



# R&D Systems Hematology Products

Controls

Calibrators

Linearity Materials

Quality Control Program



**R&D SYSTEMS HEMATOLOGY PRODUCTS**

R&D Systems, Inc., a specialty manufacturer of biological products, was founded and incorporated in 1976 in Minneapolis, Minnesota. For the past 40 years, we have continued to develop hematology products for clinical laboratory use. In 2014 the division which is now part of the bio-techne corporation was renamed Clinical Controls Division. R&D Systems remains the brand name.

Monitoring of existing products, as well as validating improvements to products, is conducted in an on-going basis to ensure that R&D Systems is responding to your needs and providing hematology products you can rely on. R&D Systems produces over 45 different products for all major hematology instruments manufactured throughout the world, including instruments manufactured by: Abbott Diagnostics (Abbott), Horiba Medical (HORIBA), Beckman Coulter®, Inc. (Beckman Coulter), BD Biosciences, HemoCue®, Inc. (HemoCue), Siemens Healthcare Diagnostics (Siemens), and Sysmex® Corporation (Sysmex). Our product line includes controls, calibrators, linearity, and survey materials.

The CBC-Monitor2 Interlaboratory Quality Control Program is available free of charge to all customers.

Our Technical Service laboratory staff's experience with instruments and controls provides users of all R&D Systems hematology products with superior technical service support. Each customer phone call is answered by a technically qualified person within 30 seconds.

In addition, our Sales and Customer Service staff are available to assist you with any product inquiries, orders, or any issues related to service. Customer calls are answered by a highly qualified staff person with extensive knowledge of the R&D Systems product line and relevant instruments.

Your future hematology control needs are anticipated in our new product development projects ensuring that R&D Systems will continue to be a source you can look to for your laboratory's hematology control materials.

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[www.RnDHeme.com](http://www.RnDHeme.com)

	CBC-3K	CBC-ST Plus	CBC-3D	PLATELET-TROL Extended	R&D 3K Retic	R&D 4K Retic	CBC-LINE	CBC-LINE Ultra Low	PLT-LINE	RET-LINE	CD-Cal
CELL-DYN 1600							✓*	✓*			
CELL-DYN 1700							✓*	✓*			
CELL-DYN 1800	✓	✓R					✓*	✓*			✓
CELL-DYN 3000							✓*	✓*			
CELL-DYN 3200	✓				✓		✓*	✓*			✓
CELL-DYN Ruby™	✓				✓		✓*	✓*			✓
CELL-DYN Emerald™			✓				✓*	✓*			
CELL-DYN 3500, 3700	✓			✓	✓		✓*	✓*	✓*		✓
CELL-DYN 3500 VET, 3700 VET				✓			✓*	✓*	✓*		
CELL-DYN 4000							✓*	✓*	✓*	✓*	
CELL-DYN SAPPHIRE™	✓			✓		✓	✓*	✓*	✓*	✓*	✓
Manual Methodologies/ Semi-automated	✓					✓					

KEY| ✓ = Assay Values are available for each instrument. ✓R = Recommended product for instrument (if assay values are available on >1 product). ✓\* = Please call or check our website for catalog number best suited for your analyzer.

### CBC-3K Whole Blood Control (Five-Part WBC Differential)

CBC-3K is a tri-level control for monitoring the Abbott CELL-DYN SAPPHIRE hematology analyzers. The CELL-DYN SAPPHIRE assay tables include values for 26 parameters. Assay values are also provided for the CELL-DYN 1800, 3200, 3500, 3700, Ruby, and manual methods. Disks are available for uploading assay values to the CELL-DYN 1800, 3200, 3500, 3700, Ruby and SAPPHIRE instruments. CBC-3K has 75-day closed vial stability with 8-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	3K301	10 x 3 mL (10 Normal)
	3K302	10 x 3 mL (5 Low, 5 High)
	3K303	12 x 3 mL (4 Low, 4 Normal, 4 High)
	3K303X	6 x 3 mL (2 Low, 2 Normal, 2 High)
<b>Diskette</b>	DSK3K	CELL-DYN CD1800, CD3200, CD3500, CD3700, Ruby, SAPPHIRE

### CBC-ST Plus Whole Blood Control (Three-Part WBC Differential)

CBC-ST Plus is a tri-level control for monitoring Abbott CELL-DYN three part diff instruments including the Abbott CELL-DYN 1800. Disks are available for uploading assay values. CBC-ST PLUS has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	ST001	10 x 2.5 mL (Normal)
	ST002	10 x 2.5 mL (5 Low, 5 High)
	ST003	12 x 2.5 mL (4 Low, 4 Normal, 4 High)
	ST004	6 x 2.5 mL (2 Low, 2 Normal, 2 High)
<b>Tubes</b>	ST207	12 x 2.5 mL (4 Low, 4 Normal, 4 High)
	ST208	6 x 2.5 mL (2 Low, 2 Normal, 2 High)
	ST405	12 x 4 mL (4 Low, 4 Normal, 4 High)
	ST406	6 x 4 mL (2 Low, 2 Normal, 2 High)
<b>Diskette</b>	DSKST	CELL-DYN 1800

### CBC-3D® Whole Blood Control (Three-Part WBC Differential)

CBC-3D is a tri-level control for monitoring Abbott CELL-DYN instruments. CBC-3D has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	3D501	10 x 2 mL (Normal)
	3D502	10 x 2 mL (5 Low, 5 High)
	3D503	12 x 2 mL (4 Low, 4 Normal, 4 High)
<b>Tubes</b>	3D507	12 x 2 mL (4 Low, 4 Normal, 4 High)
	3D508	6 x 2 mL (2 Low, 2 Normal, 2 High)
	3D515	8 x 5 mL (Normal)
	3D516	8 x 5 mL (4 Low, 4 High)
	3D517	12 x 5 mL (4 Low, 4 Normal, 4 High)

### PLATELET-TROL Extended Platelet Control

PLATELET-TROL Extended is a multi-level control designed specifically for monitoring the elevated platelet ranges of hematology analyzers. PLATELET-TROL Extended has 75-day closed vial stability with 14-day open vial stability. Kit requires high speed vortexer.

	CATALOG #	INSTRUMENT	DESCRIPTION
<b>Tubes</b>	PTE004	Abbott CELL-DYN 3500, 3700	12 x 3 mL (4 each: Level 3, 4, 5)*
	PTE006	Abbott CELL-DYN 3500/3700 VET Mode, SAPPHIRE	12 x 3 mL (4 each: Level 3, 5, 6)*

\*Approximate Plt values (units in 10<sup>3</sup>/mL):  
Level 3: 1000    Level 4: 1500    Level 5: 2000    Level 6: 3000

### R&D 3K Retic Whole Blood Reticulocyte Control

R&D 3K Retic is a bi-level whole blood reticulocyte control designed specifically for the Abbott CELL-DYN 3200, 3500, 3700, and Ruby hematology analyzers. The target values for the levels are level 1: 1.2 % and Level 2: 5.0 %. R&D 3K Retic has 75-day closed vial stability with 16-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	3R001	4 x 3 mL (2 each: Level 1, 2)
	3R002	10 x 3 mL (5 each: Level 1, 2)

### R&D 4K Retic Whole Blood Reticulocyte Control

R&D 4K Retic is a bi-level whole blood reticulocyte control designed specifically for the Abbott CELL-DYN SAPPHIRE hematology analyzers. Assay values are also provided for manual methods. The target values for the levels are Level 1: 1.0 % and Level 2: 10.0 %. R&D 4K Retic has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	4R001	4 x 3 mL (2 each: Level 1, 2)
	4R002	10 x 3 mL (5 each: Level 1, 2)

### CD-CAL Whole Blood Calibrator

CD-Cal is designed for calibration of Abbott CELL-DYN 1700, 1800, 3200, 3500, 3700, Ruby, and SAPPHIRE hematology analyzers. Values are provided for WBC, RBC, Hgb, MCV, and Plt. MPV values are provided for the CELL-DYN 4000 and SAPPHIRE. CD-Cal has 45-day closed vial stability with 7-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	3KC11	2 x 3 mL
	3KC12	5 x 3 mL

### CBC-LINE

Contains pre-diluted WBC, RBC/Hgb, and Plt levels. Kits are customized to the reportable range capabilities of all major hematology analyzers to provide a kit best suited to your needs. When CBC-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### CBC-LINE Ultra Low/Ultra Low Plus RBC

CBC-LINE Ultra Low/Ultra Low Plus RBC Range Linearity Kits are pre-diluted samples that provide a means of measuring a hematology instrument's performance and reportable range at the very low end of the linearity range for white blood cell and platelet parameters (UL001) or white blood cell, red blood cell, and platelet determinations (UL002). Linearity combined with independently verified and documented calibration is used to establish the range of lowest patient values that can be accurately reported. CBC-LINE Ultra Low/Ultra Low Plus RBC kits have 105-day closed vial stability with an immediate use for open vial stability.

