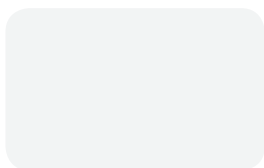
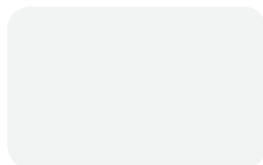
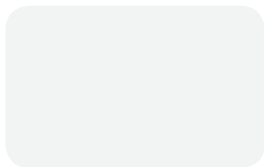
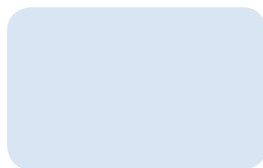


# DIAGNOSTICS SOLUTIONS HEMATOLOGY REAGENTS AND ANALYZERS



# Avantor™ Performance Materials

is extending the reach of reliable diagnostic solutions to help improve healthcare outcomes and quality of life for a changing world.

## Performance Diagnostics for a Changing World

Avantor™ Performance Materials' global diagnostics business has a unique mission: Improve the quality and affordability of diagnostic tools to help benefit the health and well-being of people around the world. We offer:

- *In vitro* reagents and instruments for hematology, clinical chemistry, immunology – ELISA, CLIA and rapid diagnostics tests, histology, microbiology and genetic testing
- Consumables and instruments for life sciences research in academia, government and pharmaceutical labs

## Two World-Class Diagnostics Brands

Today, our performance diagnostics solutions include:

**J.T.Baker® clinical reagents** — for over 30 years, solutions for hematology and histology reagents engineered for maximum performance.

**BeneSphera™ diagnostics solutions** — providing proven and affordable diagnostic products and systems for applications including hematology, clinical chemistry, immunology, microbiology, and life science.



**BeneSphera™**

## About Avantor™ Performance Materials

Avantor is a global leader in performance materials and chemistries in high-growth specialty chemical markets — including laboratory products, pharmaceuticals, electronic materials and diagnostics. We have seven global manufacturing facilities with certified capabilities such as ISO, cGMP and Six Sigma. Our global diagnostics offering is built on a strong foundation: a passion for quality, innovation and reliability in performance materials.

## Our Global Resources

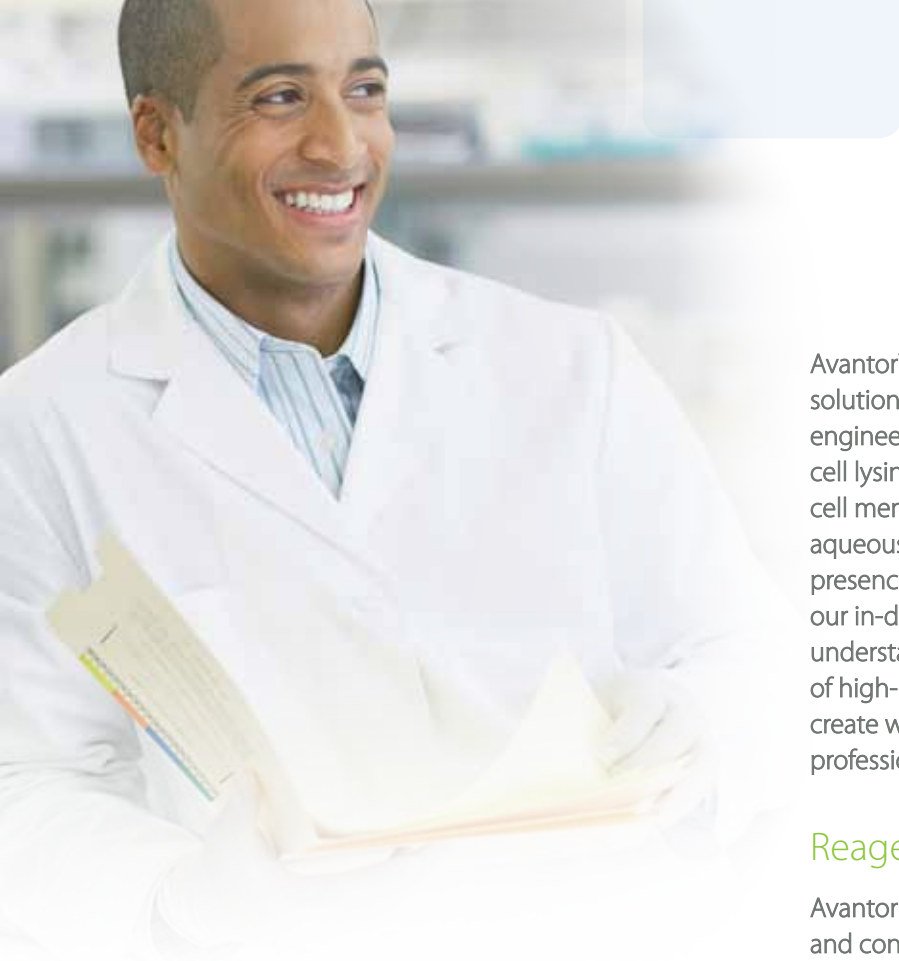
**Strong, in-house research & development capabilities** — including the ability to develop customized solutions

