

Hemoglobin systems

for neonatal screening and
diagnostic use




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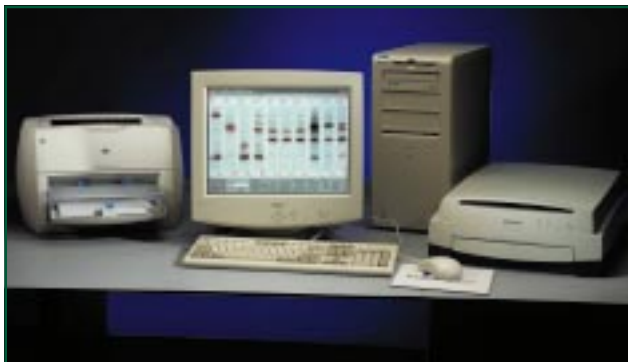
“... to reach out and touch every individual worldwide, not once, not twice, but several times during their lifetime, to prevent serious disorders.”


PerkinElmer™
life sciences.

The best

With more than 700 hemoglobin variants in the world, and the unique genetic combinations appearing in our increasingly mobile populations, hemoglobin disorders may appear where least expected. PerkinElmer Life Sciences offers a full range of products and solutions for hemoglobinopathy testing for neonatal screening as well as for diagnostic applications for all ages. We developed very specifically RESOLVE™ test kits, equipment packages, and IsoScan® Digital Imaging System to enable laboratories to produce optimal results in just hours. We stand behind our products with a commitment to our customers through training, technical support, and service.

RESOLVE test kits are designed to separate hemoglobins by isoelectric focusing (IEF) on a thin agarose gel. The clean separation of Hb F from Hb A in our RESOLVE Neonatal gel kits permits differentiation of sickle cell anemia (Hb SS) from sickle cell trait (Hb AS). Due to the specificity and sensitivity of the gels we produce, separation of Hb C from Hb A2 and Hb E, as well as Hb D-Los Angeles and Hb G-Philadelphia from Hb S is achieved. Hb Barts' may be clearly detected.



The preparation and separation of hemoglobin is accomplished through the application of a hemolysate onto a precast agarose gel containing RESOLVE Ampholytes. RESOLVE Ampholytes are composed of low molecular weight amphoteric molecules with isoelectric points between pH 6-8. When an electrical current is applied to the gel, these molecules migrate to their isoelectric points (pI's) within the gel, forming a stable pH gradient.

The hemoglobin variants also migrate through the pH gradient in the gel until they reach the area where their individual pI's equal the corresponding pH of the gel. At this point, the net charges on the variants are zero and migration ceases. The electric field counteracts diffusion and the hemoglobin variant forms a discrete thin band.

Your customized plan

Our sales and support persons will help you to determine the gel product, package size, testing equipment and the evaluation system which best suit your needs. If you are seeking an automated solution for high throughput needs, please consult your sales representative for the latest developments.

systems for h



RESOLVE SYSTEMS

RESOLVE methods

PerkinElmer Life Sciences delivers kit inserts with each shipment of RESOLVE gel products. In these inserts, there are graphics and complete instructions to assist the user in daily runs. There are also notes clarifying the interpretation of the results, as well as quick trouble shooting guides that can be consulted for improving technique and applications. Our products are FDA approved and fully tested.

The RESOLVE gel products, RESOLVE testing equipment and IsoScan Digital Imaging System are being used in many hospitals, clinics and neonatal labs throughout the world. Our customers produce results with ease and successfully identify patients with hemoglobin disorders, who are referred to follow up programs for treatment. These products and the work of our customers help improve the quality of health and life, and this is what we at PerkinElmer Life Sciences are committed to do.

The use of RESOLVE Hemoglobin Kits and Testing Systems offers many advantages over competitive methods and products:

Time:

The RESOLVE system can provide a great advantage in time taken to run tests. HPLC takes up to 5 minutes per sample; therefore, 88 samples would take up to 7 hours to produce results; our method takes just 60 - 90 minutes, excluding sample preparation. One operator can run multiple Multiphor II electrophoresis units to produce a high number of results within the same time frame with easy visual inspection as runs progress.

Scalability:

Multiphor II electrophoresis units are designed for scalability. A typical setup would include 2 chambers for each Programmable Power Supply, and up to four electrophoresis units on one Circulating Water Bath. Therefore, expansion of the system is possible with minimum additional expenditures. The Programmable Power Supplies can create and store constant run parameters for different

gel run setups. The Gel Dryers can accommodate 5 or 9 gels at a time.

Safety

Our kit insert and product literature provide complete instructions and safety features to ensure the proper use of the equipment and kit reagents, such as the gels, anode and cathode solutions, as well as hemoglobin elution solution to reconstitute dried blood spot samples.

Product Flexibility

PerkinElmer Life Sciences offers you three different sizes of gels, packaged conveniently to best suit your laboratory's needs. Each size of gel can be used on the Multiphor II electrophoresis unit to evaluate cord blood, blood spots, or whole blood samples.

Clarity

The IEF technique combined with the specially formulated gels enables good separation between hemoglobin bands differing by only 0.02 pH units, resulting in highly resolved, identifiable results.