### PLT-LINE

Contains pre-diluted platelet levels. Kits are customized to the reportable range capabilities of the hematology analyzers to provide a kit best suited to your needs. When PLT-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### RET-LINE

Contains a series of reticulocyte concentrations to test your hematology analyzer's ability to accurately recover reticulocyte counts across a range of values. Each kit includes one Instrument Evaluation Report at no extra charge.\*Approximate Plt values (units in 10<sup>3</sup>/mL):  
Level 3: 1000 Level 4: 1500 Level 5: 2000 Level 6: 3000

	PLATELET-TROL Extended	CBC-LINE	CBC-LINE Ultra Low	PLT-LINE	RET-LINE
Micros 60	✓	✓*	✓*		
Pentra 60, 60 C+		✓*	✓*	✓*	
Pentra 80	✓	✓*	✓*	✓*	
Pentra 80 XL		✓*	✓*	✓*	
Pentra 120		✓*	✓*	✓*	✓*

KEY| ✓ = Assay Values are available for each instrument. ✓\* = Please call or check our website for catalog number best suited for your analyzer.

### PLATELET-TROL Extended Platelet Control

PLATELET-TROL Extended is a multi-level control designed specifically for monitoring the elevated platelet ranges of hematology analyzers. PLATELET-TROL Extended has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	INSTRUMENT	DESCRIPTION
Tubes	PTE004	ABX Pentra 80	12 x 3 mL (4 each: Level 3, 4, 5)*
	PTE006	ABX Micros 60	12 x 3 mL (4 each: Level 3, 5, 6)*

\*Approximate Plt values (units in 10<sup>3</sup>/mL):  
Level 3: 1000    Level 4: 1500    Level 5: 2000    Level 6: 3000

### CBC-LINE

Contains pre-diluted WBC, RBC/Hgb, and Plt levels. Kits are customized to the reportable range capabilities of all major hematology analyzers to provide a kit best suited to your needs. When CBC-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### CBC-LINE Ultra Low/Ultra Low Plus RBC

CBC-LINE Ultra Low/Ultra Low Plus RBC Range Linearity Kits are pre-diluted samples that provide a means of measuring a hematology instrument's performance and reportable range at the very low end of the linearity range for white blood cell and platelet parameters (UL001) or white blood cell, red blood cell, and platelet determinations (UL002). Linearity combined with independently verified and documented calibration is used to establish the range of lowest patient values that can be accurately reported. CBC-LINE Ultra Low/Ultra Low Plus RBC kits have 105-day closed vial stability with an immediate use for open vial stability.

### PLT-LINE

Contains pre-diluted platelet levels. Kits are customized to the reportable range capabilities of the hematology analyzers to provide a kit best suited to your needs. When PLT-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### RET-LINE

Contains a series of reticulocyte concentrations to test your hematology analyzer's ability to accurately recover reticulocyte counts across a range of values. Each kit includes one Instrument Evaluation Report at no extra charge.

	R&D LeukoReduced RBC/PLT	StatusFlow Series	R&D Retic-I	FETALtrol
BD FACalibur	✓	✓	✓	✓
BD FACScanto II	✓	✓		✓
Manual Methodologies	✓		✓	✓

KEY| ✓ = Assay Values are available for each instrument

### R&D LeukoReduced RBC/PLT Control

LeukoReduced RBC/PLT Control is a bi-level control product to monitor flow cytometer and Nageotte Chamber methods for quantification of residual leukocytes in LeukoReduced red blood cell and platelet products. The WBC target values for the levels are Level 1: 2.0 µL and Level 2: 20.0 µL. LeukoReduced RBC/PLT has a closed vial stability of 75 days with an open vial stability of 30 days or 21 thermal cycles.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	LRR001	2 x 3 mL (RBC - 1 each: Level 1, 2)
	LRP001	2 x 3 mL (PLT - 1 each: Level 1, 2)
	LRC001	4 x 3 mL (RBC and PLT - 1 each: Level 1, 2)

### StatusFlow® Flow Cytometry Control

StatusFlow is a stable preparation of human peripheral leukocytes and erythrocytes designed for use as a control in immunophenotyping when evaluating RBC lysis, antibody reactivity, instrument set-up, and instrument performance by flow cytometry. Assay values are reported as a percent of total lymphocytes and as the number of cells for the following phenotypes: CD3<sup>+</sup>, CD3<sup>+</sup>/CD4<sup>+</sup>, CD3<sup>+</sup>/CD8<sup>+</sup>, CD19<sup>+</sup>, CD3<sup>+</sup>/CD16<sup>+</sup>56<sup>+</sup>, CD20<sup>+</sup>, CD2<sup>+</sup>, and HLA-DR<sup>+</sup>. Target values (for research use only) are also provided for the following CD markers: kappa, lambda, CD8<sup>+</sup>/CD38<sup>+</sup>, CD33<sup>+</sup>/CD14<sup>+</sup>, CD7<sup>+</sup>/CD3<sup>+</sup>, CD5<sup>+</sup>, CD22<sup>+</sup>/CD3<sup>+</sup>, and CD13<sup>+</sup>. Target values for CD45 and CD14, which are intended for gating purposes only, are also included. StatusFlow has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles.

	CATALOG #	DESCRIPTION
<b>Hemogard Tubes</b>	FC202	2 x 2.5 mL
	FC302	3 x 2.5 mL
	FC402	4 x 2.5 mL
	FC502	5 x 2.5 mL
	FC204	2 x 4 mL
	FC404	4 x 4 mL
	FC504	5 x 4 mL

### StatusFlow<sup>LO</sup> Flow Cytometry Control

StatusFlow<sup>LO</sup> is designed to team with StatusFlow to provide a two-level whole blood reference control for monitoring low CD3<sup>+</sup>/CD4<sup>+</sup> cell counts. Assay values are reported as a percent of total lymphocytes and as the number of cells for CD3<sup>+</sup>, CD3<sup>+</sup>/CD4<sup>+</sup>, CD3<sup>+</sup>/CD8<sup>+</sup>, CD19<sup>+</sup>, and CD3<sup>+</sup>/CD16<sup>+</sup>56<sup>+</sup>. The CD3<sup>+</sup>/CD4<sup>+</sup> cell count is less than 200 cells/µL. StatusFlow<sup>LO</sup> has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles.

	CATALOG #	DESCRIPTION
<b>Hemogard Tubes</b>	FC235	1 x 2.5 mL
	FC237	2 x 2.5 mL

### StatusFlow<sup>PRO</sup> Flow Cytometry Control

StatusFlow<sup>PRO</sup> contains human stem cells and can be used with most flow cytometry methods for identifying CD34<sup>+</sup> cells. StatusFlow<sup>PRO</sup> offers two clinically relevant levels of CD34<sup>+</sup> cells. Target values for the Low Level CD34 are approximately 10 cells/µL. Target values for the High Level CD34 are approximately 35 cells/µL. Statusflow<sup>PRO</sup> facilitates the evaluation of CD34<sup>+</sup> gating strategy, evaluation of the CD34 antibody clone selection, lysing reagents and data analysis. StatusFlow<sup>PRO</sup> has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles.