**Global manufacturing capability** — seven manufacturing facilities on three continents with certified capabilities (such as ISO, cGMP, Six Sigma) for a strong, responsive global supply chain

**Quality infrastructure and culture** — a quality culture that includes rigorous testing of every raw material, packaging materials and every batch and accelerated stability and real time testing

**Extensive sales & service network** — more than 250 distributors in 100 countries worldwide, plus fully staffed customer service centers providing product support, application support, technical support and training.

**Regulatory compliance with the following certifications** — ISO 13485:2003, ISO 9001:2008, ISO 14001:2004 and European IVD Directive 98/79/EC (CE).



Avantor™ Performance Materials builds our diagnostic solutions on the foundation of our deep experience engineering high-quality chemistries. We understand cell lysing and chemical interaction of compounds on cell membranes, the characteristics of these materials in aqueous solutions, and their long-term behavior in the presence of other chemicals. This insight, coupled with our in-depth knowledge of measuring principles and understanding of the key concepts underlying the creation of high-performance products for hematology, helps us create world-class diagnostics solutions that are trusted by professionals the world over.

## Reagents for Hematology

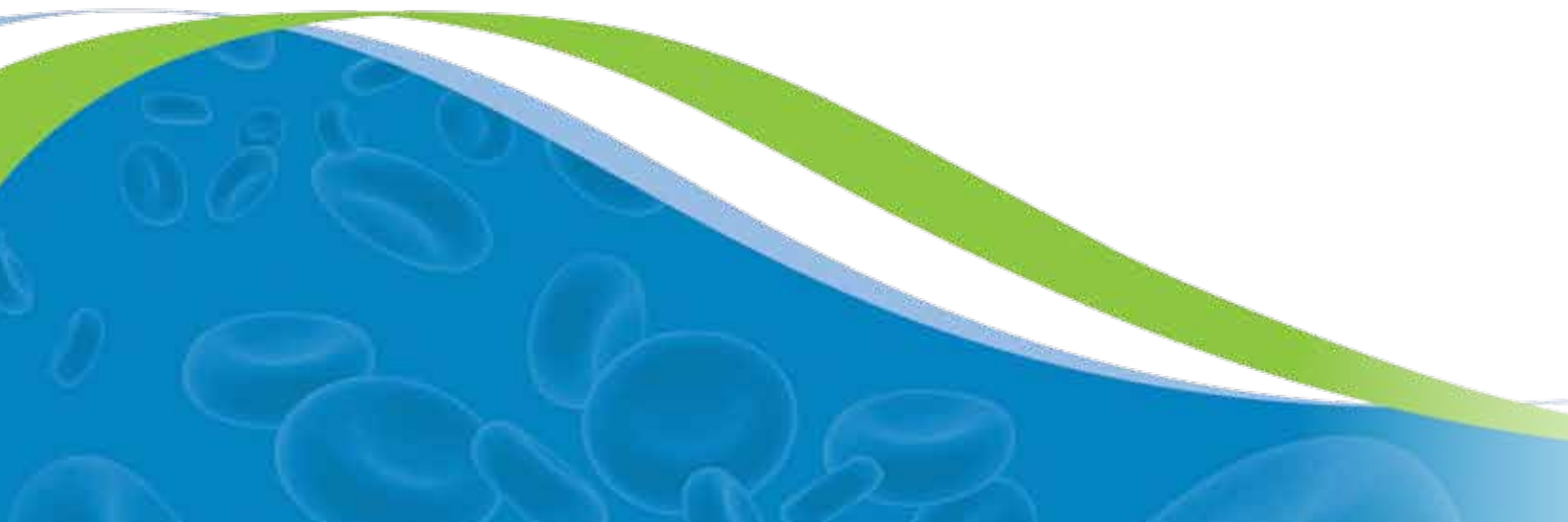
Avantor offers a complete line of J.T.Baker® brand reagents and controls for a range of analyzers, from 3-part differential instruments to 5-part differential automated analyzers. To save time and ensure compatibility, J.T.Baker® brand reagents are supplied in bottles that fit to the tubes and connections provided with the instrument.