Diagnostic Flexibility

PerkinElmer Life Sciences offers a variety of electrophoresis markers for common and rare hemoglobins, which are used as pI position markers. With the high quality separation achieved on the gels, it is possible to observe and compare unique hemoglobins within specific populations.

hemoglobin diagnostics



IsoScan

Multiple Evaluation Methods

Hemoglobin gels may be evaluated with or without stain. We offer the JB-2 Staining system in two sizes as well as trays and rocking systems to fix, rinse, and/or stain the gels. Unstained gels present more reliable quantitative results when evaluated via IsoScan. Stained gels can still be analyzed with IsoScan. We offer a viewing product, the Glow Box, to enable you to better illuminate your finished gels for visual evaluation.

Electronic Evaluation and Storage

With the IsoScan Imaging System, a high-resolution digital image of the gel is created so that whole bands can be evaluated on-screen. The system comes complete with specified and tested IsoScan scanner, computer, monitor and printer, and specially developed IsoScan software. You can work through patient samples in groups and

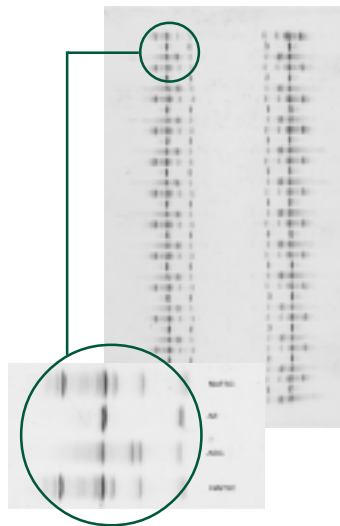
individually label suspect bands. Results are generated as individual reports or all samples, listing percentage, pI and comments. The use of IsoScan software eliminates handwriting illegibility and individual interpretation differences to give you more consistent hemoglobin reporting procedures.

Laboratories that in the past stored their finished gels are now able to keep their information on hard disk or CD for long-term storage. Results are available for further reference or research studies and are easily shared, even in remote locations, without being subject to moisture damage, oxidation, fire, or being lost in shipping.

Security

PerkinElmer maintains high standards of production and inspection. Our products are FDA cleared and produced under stringent GMP guidelines in facilities with ISO-certified quality systems. We take

pride in providing you the most efficient and economic hemoglobin testing products so that you can be confident in the quality of your results.

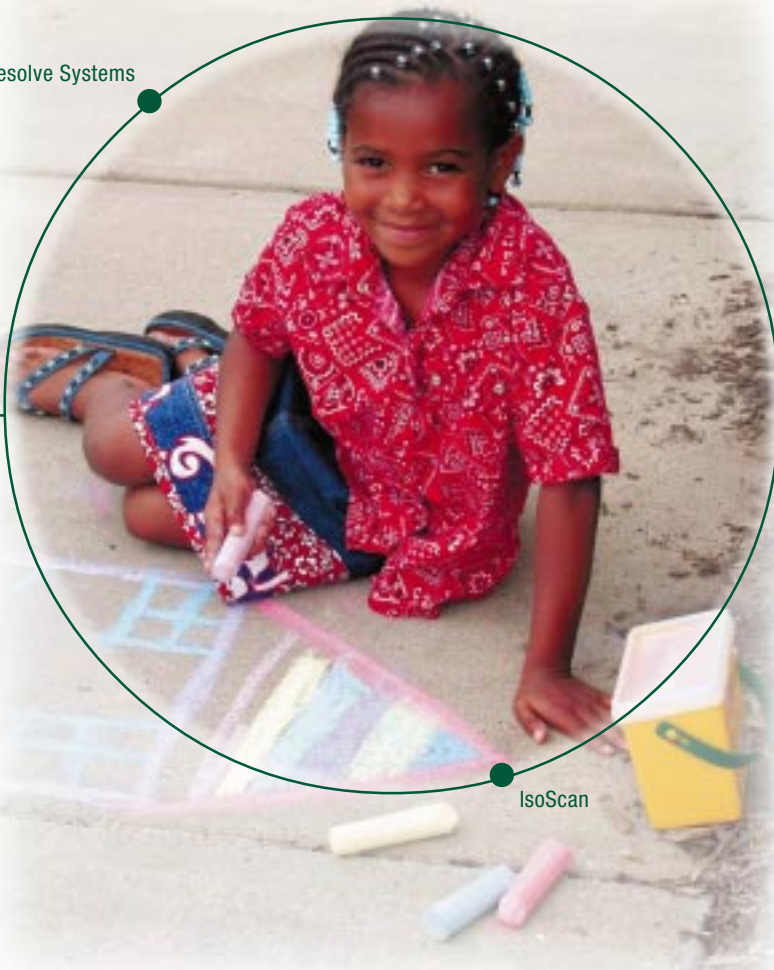


Scan
What You See,
See What
You Scan™

systems

for hemoglobin diagnostics

Resolve Systems



IsoScan

One partner

- We offer you complete system components and products to run tests and evaluate the results, so you have the convenience of one partner and one invoice.

Training

- We stand behind these products with excellent training provided by our diagnostic professionals so you are producing test results with ease and confidence.

Technical Service

- Our Technical Service Staff is available to answer your questions and give you additional tips to optimize your results.

Diagnostic Resources

- We make available to you literature, textbooks, and video resources to expand your knowledge base.

Service Engineers

- Our quick response is a real advantage to our customers when they need assistance most.

Complete
service commitment
to our partners.



Ordering information

All PerkinElmer Life Sciences diagnostic products may not be available in all countries.

To obtain a PerkinElmer Life Sciences Hemoglobin Product List, please contact your local diagnostic professional on your distributor, our sales offices listed below, or visit our website at

www.perkinelmer.com/lifesciences

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