	CATALOG #	DESCRIPTION
<b>Hemogard Tubes</b>	FC234L	1 x 1.5 mL Status Flow <sup>PRO</sup> (Low)
	FC234H	1 x 1.5 mL Status Flow <sup>PRO</sup> (High)
	FC236L	2 x 1.5 mL Status Flow <sup>PRO</sup> (Low)
	FC236H	2 x 1.5 mL Status Flow <sup>PRO</sup> (High)
	FC238	2 x 1.5 mL Status Flow <sup>PRO</sup> (Low/High)

### R&D Retic-I Whole Blood Reticulocyte Control

R&D Retic-I is a tri-level whole blood reticulocyte control for manual and automated counting methods. Assay values are provided for the manual method, manual with Miller ocular, and Flow Cytometers using Retic-COUNT Thiazole Orange. The target values for the levels are Level 1: 1.0 %; Level 2: 5.0 %; Level 3: 10.0 %. R&D Retic-I has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	RI001	9 x 1.5 mL (3 each: Level 1, 2, 3)
	RI005	3 x 1.5 mL (1 each: Level 1, 2, 3)
<b>Tubes</b>	R1003	9 x 3 mL (3 each: Level 1, 2, 3)
	R1004	3 x 3 mL (1 each: Level 1, 2, 3)

### FETALtrol™

FETALtrol is a tri-level control product used for the assesment of fetomaternal hemorrhage. FETALtrol can be used to control both flow cytometry assays and manual stains (KB) for the detection of RBCs containing HbF or Rho (D antigen). FETALtrol has a closed vial stability of 105 days with an open vial stability of 25 thermal cycles.

	CATALOG #	DESCRIPTION
<b>Vials</b>	FH101	6 x 2 mL (2 each: Level 1, 2, 3)
	FH102	3 x 2 mL (1 each: Level 1, 2, 3)

# Products for Beckman Coulter

	CBC-5D	CBC-3D	CBC-7	Body Fluid-I	PLATELET-TROL Extended	R&D LeukoReduced RBC/PLT	StatusFlow® Series	R&D Retic-I Plus	R&D Retic-I	R&D Retic-I for DxH 800	LH-nRBC	CBC-LINE	CBC-LINE Ultra Low	PLT-LINE	RET-LINE C	CBC-CAL PLUS	FETALtrol
Unice!® DxH™ 800, 600	✓			✓						✓		✓*	✓*	✓*	✓*	✓	
Semi-Auto (A-Z)		✓	✓ <sup>R</sup>														
Gen-S™	✓							✓				✓*	✓*		✓*	✓	
LH 700 Series	✓			✓	✓			✓			✓	✓*	✓*	✓*	✓*	✓	
LH 500 Series	✓							✓				✓*	✓*	✓*	✓*	✓	
HmX	✓											✓*	✓*		✓*	✓	
A <sup>c</sup> -T™ 8, AC-T 10™												✓*	✓*				
A <sup>c</sup> -T diff™, AC-T diff 2™												✓*	✓*				
A <sup>c</sup> -T 5 diff AL												✓*	✓*				
A <sup>c</sup> -T 5 diff OV												✓*	✓*				
A <sup>c</sup> -T 5 diff CP												✓*	✓*				
Elite, Epics, Profile, Epics XL, FC 500						✓	✓		✓								✓
Manual Methodologies/ Semi-Automated			✓			✓			✓								

KEY| ✓ = Assay Values are available for each instrument. ✓<sup>R</sup> = Recommended product for instrument (if assay values are available on >1 product). ✓\* = Please call or check our website for catalog number best suited for your analyzer.

## CBC-5D Whole Blood Control (Five-Part WBC Differential)

CBC-5D is a tri-level control designed specifically for Beckman Coulter MAXM, STKS, HmX, Gen-S, LH 500, LH 700 Series and DxH 800/600 hematology analyzers. The assay table includes values for 22 parameters. CBC-5D is bar-coded for the correct QC file access. Bar codes are available for uploading assay values on the Coulter HmX, Gen-S, LH500, LH700 Series and DxH 800/600. Disks are available for uploading assay values to the Coulter HmX, Gen-S, LH 500, and LH 700 Series instruments. CBC-5D has 105-day closed vial stability with an open vial stability of 14 samples within 14 days.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	5D003	12 x 5 mL (4 each: Level 1, 2, 3)
	5D004	6 x 5 mL (2 each: Level 1, 2, 3)
<b>Diskette</b>	DSK5D	Coulter Gen-S, HmX, LH 700 Series, LH 500, DxH 800

## LH-nRBC Whole Blood Control

LH-nRBC is a tri-level control designed to monitor the nRBC parameter on Beckman Coulter LH 700 Series hematology analyzers. The assay table provides nRBC absolute values, nRBC per 100 WBC values, as well as total WBC and RBC values. LH-nRBC has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	LH004	12 x 3 mL (4 each: Level 1, 2, 3)
	LH002	6 x 3 mL (2 each: Level 1, 2, 3)

## CBC-3D® Whole Blood Control (Three-Part WBC Differential)

CBC-3D is a tri-level control for monitoring Beckman Coulter instruments. CBC-3D has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	3D501	10 x 2 mL (Normal)
	3D502	10 x 2 mL (5 Low, 5 High)
	3D503	12 x 2 mL (4 Low, 4 Normal, 4 High)
<b>Tubes</b>	3D507	12 x 2 mL (4 Low, 4 Normal, 4 High)
	3D508	6 x 2 mL (2 Low, 2 Normal, 2 High)
	3D515	8 x 5 mL (Normal)
	3D516	8 x 5 mL (4 Low, 4 High)
	3D517	12 x 5 mL (4 Low, 4 Normal, 4 High)

## CBC-7 Whole Blood Control

CBC-7 is a tri-level control used for manual and semi-automated instruments. CBC-7 has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	72001	10 x 2 mL (Normal)
	72002	10 x 2 mL (5 Low, 5 High)
	72003	12 x 2 mL (4 Low, 4 Normal, 4 High)
	72004	6 x 2 mL (2 Low, 2 Normal, 2 High)

## PLATELET-TROL Extended Platelet Control

PLATELET-TROL Extended is a multi-level control designed specifically for monitoring the elevated platelet ranges of hematology analyzers. PLATELET-TROL Extended has 75-day closed vial stability with 14-day open vial stability. Kit requires high speed vortexer.

	CATALOG #	INSTRUMENT	DESCRIPTION
Tubes	PTE006	Coulter LH 700 Series	12 x 3 mL (4 each: Level 3, 5, 6)*

\*Approximate Ret values (units in 10<sup>9</sup>/mL):  
Level 3: 1000    Level 5: 2000    Level 6: 3000

## R&D LeukoReduced RBC/PLT Control

LeukoReduced RBC/PLT Control is a bi-level control product to monitor flow cytometer and Nageotte Chamber methods for quantification of residual leukocytes in LeukoReduced red blood cell and platelet products. The WBC target values for the Levels are Level 1: 2.0 µL and Level 2: 20.0 µL. LeukoReduced RBC/PLT has a closed vial stability of 75 days with an open vial stability of 30 days or 21 thermal cycles.

	CATALOG #	DESCRIPTION
Tubes	LRR001	2 x 3 mL (RBC: 1 each: Level 1, 2)
	LRP001	2 x 3 mL (PLT: 1 each: Level 1, 2)
	LRC001	4 x 3 mL (RBC and PLT: 1 each: Level 1, 2)

## StatusFlow® Flow Cytometry Control

StatusFlow is a stable preparation of human peripheral leukocytes and erythrocytes designed for use as a control in immunophenotyping when evaluating RBC lysis, antibody reactivity, instrument set-up, and instrument performance by flow cytometry. Assay values are reported as a percent of total lymphocytes and as the number of cells for the following phenotypes: CD3<sup>+</sup>, CD3<sup>+</sup>/CD4<sup>+</sup>, CD3<sup>+</sup>/CD8<sup>+</sup>, CD19<sup>+</sup>, CD3<sup>+</sup>/CD16<sup>+</sup>56<sup>+</sup>, CD20<sup>+</sup>, CD2<sup>+</sup>, and HLA-DR<sup>+</sup>. Target values (for research use only) are also provided for the following CD markers: kappa, lambda, CD8<sup>+</sup>/CD38<sup>+</sup>, CD33<sup>+</sup>/CD14<sup>+</sup>, CD7<sup>+</sup>/CD3<sup>+</sup>, CD5<sup>+</sup>, CD22<sup>+</sup>/CD3<sup>+</sup>, and CD13<sup>+</sup>. Target values for CD45 and CD14, which are intended for gating purposes only, are also included. StatusFlow has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles.