### Avantor offers the following hematology products:

- Reagents – including Diluid™, a diluting fluid, and CyMet™, a lysing reagent and cleaner – for a broad range of hematology analyzers
- Hematology controls suitable to be used in combination with our reagents
- Hematology analyzers with 3- or 5-part differential analysis for human or veterinary applications
- Staining solutions for manual staining of slides

J.T.Baker® brand reagents are available for most models of the following hematology cell counters:

Abbott®	Erma	Nihon Kohden™
ABX Diagnostics®	Hospitex	Orphee
AVL	HTI®	Seac
Bayer®	Hycell	Swelab
Beckman-Coulter®	MDC	Sysmex®
BeneSphera™	Medonic	Urit®
Diatron	Melet Schloesing	
Drew Scientific	Mindray™	



### Diluting fluids

Diluid™ is a 0.2 micron filtered blood diluting fluid for use in cell counting and sizing. The composition of the reagent maintains the stability of RBC's, PLT's, and WBC's during counting. J.T.Baker® brand Diluid™ diluting fluid is suitable to monitor 5-part WBC differential analysis based on the laser light scattering principle. It can also be used for 3-part differential analyses or non-differential applications.

### Lysing reagents

J.T.Baker® brand CyMet™ lysing reagent is available as a cyanide-free solution. CN-free reagents are safer than the traditional cyanide containing products and have shown to be more stable.

### Cleaning and rinsing solutions

Avantor supplies several cleaning and rinsing solutions, such as DetectoTerge™ isotonic chemical cleaners with surface active ingredients. Our enzymatic cleaners – ProClean™, ProClean™ Plus, and Proclean™ Extra – contain proteolytic enzymes and are developed to remove proteinous pollution and cell debris.

### Calibration set

Cal Set 1 is an ideal solution for the calibration of impedance based cell analyzers. This calibration set simulates native blood. Cal Set 1 is stable for 4 months and is supplied with a broad range of assigned values.



### Hematology controls

J.T.Baker® brand controls are available in tri-levels, abnormal low, normal, and abnormal high levels in various pack sizes. The controls simulate whole blood and are intended for use in hemocytometry to monitor daily accuracy and precision of hematology instruments. The controls contain human RBC, mammalian WBC's, and platelets. All cells are suspended in a plasma-like fluid and all deliveries are supplied with assay values. Hematology controls are stable for 3-6 months while opened vials remain stable for minimum 2 weeks.

The following hemocytometric values may be obtained:

Red Blood Cells	Basophils
Total White Blood Cells	Hemoglobin
Neutrophils	Hematocrit
Lymphocytes	Mean Cell Volume
Monocytes	Mean Corpuscular Hemoglobin
Eosinophils	Platelets
All other values directly derived from the above listed	



## Hematology Analyzers

Avantor offers BeneSphera™ brand hematology analyzers for human or veterinary applications, available in select markets\* in Europe and Asia. J.T.Baker® brand reagents should be used with BeneSphera™ brand hematology analyzers to achieve optimal performance.

### BeneSphera™ Brand Hematology Analyzers

BeneSphera™ brand hematology analyzers are intended to be used *in vitro* for the examination of specimens derived from the human body. These reliable, easy-to-use analyzers are capable of monitoring either a 3- or 5-part differential population.

The BeneSphera™ 3-part differential hematology analyzer H32 has a throughput of 60 samples per hour and only needs 9.6 µL of whole blood sample volume to provide 20 parameters.

The BeneSphera™ 5-part differential hematology analyzer has two optical flowcells and uses two semiconductor lasers to provide a 4 angle WBC scatter. The instrument uses an extra detector with an extra angle for fluorescence and employs the regular impedance counting technique, using data generated from the apertures in the flowcells. The BeneSphera™ 5-part differential hematology analyzer provides 23 parameters and 3D scattergrams together with 22 additional parameters such as Reticulocytes, NRBC's, CD4, CD8, and CRP, and helps to enhance laboratory efficiency with a throughput of 120 samples per hour in the autoloader modus



### BeneSphera™ Brand VET Hematology Analyzers

The BeneSphera™ brand 3-part differential VET hematology analyzer H32 is capable of analyzing specimens of eleven species of animals. It has a throughput of 60 samples per hour and only needs 9.6 µL of whole blood sample volume to provide twenty parameters and three histograms.



