of myocardial infarction.

The Access 2 Immunoassay System is an *in vitro* diagnostic device used for the quantitative, semi-quantitative, or qualitative determination of various analyte concentrations found in human body fluids.

Prescription Use   X   AND/OR Over-The-Counter Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

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PAGE IF NEEDED)

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health  
(OIR)

Ruth A. Chesler

Division Sign-Off  
Office of In Vitro Diagnostics and Radiological Health

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