	CATALOG #	DESCRIPTION
Hemogard Tubes	FC202	2 x 2.5 mL
	FC302	3 x 2.5 mL
	FC402	4 x 2.5 mL
	FC502	5 x 2.5 mL
	FC204	2 x 4 mL
	FC404	4 x 4 mL
	FC504	5 x 4 mL

## StatusFlow<sup>LO</sup> Flow Cytometry Control

StatusFlow<sup>LO</sup> is designed to team with StatusFlow to provide a two-level whole blood reference control for monitoring low CD3<sup>+</sup>/CD4<sup>+</sup> cell counts. Assay values are reported as a percent of total lymphocytes and as the number of cells for CD3<sup>+</sup>, CD3<sup>+</sup>/CD4<sup>+</sup>, CD3<sup>+</sup>/CD8<sup>+</sup>, CD19<sup>+</sup>, and CD3<sup>+</sup>/CD16<sup>+</sup>56<sup>+</sup>. The CD3<sup>+</sup>/CD4<sup>+</sup> cell count is less than 200 cells/µL. StatusFlow<sup>LO</sup> has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles.

	CATALOG #	DESCRIPTION
Hemogard Tubes	FC235	1 x 2.5 mL
	FC237	2 x 2.5 mL

## StatusFlow<sup>PRO</sup> Flow Cytometry Control

StatusFlow<sup>PRO</sup> contains human stem cells and can be used with most flow cytometry methods for identifying CD34<sup>+</sup> cells. StatusFlow<sup>PRO</sup> offers two clinically relevant levels of CD34<sup>+</sup> cells. Target values for the Low Level CD34 are approximately 10 cells/µL. Target values for the High Level CD34 are approximately 35 cells/µL. StatusFlow<sup>PRO</sup> facilitates the evaluation of CD34<sup>+</sup> gating strategy, evaluation of the CD34 antibody clone selection, lysing reagents and data analysis. StatusFlow<sup>PRO</sup> has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles.

	CATALOG #	DESCRIPTION
Hemogard Tubes	FC234L	1 x 1.5 mL Status Flow <sup>PRO</sup> (Low)
	FC234H	1 x 1.5 mL Status Flow <sup>PRO</sup> (High)
	FC236L	2 x 1.5 mL Status Flow <sup>PRO</sup> (Low)
	FC236H	2 x 1.5 mL Status Flow <sup>PRO</sup> (High)
	FC238	2 x 1.5 mL Status Flow <sup>PRO</sup> (Low/High)

## Body Fluid - I

The R&D Body Fluid-I is an assayed hematology control intended to monitor the reliability of the Beckman Coulter LH 700 Series and DxH 800/600 instruments that quantitatively measure red and white blood cell counts in cerebrospinal fluids, serous fluids, and synovial fluids. Body Fluid-I has a 75-day closed vial stability with 30-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	BFI001	3 x 3 mL (1 each: Level 1, 2, 3)
	BFI002	6 x 3 mL (2 each: Level 1, 2, 3)

## R&D Retic-I Plus Whole Blood Reticulocyte Control

R&D Retic-I Plus is a tri-level whole blood reticulocyte control for Beckman Coulter Gen-S, LH 500, and LH 700 Series. The target values for the levels are Level 1: 1.2%; Level 2: 7.0%; Level 3: 12.0%. Disks are available for uploading assay values to the Gen-S and LH 750 instruments. R&D Retic-I Plus has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	RP401	3 x 4 mL (1 each: Level 1, 2, 3)
	RP403	9 x 4 mL (3 each: Level 1, 2, 3)
Diskette	DSKRP	Coulter Gen-S, LH 700 Series

## FETALtrol™

FETALtrol is a tri-level control product used for the assessment of fetomaternal hemorrhage. FETALtrol can be used to control both flow cytometry assays and manual stains (KB) for the detection of RBCs containing HbF or Rho (D antigen). FETALtrol has a closed vial stability of 105 days with an open vial stability of 25 thermal cycles.

	CATALOG #	DESCRIPTION
Vials	FH101	6 x 2 mL (2 each: Level 1, 2, 3)
	FH102	3 x 2 mL (1 each: Level 1, 2, 3)



## Products for Beckman Coulter

### R&D Retic-I for DxH 800 Whole Blood Reticulocyte Control

R&D Retic-I for DxH 800 is a tri-level whole blood reticulocyte control for the Beckman Coulter DxH800 analyzer. The target values for the levels are Level 1: 1.0%; Level 2: 4.0%; Level 3: 8.0%. R&D Retic-I for DxH 800 has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	RDXH01	3 x 3 mL (1 each: Level 1, 2, 3)
	RDXH03	9 x 3 mL (3 each: Level 1, 2, 3)

### R&D Retic-I Whole Blood Reticulocyte Control

R&D Retic-I is a tri-level whole blood reticulocyte control for manual and automated counting methods. Assay values are provided for the manual method, manual with Miller ocular, and Flow Cytometers using Retic-COUNT Thiazole Orange. The target values for the levels are Level 1: 1.0 %; Level 2: 5.0 %; Level 3: 10.0 %. R&D Retic-I has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	RI001	9 x 1.5 mL (3 each: Level 1, 2, 3)
	RI005	3 x 1.5 mL (1 each: Level 1, 2, 3)
<b>Tubes</b>	RI003	9 x 3 mL (3 each: Level 1, 2, 3)
	RI004	3 x 3 mL (1 each: Level 1, 2, 3)

### CBC-CAL PLUS Whole Blood Calibrator

CBC-CAL PLUS is designed for the calibration of most models of Beckman Coulter hematology analyzers. Values are provided for WBC, RBC, Hgb, Hct, MCV, Plt, and MPV parameters for Isoton® II, Isoton III, and Isoton III/UNI-T-PAK reagent systems. Bar Codes are available for uploading assay values to the Coulter HmX, GEN-S, LH 500, LH 700 Series and DxH 800. Disks are available for uploading assay values to the HmX, GEN-S, LH 500 and LH 700 Series. CBC-CAL PLUS has 45-day closed vial stability with 7-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Vials</b>	8CP11	4 x 5 mL
	8CP14	2 x 5 mL
<b>Tubes</b>	8CP33	3 x 4.5 mL
<b>Diskette</b>	DSKCALPLUS	Coulter HmX, GEN-S, LH 500, LH 700 Series

### CBC-LINE

Contains pre-diluted WBC, RBC/Hgb, and Plt levels. Kits are customized to the reportable range capabilities of all major hematology analyzers to provide a kit best suited to your needs. When CBC-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### CBC-LINE Ultra Low/Ultra Low Plus RBC

CBC-LINE Ultra Low/Ultra Low Plus RBC Range Linearity Kits are pre-diluted samples that provide a means of measuring a hematology instrument's performance and reportable range at the very low end of the linearity range for white blood cell and platelet parameters (UL001) or white blood cell, red blood cell, and platelet determinations (UL002). Linearity combined with independently verified and documented calibration is used to establish the range of lowest patient values that can be accurately reported. CBC-LINE Ultra Low/Ultra Low Plus RBC kits have 105-day closed vial stability with an immediate use for open vial stability.

### PLT-LINE

Contains pre-diluted platelet levels. Kits are customized to the reportable range capabilities of the hematology analyzers to provide a kit best suited to your needs. When PLT-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### RET-LINE

Contains a series of reticulocyte concentrations to test your hematology analyzer's ability to accurately recover reticulocyte counts across a range of values. Each kit includes one Instrument Evaluation Report at no extra charge.

	SEDRite Plus	SEDRite III
Clinical Data Inc. - Excyte™ 10/M, Excyte 40	✓	
Diesse - Mini-Ves™, Ves-Matic™ 10/Easy, Ves-Matic 20	✓	
Excite™ 10/M	✓	
Excite™ 40	✓	
R&R Mechatronics - StaRRsed	✓	
Polymedco - Sedimat® 15		✓
STARSED	✓	
Westergren, saline diluted	✓	
Westergren, sodium citrate diluted	✓	
Westergren, undiluted	✓	
Wintrobe	✓	

KEY| ✓ = Assay Values are available for each instrument.