*\*For availability and more information, contact your local Avantor Account Representative or distributor.*

## Hematology Stains

Avantor provides several staining solutions for manual staining of blood-smear slides. J.T.Baker® brand stains are designed to provide excellent results across a variety of hematology applications.

### May-Grünwald and Giemsa Stains

May-Grünwald's eosin methylene blue and Giemsa's azure eosin methylene blue stains are commonly used stains for blood and bone marrow smears as well as cytological specimens, such as urine sediment or sputum.

### Wright's stain

Wright's stain is used for staining of blood and bone marrow smears, specifically for differential blood picture staining.

### Leishman's stain

Leishman's stain is used for staining of blood and bone marrow, specifically to differentiate and identify leucocytes, malaria parasites, and trypanosomes (unicellular parasitic protozoa).

### Reticount stain

Reticount is a special hematology stain intended for the identification of reticulocytes in blood smears and for counting the number of reticulocytes per 1000 erythrocytes.

### Sörensen buffer

Sörensen buffer solution is used in the staining process to avoid any unforeseen effects of tap water. The buffer is supplied in a 20 times concentrated format and should be diluted before use.



Phillipsburg, NJ 9001:2008 & 14001:2004  
Paris, KY 9001:2008  
Mexico City, Mexico 9001:2008  
Deventer, the Netherlands 9001:2008, 14001:2004 & 13485:2003

Gliwice, Poland 9001:2008 & 17025:2005  
Selangor, Malaysia 9001:2008  
Dehradun, India 9001:2008, 14001:2004 & 13485:2003  
Mumbai, India 9001:2008 & 17025:2005



**BeneSphera™**

Abbott® is a trademark of Abbott Laboratories Corporation. ABX Diagnostics® is a trademark of HORIBA ABX SAS. AVL is manufactured by Roche Diagnostics Corporation. Bayer® is a trademark of Bayer Corporation. Beckman Coulter® is a trademark of Beckman Coulter, Inc. Diatron is manufactured by Diatron MI PLC. Drew Scientific is manufactured by Drew Scientific, Ltd. Erma is manufactured by Erma, Inc. Hospitex is manufactured by Hospitex Diagnostics. HTI® is a trademark of High Technology, Inc. Hycell is manufactured by Hycell Diagnostics. MDC is manufactured by Al Systeme. Medonic and Swelab are manufactured by Boule Medical AB. Melet Schloesing is manufactured by Melet Schloesing Laboratories, S.A. Mindray® is a trademark of Shenzhen Mindray Bio-Medical Electronics Co. Ltd. Nihon Kohden® is a trademark of Nihon Kohden Corporation. Orphée S.A. is manufactured by The Cormay Group. Seac is manufactured by RADIM Spa. Sysmex® is a trademark of Sysmex Corporation. Urit® is a trademark of Urit Medical Electronic Co., Ltd.

### About Avantor™ Performance Materials

Avantor Performance Materials manufactures and markets high-performance chemistries and materials around the world under several respected brand names, including the J.T.Baker®, Macron Fine Chemicals™, Rankem™, BeneSphera™ and POCH™ brands.

Avantor products are used in a wide range of industries. Our biomedical and life science solutions are used in pharmaceutical production, laboratory research for academic, industry and quality control, and in medical lab testing. Our electronics materials products are used in the manufacturing of semiconductors. Based in Center Valley, Pennsylvania (USA), Avantor is owned by an affiliate of New Mountain Capital, LLC.

For additional information please visit [www.avantormaterials.com](http://www.avantormaterials.com) or follow [www.twitter.com/avantor\\_news](https://twitter.com/avantor_news)

### Ordering Information and Assistance

#### Customer Service and Technical Service

##### India

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E-MAIL: [diagnostics.india@avantormaterials.com](mailto:diagnostics.india@avantormaterials.com)

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

#### ASK Avantor™

Our Web site features ASK Avantor™, which includes live chat capabilities with customer service representatives.  
[www.avantormaterials.com/askavantor](http://www.avantormaterials.com/askavantor)



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Center Valley, PA 18034  
USA

### Worldwide Locations

- China
- India
- Korea
- Malaysia
- Mexico
- Netherlands
- North America
- Poland
- Taiwan

For contact information at these locations, visit  
[www.avantormaterials.com/WorldwideDirectory](http://www.avantormaterials.com/WorldwideDirectory)