### SEDRite Plus Whole Blood Erythrocyte Sedimentation (ESR) Control

SEDRite Plus is a bi-level control formulated to provide values in the clinically normal and elevated ranges, and is designed to monitor erythrocyte sedimentation rate (ESR) values obtained from manual and automated ESR methods. SEDRite Plus is an excellent control for the ESR tests because the control cells rouleaux in the same manner as fresh whole blood cells. Therefore, this product can be used to monitor the factors that cause variability in ESR results, such as technique, time, temperature, and tube position. SEDRite Plus has 195-day closed vial stability with 30-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	SR002	8 x 9.0 mL (4 each: Level 1, 2)
	SR002X	4 x 9.0 mL (2 each: Level 1, 2)
Tubes	SR003	12 x 4.5 mL (6 each: Level 1, 2)

### SEDRite III Whole Blood Erythrocyte Sedimentation (ESR) Control

SEDRite III is a bi-level control designed specifically for the Sedimat 15 analyzer. It is formulated to provide values in the clinically normal and elevated ranges. SEDRite III is an excellent control for the ESR tests because the control cells rouleaux in the same manner as fresh whole blood cells. SEDRite III has 195-day closed vial stability with 30-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	SED004	8 x 9.0 mL (4 each: Level 1, 2)
	SED002	4 x 9.0 mL (2 each: Level 1, 2)

## Products for HemoCue

	CBC-7	CBC-7 HemoCue Kit	HC WBC	HGB Extended Control	R&D Glu/Hgb	CBC-LINE for HemoCue
HemoCue® Hb 201+	✓	✓ <sup>R</sup>		✓	✓	✓ <sup>*</sup>
HemoCue B-Glucose, Glucose 201					✓	
HemoCue WBC			✓			
Manual Methodologies	✓	✓				

KEY| ✓ = Assay Values are available for each instrument. ✓<sup>R</sup> = Recommended product for instrument (if assay values are available on >1 product). ✓<sup>\*</sup> = Please call or check our website for catalog number best suited for your analyzer.

### CBC-7 Whole Blood Control

CBC-7 is a tri-level control used for manual, semi-automated, and automated instruments capable of measuring up to seven parameters. CBC-7 has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	72001	10 x 2 mL (Normal)
	72002	10 x 2 mL (5 Low, 5 High)
	72003	12 x 2 mL (4 Low, 4 Normal, 4 High)
	72004	6 x 2 mL (2 Low, 2 Normal, 2 High)

### CBC-7 HemoCue Kit Whole Blood Hemoglobin Control

CBC-7 HemoCue is a tri-level control used to monitor hemoglobin values obtained from the HemoCue hemoglobin photometer. CBC-7 HemoCue has 105-day closed vial stability with 30-day open vial stability stored at room temperature.

	CATALOG #	DESCRIPTION
Vials	HC722	14 x 2 mL (7 Low, 7 Normal)
	HC723	21 x 2 mL (7 Low, 7 Normal, 7 High)
	HC724	6 x 2 mL (2 Low, 2 Normal, 2 High)
	HC725	7 x 2 mL (Low)
	HC727	7 x 2 mL (High)
	HC728	9 x 2 mL (3 Low, 3 Normal, 3 High)
	HC729	14 x 2 mL (7 Low, 7High)

### HC WBC Whole Blood Control

HCWBC is a tri-level control used to monitor values obtained from a HemoCue WBC system. HC WBC has 105-day closed vial stability with 30 day open vial stability and is provided in 1.5 mL plastic dropper vials.

	CATALOG #	DESCRIPTION
Plastic Dropper Vials	WBC005	3 x 2.0 mL (1 each: Level 1, 2, 3)

### HGB Extended Control

HGB Extended Control is an assayed control designed to monitor values obtained from the HemoCue Hemoglobin Photometer. HGB Extended Control has 375-day closed vial stability with 30-day open vial stability at 15-30 °C (59-86 °F) or 2-8 °C (35-46 °F).

	CATALOG #	DESCRIPTION
Vials	HGB722	12 x 2 mL (6 Low, 6 Normal)
	HGB729	12 x 2 mL (6 Low, 6 High)
	HGB723	18 x 2 mL (6 Low, 6 Normal, 6 High)
	HGB724	6 x 2 mL (2 Low, 2 Normal, 2 High)
	HGB725	6 x 2 mL (Low)
	HGB727	6 x 2 mL (High)

### R&D Glu/Hgb Whole Blood Control

R&D Glu/Hgb is a tri-level control used to monitor the precision and accuracy of HemoCue B-Glucose, Glucose 201, and Hb 201+ analyzers. The three levels of control are designed to provide values in the abnormal low, normal, and abnormal high ranges. Because the control contains erythrocytes, the total test process is verified, including the lysing reagent. R&D Glu/Hgb has 105-day closed vial stability with 30-day open vial stability at 15 - 30 °C (59 - 86 °F) or at 2 - 8 °C (35 - 46 °F), and is provided in 1.5 mL plastic dropper vials.

	CATALOG #	DESCRIPTION
Plastic Dropper Vials	GH00L	6 x 1.5 mL (Low)
	GH00N	6 x 1.5 mL (Normal)
	GH00H	6 x 1.5 mL (High)
	GH00LX	3 x 1.5 mL (Low)
	GH00NX	3 x 1.5 mL (Normal)
	GH00HX	3 x 1.5 mL (High)
	GH00S	3 x 1.5 mL (1 Low, 1 Normal, 1 High)

### CBC-LINE for HemoCue

Contains whole blood pre-diluted Hgb levels appropriate for use in instrument calibration verification. Kits are customized to the reportable range capabilities of B-Hemoglobin and Hb 201+ analyzers. Each kit includes one Instrument Evaluation Report at no extra charge.

## Products for Manual Methodologies

### CBC-3K Whole Blood Control (Five-Part WBC Differential)

CBC-3K is a tri-level control for monitoring Abbott CELL-DYN instruments. Manual values are also provided for Coulter Counter Z series, cyanmethemoglobin method, centrifuged microhematocrit, and hemocytometer WBC and platelet counts. CBC-3K has 75-day closed vial stability with 8-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	3K302	10 x 3 mL (5 Low, 5 High)
	3K303	12 x 3 mL (4 Low, 4 Normal, 4 High)
	3K303X	6 x 3 mL (2 Low, 2 Normal, 2 High)

### CBC-7 Whole Blood Control

CBC-7 is a tri-level control used for manual, semi-automated, and automated instruments capable of measuring up to seven parameters. Manual values are supplied for a Coulter hemoglobinometer and Z series, cyanmethemoglobin method, centrifuged microhematocrit, and calculated MCV using Centrifuged microhematocrit. CBC-7 has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	72001	10 x 2 mL (Normal)
	72002	10 x 2 mL (5 Low, 5 High)
	72003	12 x 2 mL (4 Low, 4 Normal, 4 High)
	72004	6 x 2 mL (2 Low, 2 Normal, 2 High)

### CBC-7 HemoCue Kit Whole Blood Hemoglobin Control

CBC-7 HemoCue is a tri-level control used to monitor hemoglobin values obtained from the HemoCue hemoglobin photometer as well as centrifuged microhematocrit. CBC-7 HemoCue has 105-day closed vial stability with 30-day open vial stability stored at room temperature.

	CATALOG #	DESCRIPTION
Vials	HC722	14 x 2 mL (7 Low, 7 Normal)
	HC723	21 x 2 mL (7 Low, 7 Normal, 7 High)
	HC724	6 x 2 mL (2 Low, 2 Normal, 2 High)
	HC725	7 x 2 mL (Low)
	HC727	7 x 2 mL (High)

### R&D LeukoReduced RBC Control

LeukoReduced RBC Control is a bi-level control product to monitor flow cytometer and Nageotte Chamber methods for quantification of residual leukocytes in leukoreduced red blood cell products. The WBC target values for the levels are as follows: Level 1: 2.0  $\mu$ L; Level 2: 20.0  $\mu$ L. LeukoReduced RBC has a closed vial stability of 75 days with an open vial stability of 30 days or 21 thermal cycles.

	CATALOG #	DESCRIPTION
Tubes	LRR001	2 x 3 mL (1 each: Level 1, 2)

### R&D LeukoReduced PLT Control

LeukoReduced PLT Control is a bi-level control product to monitor flow cytometer and Nageotte Chamber methods for quantification of residual leukocytes in leukoreduced platelet products. The WBC target values for the levels are Level 1: 2.0  $\mu$ L; Level 2: 20.0  $\mu$ L. LeukoReduced PLT has a closed vial stability of 75 days with an open vial stability of 30 days or 21 thermal cycles.

	CATALOG #	DESCRIPTION
Tubes	LRP001	2 x 3 mL (1 each: Level 1, 2)

### R&D LeukoReduced RBC/PLT Control

LeukoReduced RBC/PLT Control is a bi-level control product to monitor flow cytometer and Nageotte Chamber methods for quantification of residual leukocytes in LeukoReduced red blood cell and platelet products. The WBC target values for the levels are Level 1: 2.0  $\mu$ L; Level 2: 20.0  $\mu$ L. LeukoReduced RBC/PLT has a closed vial stability of 75 days with an open vial stability of 30 days or 21 thermal cycles.

	CATALOG #	DESCRIPTION
Tubes	LRC001	4 x 3 mL (RBC & PLT - 1 each: Level 1, 2)

### FETALtrol™

FETALtrol is a tri-level control product used for the assessment of fetomaternal hemorrhage. FETALtrol can be used to control both flow cytometry assays and manual stains (KB) for the detection of RBCs containing HbF or Rho (D antigen). FETALtrol has a closed vial stability of 105 days with an open vial stability of 25 thermal cycles.

	CATALOG #	DESCRIPTION
Vials	FH101	6 x 2 mL (2 each: Level 1, 2, 3)
	FH102	3 x 2 mL (1 each: Level 1, 2, 3)

## Products for Manual Methodologies

### HCT Extended

HCT Extended is an assayed bi-level control designed to monitor values obtained from automated, semi-automated and manual methods. HCT Extended has a 75-day closed vial stability with 21-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	HCT004	4 x 3 mL (2 Abnormal I, 2 Abnormal II)

### R&D 4K Retic Whole Blood Reticulocyte Control

R&D 4K Retic is a bi-level whole blood reticulocyte control for the Abbott CELL-DYN 4000 and SAPPHIRE hematology analyzers, and for manual reticulocytes. The target values for the levels are Level 1: 1.0 %; Level 2: 10.0 %. R&D 4K Retic has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	4R001	4 x 3 mL (2 each: Level 1, 2)
	4R002	10 x 3 mL (5 each: Level 1, 2)

### R&D Retic Whole Blood Reticulocyte Control

R&D Retic is a tri-level whole blood reticulocyte control for manual counting methods. Assay values are provided for the manual method and manual with Miller ocular. The target values for the levels are Level 1: 1.0 %; Level 2: 5.0 %; Level 3: 10.0 %. R&D Retic has 75-day closed vial stability with 21-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	RE003	9 x 1.5 mL (3 each: Level 1, 2, 3)
	RE003X	3 x 1.5 mL (1 each: Level 1, 2, 3)

### R&D Retic-I Whole Blood Reticulocyte Control

R&D Retic-I is a tri-level whole blood reticulocyte control for manual and automated counting methods. Manual assay values are provided for the manual method and manual with Miller ocular. The target values for the levels are Level 1: 1.0 %; Level 2: 5.0 %; Level 3: 10.0 %. R&D RETIC-I has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	RI001	9 x 1.5 mL (3 each: Level 1, 2, 3)
	RI005	3 x 1.5 mL (1 each: Level 1, 2, 3))
Tubes	RI003	9 x 3 mL (3 each: Level 1, 2, 3)
	RI004	3 x 3 mL (1 each: Level 1, 2, 3)

### Body Fluid

Body Fluid is a bi-level control used to monitor total cell counts performed manually using a hemocytometer. The two levels of this control are designed to monitor values in the normal and abnormal ranges. This product contains mammalian erythrocytes and leukocytes in a plasma like fluid. Body Fluid Control has 105-day closed vial stability with open vial stability of 90 days (31 thermal cycles).

	CATALOG #	DESCRIPTION
Vials	BF001	2 x 2 mL (1 each: Level 1, 2)
	BF002	4 x 2 mL (2 each: Level 1, 2)

### Sickle QC Whole Blood Control

Sickle QC is a positive and negative control for solubility tests used to detect Hemoglobin S. Sickle QC control is compatible with the following sickle cell tests: Chembio Diagnostic System Sickle-STAT, Columbia Calibre® Sickle Cell Reagent, Dade® Behring Sickle Sol™ Solubility Test, Ortho/Johnson SICKLEDEX®, Pacific Hemostasis SickleScreen® Sickling Hemoglobin Screening Kit, and Streck Sickle-Chex Solubility Kit. Sickle QC has 195-day closed vial stability with 100-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	SQC001	2 x 2.5 mL (1 each: Level 1, 2)
	SQC002	4 x 2.5 mL (2 each: Level 1, 2)

### SEDRite Plus Whole Blood Erythrocyte Sedimentation (ESR) Control

SEDRite Plus is a bi-level control formulated to provide values in the clinically normal and elevated ranges, and is designed to monitor erythrocyte sedimentation rate (ESR) values obtained from manual and automated ESR methods. Manual values are supplied for Westergren and Wintrobe. SEDRite Plus is an excellent control for the ESR tests because the control cells rouleaux in the same manner as fresh whole blood cells. Therefore, this product can be used to monitor the factors that cause variability in ESR results, such as technique, time, temperature, and tube position. SEDRite Plus has 195-day closed vial stability with 30-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	SR002	8 x 9.0 mL (4 each: Level 1, 2)
	SR002X	4 x 9.0 mL (2 each: Level 1, 2)
Tubes	SR003	12 x 4.5 mL (6 each: Level 1, 2)

### SEDRite III Whole Blood Erythrocyte Sedimentation (ESR) Control

SEDRite III is a bi-level control designed specifically for the Sedimat 15 analyzer. It is formulated to provide values in the clinically normal and elevated ranges. SEDRite III is an excellent control for the ESR tests because the control cells rouleaux in the same manner as fresh whole blood cells. SEDRite III has 195-day closed vial stability with 30-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	SED004	8 x 9.0 mL (4 each: Level 1, 2)
	SED002	4 x 9.0 mL (2 each: Level 1, 2)

	CBC5DMR OUT of US	CBC-3D OUT of US	CBC-3D IN US	CBC-3D IN US/Vet	CBC-CAL PLUS OUT of US	CBC-CAL PLUS IN US	CBC-CAL PLUS IN US/Vet
BC-5800	✓				✓		
BC-5600	✓				✓		
BC-5500	✓				✓		
BC-5200	✓				✓		
BC-5380	✓				✓		
BC-5300/5300Vet	✓				✓		✓
BC-5100/5100 Vet	✓				✓		✓
BC-5000/5000Vet	✓	✓			✓		
BC-5150	✓	✓			✓		
BC-5180	✓				✓		
BC-3000 PLUS		✓			✓		
BC-3200		✓	✓		✓	✓	
BC-2900		✓			✓		
BC-1800		✓			✓		
BC-3000CT		✓			✓		
BC-2800/2800Vet		✓		✓	✓		✓
BC-2600/2600Vet		✓		✓	✓		✓
BC-3600		✓	✓		✓	✓	
BC-3300		✓			✓		

KEY| ✓ = Assay Values are available for each instrument.

### CBC-5DMR Whole Blood Control (Five-Part WBC Differential)

CBC-5DMR is a tri-level control designed for monitoring Mindray Hematology analyzers. CBC-5DMR has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	5DMR02	6 x 3 mL (2 Low, 2 Normal, 2 High) - AVAILABLE OUT of US ONLY
	5DMR04	12 x 3 mL (4 Low, 4 Normal, 4 High) - AVAILABLE OUT of US ONLY

### CBC-3D Whole Blood Control (Three-Part WBC Differential)

CBC-3D is a tri-level control designed for monitoring Mindray Hematology analyzers. CBC-3D has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	3D506	6 x 3 mL (2 Low, 2 Normal, 2 High) - AVAILABLE OUT of US ONLY
	3D506US	6 x 3 mL (2 Low, 2 Normal, 2 High) - AVAILABLE IN US ONLY
	3D506VETUS	6 x 3 mL (2 Low, 2 Normal, 2 High) - VET ONLY

### CBC-CAL PLUS Whole Blood Calibrator

CBC-CAL PLUS is designed for calibration of Hematology analyzers. CBC-CAL PLUS has 45-day closed vial stability with 7-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	8CP13	2 x 3 mL - AVAILABLE OUT of US ONLY
	8CP13US	2 x 3 mL - AVAILABLE IN US ONLY
	8CP13VETUS	2 x 3 mL - VET ONLY

### CBC-LINE

Contains pre-diluted WBC, RBC/Hgb, and Plt levels. Kits are customized to the reportable range capabilities of all major hematology analyzers to provide a kit best suited to your needs. When CBC-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### PLT-LINE

Contains pre-diluted platelet levels. Kits are customized to the reportable range capabilities of the hematology analyzers to provide a kit best suited to your needs. When PLT-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

	CBC-Tech	PLATELET-TROL Extended	R&D ADVIA Retic Plus	CBC-LINE	CBC-LINE Ultra Low	PLT-LINE	RET-LINE B	Tech-Cal
ADVIA® 60	✓			✓*	✓*			✓
ADVIA 70				✓*	✓*	✓*		
14 ADVIA 120/2120/2120i	✓	✓	✓ <a href="http://www.RnDHerne.com">www.RnDHerne.com</a>		✓*	✓*	✓	✓

KEY| ✓ = Assay Values are available for each instrument. ✓\* = Please call or check our website for catalog number best suited for your analyzer.

### CBC-Tech Whole Blood Control (Five-Part WBC Differential)

CBC-Tech is a tri-level control designed specifically for the Bayer ADVIA 120, ADVIA 2120, 2120i and ADVIA 60. The ADVIA 120 and ADVIA 2120 have a bar-coded assay table that includes values for 20 parameters. CBC-Tech is bar-coded for correct QC file access. Disks are available for uploading assay values to the ADVIA 120 and ADVIA 2120 instruments. CBC-Tech has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	CT001	10 x 3.5 mL (Normal)
	CT002	10 x 3.5 mL (5 Low, 5 High)
	CT003	12 x 3.5 mL (4 Low, 4 Normal, 4 High)
	CT003X	6 x 3.5 mL (2 Low, 2 Normal, 2 High)
<b>Assay CD</b>	CDCT	Bayer ADVIA 120, 2120

### PLATELET-TROL Extended Platelet Control

PLATELET-TROL Extended is a multi-level control designed specifically for monitoring the elevated platelet ranges of hematology analyzers. PLATELET-TROL Extended has 75-day closed vial stability with 14-day open vial stability. Kit requires high speed vortexer.

	CATALOG #	INSTRUMENT	DESCRIPTION
<b>Tubes</b>	PTE006	Bayer ADVIA 120, 2120	12 x 3 mL (4 each: Level 3, 5, 6)*

\*Approximate Plt values (units in 10<sup>9</sup>/mL):  
Level 3: 1000    Level 5: 2000    Level 6: 3000

### R&D ADVIA Retic Plus Whole Blood Reticulocyte Control

R&D ADVIA Retic Plus is a tri-level whole blood reticulocyte control for the Bayer ADVIA 120, 2120, and 2120i hematology analyzer. The bar-coded assay table provides values for Retic %, Retic RBC, MCVg, MCVr, CHCMg, CHCMr, CHg, and CHR. The target values for the levels are Level 1: 1.5 %; Level 2: 5.0 %; Level 3: 9.0 %. R&D ADVIA Retic Plus is bar-coded for correct QC file access. R&D ADVIA Retic Plus has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	RA003	6 x 4 mL (2 each: Level 1, 2, 3)

### Tech-Cal Whole Blood Calibrator

Tech-Cal is designed for calibration of Bayer ADVIA 120, 2120, 2120i, and ADVIA 60 instruments. The ADVIA 120 and 2120 have a bar-coded assay table which includes values for WBCB, WBCP, RBC, Hgb, MCV, CHCM %, Plt, NEUTx %, and NEUTy %. Tech-Cal is bar-coded for correct QC file access. Tech-Cal calibrator has 45-day closed vial with 5-day open vial stability.

	CATALOG #	DESCRIPTION
<b>Tubes</b>	TCV11	2 x 3.5 mL

### CBC-LINE

Contains pre-diluted WBC, RBC/Hgb, and Plt levels. Kits are customized to the reportable range capabilities of all major hematology analyzers to provide a kit best suited to your needs. When CBC-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### CBC-LINE Ultra Low

CBC-LINE Ultra Low Range Linearity Kits are pre-diluted samples that provide a means of measuring a hematology instrument's performance and reportable range at the very low end of the linearity range for white blood cell and platelet parameters (UL001). Linearity combined with independently verified and documented calibration is used to establish the range of lowest patient values that can be accurately reported. CBC-LINE Ultra Low Kits have 105-day closed vial stability with an immediate use for open vial stability.

### PLT-LINE

Contains pre-diluted platelet levels. Kits are customized to the reportable range capabilities of the hematology analyzers to provide a kit best suited to your needs. When PLT-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### RET-LINE

Contains a series of reticulocyte concentrations to test your hematology analyzer's ability to accurately recover reticulocyte counts across a range of values. Each kit includes one Instrument Evaluation Report at no extra charge.

	CBC-X	CBC-SYS	CBC-ST Plus	Body Fluid-I	HCT Extended	XERet Control	CBC-LINE	CBC-LINE Ultra Low	PLT-LINE	RET-LINE	NEK-CAL
K-1000, K-800, K-1000/KCP-1, K-4500							✓*	✓*			
KX-21, KX-21N			✓				✓*	✓*			✓
SF-3000		COA ONLY					✓*	✓*			
XE-5000	✓					✓	✓*	✓*			
XE-2100™	✓				✓	✓	✓*	✓*	✓*	✓*	✓
XE-2100D					✓		✓*				✓
XT-4000i	✓			✓		✓	✓*	✓*	✓*	✓*	✓
XT-2000i™	✓					✓	✓*	✓*	✓*	✓*	
XN-Series	✓			✓		✓					
XT-1800i™	✓						✓*	✓*	✓*		
XS-1000i	✓						✓*				
Manual Methodologies/Semi-automated					✓						

KEY| ✓ = Assay Values are available for each instrument. ✓\* = Please call or check our website for catalog number best suited for your analyzer.

### CBC-X Whole Blood Control (Five-Part WBC Differential)

CBC-X is a tri-level control designed specifically for the Sysmex XE-5000, XE-2100, XT-4000i, XT-2000i, XN-Series, XT-1800i, and XS-1000i hematology analyzers. Assay tables include values for 27 parameters including NRBC's. CBC-X is bar-coded for correct QC file access. CDs are available for uploading assay values. CBC-X has 75-day closed vial stability with an open vial stability of 15 samples within 15 days.

	CATALOG #	DESCRIPTION
Tubes	X003	12 x 4.5 mL (4 Low, 4 Normal, 4 High)
	X003X	6 x 4.5 mL (2 Low, 2 Normal, 2 High)
	X002	10 x 4.5 mL (5 Normal, 5 High)
Assay CD	CDX	Sysmex XE-5000, XT-4000i, XE-2100, XE-2000i, XE-1800i

### CBC-SYS Whole Blood Control (Five-Part WBC Differential)

CBC-SYS is a tri-level control designed specifically for the Sysmex SF-3000 hematology analyzers. CBC-SYS is bar-coded for correct QC file access. A COA is provided. CBC-SYS has 75-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	SY003	12 x 4.5 mL (4 Low, 4 Normal, 4 High)
	SY003X	6 x 4.5 mL (2 Low, 2 Normal, 2 High)

### CBC-ST Plus Whole Blood Control (Three-Part WBC Differential)

CBC-ST Plus is a tri-level control for monitoring the Sysmex KX-21/KX-21N analyzer. CBC-ST Plus has 105-day closed vial stability with 14-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	ST001	10 x 2.5 mL (Normal)
	ST002	10 x 2.5 mL (5 Low, 5 High)
	ST003	12 x 2.5 mL (4 Low, 4 Normal, 4 High)
	ST004	6 x 2.5 mL (2 Low, 2 Normal, 2 High)
Tubes	ST207	12 x 2.5 mL (4 Low, 4 Normal, 4 High)
	ST208	6 x 2.5 mL (2 Low, 2 Normal, 2 High)
	ST405	12 x 4 mL (4 Low, 4 Normal, 4 High)
	ST406	6 x 4 mL (2 Low, 2 Normal, 2 High)

### HCT Extended

HCT Extended is an assayed bi-level control designed to monitor values obtained from automated, semi-automated and manual methods. HCT Extended has a 75-day closed vial stability with 21-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	HCT004	4 x 3 mL (2 Abnormal I, 2 Abnormal II)

### XERet Control

XERet Control is a tri-level control designed for use in monitoring reticulocytes on the Sysmex XE-5000, XE-2100, XT-4000i, XT-2000i and XN-Series hematology analyzers. XERet Control has 75-day closed vial stability with an open vial stability of 15 samples within 15 days.

	CATALOG #	DESCRIPTION
Tubes	XER003X	6 x 3 mL (2 each: Level 1, 2, 3)

### NEK-CAL Whole Blood Calibrator

The NEK-CAL is designed for calibration of Sysmex XE-2100, XE-2100D, XT-4000i, and KX-21/KX-21N hematology analyzers. Values are provided for WBC, RBC, Hgb, MCV, Hct, and Plt. NEK-CAL has 45-day closed vial with 5-day open vial stability.

	CATALOG #	DESCRIPTION
Tubes	NEK11	2 x 3.5 mL

### Body Fluid-I

The R&D Body Fluid-I Control is an assayed hematology control intended to monitor the reliability of the Sysmex XT-4000i and XN-Series instruments that quantitatively measure red and white blood cell counts in cerebrospinal fluids, serum fluids, and synovial fluids. Body Fluid-I has a 75-day closed vial stability with 30-day open vial stability.

	CATALOG #	DESCRIPTION
Vials	BF1001	3 x 3.0mL (1 each: Level 1, 2, 3)
	BF1002	6 x 3.0mL (2 each: Level 1, 2, 3)



### CBC-LINE

Contains pre-diluted WBC, RBC/Hgb, and Plt levels. Kits are customized to the reportable range capabilities of all major hematology analyzers to provide a kit best suited to your needs. When CBC-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### CBC-LINE Ultra Low/Ultra Low Plus RBC

CBC-LINE Ultra Low/Ultra Low Plus RBC Range Linearity Kits are pre-diluted samples that provide a means of measuring a hematology instrument's performance and reportable range at the very low end of the linearity range for white blood cell and platelet parameters (UL001), or white blood cell, red blood cell, and platelet determinations (UL002). Linearity combined with independently verified and documented calibration is used to establish the range of lowest patient values that can be accurately reported. CBC-LINE Ultra Low/Ultra Low Plus RBC kits have 105-day closed vial stability with an immediate use for open vial stability.

### PLT-LINE

Contains pre-diluted platelet levels. Kits are customized to the reportable range capabilities of the hematology analyzers to provide a kit best suited to your needs. When PLT-LINE Kits are used in combination with independently verified and documented calibration, the information can be used to establish the range of lowest and highest values that can be accurately reported by the hematology analyzer. Each kit includes one Instrument Evaluation Report at no extra charge. Kit requires high speed vortexer.

### RET-LINE

Contains a series of Reticulocyte concentrations to test your hematology analyzer's ability to accurately recover reticulocyte counts across a range of values. Each kit includes one Instrument Evaluation Report at no extra charge.

### We are pleased to announce the availability of our completely online QC Program. The program is available in English and French.

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❖ R&D Customers may enroll in the program at anytime

❖ Browse for CBC-Monitor 2 Online

Enter <http://cbcmonitor2.rndsystems.com> in your web browser.

Click on New Account, and fill in the information on the My Account page.

Click on Submit. You are now able to enroll your instrument.

Click on My Analyzers at the top of the page.

- Select Add New Analyzer in the Analyzer dropdown field to ENROLL ANY NEW ANALYZERS.
- Name your analyzers for easy reference using the Analyzer Name field.
- Choose your Analyzer model and Control name from the drop down boxes.

A list of parameters will appear under the instrument field.

- Select units for each parameter to match your analyzer settings under Unit.
- Uncheck any parameters that you do not report under Show.
- Click *SUBMIT* to record.

**You may enter data as soon as the instrument is enrolled.**

An email is automatically sent to CBC-Monitor so the instrument enrollment can be confirmed by CBC-Monitor staff. When the instrument has been confirmed, you will receive an email. At that time you will be able to pull up instrument reports whenever you like.

There is an **Inquiry** button under the R&D logo. Click on that to send a message to CBC-Monitor staff. Emails are answered Monday-Friday during business hours.

The CBC-Monitor report uses key indicators to present a Laboratory's results in comparison to those of the Peer Group: the Mean Difference, the SDI (Standard Deviation Index) and the PI (Precision Index). Each section of the report is presented in an easy-to-read format, while being complete and statistically relevant. A brief description of each:

- Peer Group Comparison – A peer group comparison is a key consideration to laboratories that must meet Proficiency Testing requirements. In this report, key statistics are presented in a user friendly format so that valid conclusions about the data may be drawn.
- Other Group Results – This report lists other peer or instrument group results to provide yet another comparison to aid a laboratory in problem solving.
- Comparison History – This is a 12-month chronological presentation of a laboratory's data. This lengthy history provides a means for the identification of long term shifts and trends.
- Quality Index – These graphs are visual representations of a laboratory's performance relative to that of their peer group.
- Levey-Jennings Charts – These charts plot daily data against a laboratory's own Mean values.
- Detailed Levy-Jennings Charts - This report shows detail data that has been entered, and the lab mean compared to the assay target. Rejected data points are included in this report.

**For assistance please call 1-800-523-3395 ext 4435 or 612-656-4435**

## ORDERING INFORMATION

### Ordering Information

TELEPHONE: (800) 428-4246 extension 6000 or  
(612) 379-2956 extension 6000  
FAX: (612) 379-6809

Mail orders should be mailed to the attention of:

Clinical Controls Division  
Customer Service/Sales Department  
R&D Systems, Inc., 2001 Kennedy Street,  
Minneapolis, MN 55413

Email orders should be emailed to the attention of:  
[customerserviceCCD@rmdsystems.com](mailto:customerserviceCCD@rmdsystems.com)

All orders are subject to acceptance and credit approval by  
Research and Diagnostic Systems, Inc. (R&D Systems).

### Standing Orders

Any of R&D Systems' products may be ordered on a standing order agreement or contract basis. Unless otherwise indicated, standing orders are automatically shipped the day of the release of the new product lots. Products are manufactured semiannually, quarterly, bi-monthly, or monthly and standing orders are shipped on those schedules or as needed if sufficient inventory exists. The standing order product ship date schedule may be obtained from Customer Service upon request, or online at [www.RnDHeme.com](http://www.RnDHeme.com).

### Shipping

Shipping and handling costs are prepaid and added to the invoice. R&D Systems reserves the right to select the packaging and shipping method for your order, which will ensure the stability of product and efficient tracking. Domestic orders will normally be shipped by overnight air express. Any damage during shipment is covered by the warranty provided in these terms and conditions.

### Prices and Terms

Prices quoted are in US dollars and are subject to change without notice, except for contract or standing order agreements. Terms are net 30 days. A \$26.00 shipping charge will be added to all orders shipped within the contiguous 48 states and a \$12.00 shipping surcharge will be added to orders delivered to Alaska, Canada, Hawaii, or Puerto Rico. Next day delivery is provided upon request at an additional charge.

### Damage or Delay in Transit

Title shall pass to the purchaser upon delivery to the carrier. If the purchaser receives merchandise in a broken or damaged condition, the purchaser should insist that the carrier note the damage or breakage on the delivery receipt. The transportation company acts as the agent for the purchaser. R&D Systems is not responsible for loss, damage, or delay concerning goods after delivery to the carrier.

### Claims

Any claim for credit or return must be made within 10 days of shipment of the product. No credit will be issued for product returned without the authorization of R&D Systems, Inc. For further information, contact our Customer Service Department.

If an error by R&D Systems results in shipment of an incorrect order, R&D Systems will, at its option, either ship a replacement order at no charge or credit the customer's account for the original product shipped in error.

### Order Changes and Cancellations

Standing Order changes or cancellations must be received by R&D Systems at least seven working days prior to the next scheduled ship date. **All order cancellations or changes must be confirmed in writing, by e-mail or by FAX.**

### Assay Tables

Periodically, assay tables provided with our products are added or deleted. Our normal practice is to provide notice prior to deleting a table.

### Resale Prohibited

In the absence of an express written agreement to the contrary, all products sold by R&D Systems are for the exclusive use of the purchaser and are not to be resold.

### Warranty

All products supplied by R&D Systems are warranted to meet or exceed our published specifications when used under normal conditions in your laboratory. Should any product fail to perform as warranted, upon notification, R&D Systems at its option, shall promptly replace it free of charge or give full credit of the original purchase price. Our obligation and your sole remedy is limited to such replacement of the product or full credit of the original purchase price in the event the product proves to be defective.

**R&D SYSTEMS DOES NOT MAKE ANY OTHER WARRANTY OR REPRESENTATION WHATSOEVER, WHETHER EXPRESSED OR IMPLIED, WITH RESPECT TO THESE PRODUCTS. IN PARTICULAR, R&D SYSTEMS DOES NOT MAKE ANY WARRANTY OF SUITABILITY, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY PRODUCT.**

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