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DASA utilizes Siemens' systems to deliver high quality care across diverse Brazilian market

Answers for life.

# DASA deploys Siemens' systems to deliver high quality care across diverse Brazilian market

Dr. Evaldo Marchini, an infectious disease specialist in Sao Paulo, Brazil, strives to provide the highest quality of care to all of his patients. He expects a laboratory to deliver quick and efficient service, reliable and accurate results, and useful technical information.

"I have confidence in DASA's technical expertise," Dr. Marchini says. "Whenever I have a question or concern about a test result, I call DASA." Dr. Marchini is not alone. More than 40,000 physicians throughout Brazil recommend DASA labs to their patients.

"Consider the typical day of a physician in Brazil", says Dr. Claudio Figueiredo de A. Pereira, Director of Clinical Analysis at DASA. "That physician is busy seeing multiple patients and wants to ensure the best possible health outcome for each one."

## How can a diagnostics laboratory best support that goal?

"That question drives everything we do at DASA," Dr. de A. Pereira says. "A number of factors are critical: fast turnaround; high quality testing; information-rich reporting; expert diagnostic decision-support."

DASA delivers on all these quality measures through advanced diagnostic technologies, robust consultation services, and continuous investment in innovation.

## DASA hones strategy for large, diverse market

DASA, the largest diagnostic laboratory in Latin America, has achieved its leadership position by honing its operational strategy to the needs of a demanding Brazilian marketplace. The largest country in South America, Brazil has a population of 203 million, characterized by wide geographic, cultural, and socioeconomic diversity. The Brazilian constitution grants all citizens the right to free medical care from public as well as private providers. However, rates are just one-third those of private payers. Thus, DASA faced the question of how to provide uniformly high-quality testing for all patients while operating viably as a business.



“Our mission is to provide all social classes access to quality healthcare services and products using modern quality and technology.”

Dr. Octavio Fernandes  
Vice President of Operations, DASA

# Siemens Healthcare Diagnostics' product portfolio at work for DASA

## Instruments



### Dimension® RxL Max® System

Integrated system for chemistry and immunoassay testing, meeting the needs of their mid/low-volume labs.



### ADVIA Centaur® XP System

High-performance immunoassay system with extensive menu, deployed as a standalone or automated analyzer for high volume labs.



### IMMULITE®1000 and IMMULITE® 2000 Systems

Premier immunoassay system with broad, esoteric testing menu for specialty testing.



### ADVIA® 2400 System

Core chemistry system for meeting high- to very high-volume testing needs with reliability and extensive menu.

## Automation



### VersaCell® System

Task-targeted automation with flexible menu and instrument options.



### ADVIA® LabCell® Automation Solutions

Total lab automation for high- to very high-volume testing needs.



## DASA at a glance:

- Largest diagnostic company in Latin America, fourth in the world
- 520 private patient service centers for sample collection
- 26 labs, including nine central labs
- Present in 13 Brazilian states and in the Federal District
- 25 brands, segmented into premium, executive, and standard
- Operates in diverse segments: private, public, lab-to-lab
- Offers more than 3,000 types of tests: clinical chemistry, hemostasis, blood gas, immunoassay, microbiology, nephelometric, urinalysis
- More than 100,000 patients a day; approximately 40,000 physicians served
- Accreditation: CAP – College of American Pathologists
- Certifications: ISO 9001, ISO 14001, OHSAS 18001 and PALC
- 12,000 employees
- Annual revenues approximately \$1 billion U.S.

## Everybody gets equally high quality testing.

“Despite having two brands, the product we offer in clinical analysis is the same,” says Dr. Octavio Fernandes, Vice President of Operations, DASA. “DASA’s vision is to provide all social classes access to health care services and products using modern quality and technology.”

DASA’s relationship with Siemens Healthcare Diagnostics plays a crucial role. Siemens provides DASA with a broad solution portfolio that aligns with the laboratory testing needs across diverse service segments. DASA operates four divisions, each with its own special needs and challenges. The public division, which serves patients receiving government-reimbursed care, must provide cost-efficient access to large populations.

The reference-lab division, which receives daily samples from more than 4,000 labs throughout Brazil, must provide unfailing accuracy and fast turnaround time (TAT). The hospital division, which serves more than 100 private and public hospitals, needs to provide around-the-clock service, speed and reliability. In addition, the hospital division operates close to the physicians, and therefore, provides frequent on-the-spot diagnostic consulting.

DASA exemplifies the consolidation of Brazil’s previously fragmented clinical diagnostics market. Eighteen acquisitions since 2005 created a DASA network of 26 labs—including nine core labs—delivering 25 distinct brands segmented into premium, executive and standard levels of service. This mega-lab structure enables DASA to establish economies of scale for high volume, high reliability, and adaptability to changing market demands. DASA’s test volume is rising 15% annually and is expected to reach 22 million by 2015. Test menus must adapt to changing disease vectors and demographic trends. Meanwhile, DASA aims to shift staff focus from routine tasks to providing value-added service to patients and physicians.

All of this calls for testing systems that deliver high quality, high throughput, flexibility, scalability, automation and cost efficiency. DASA’s search for advanced diagnostic systems led to Siemens. The lab signed a multi-year contract with Siemens in 2010.

“The mission of the lab is to carry out this huge test portfolio in the most efficient way, with the best quality standards, for all the different segments of the Brazilian population,” Dr. Fernandes says.



“The biggest strength of Siemens in Brazil, as elsewhere, is robustness of the equipment, the broad portfolio of highly reliable solutions for all lab disciplines.”

## Siemens delivers speed, accuracy, and efficiency

DASA performs a lot of diabetes monitoring and tests for thyroid disease. Its workhorse for fast, high-volume immunoassay testing is the ADVIA Centaur® XP Immunoassay System. DASA has 35 of these systems in its core labs. Each system delivers up to 240 tests per hour, STAT capabilities for priority testing, and an extensive menu of 30 onboard reagents for both routine and specialized testing.

“The Centaurs work beautifully to deliver speed and accuracy for our diverse patient population,” Dr. Fernandes says.



“The ADVIA, the Dimension, the IMMULITEs—these are very robust instruments that support our strict performance measures and quality controls.”

Dr. Claudio Figueiredo de A. Pereira  
Director of Clinical Analysis, DASA

DASA uses multiple high-throughput systems such as the ADVIA 1800 and 2400 Clinical Chemistry Systems for drugs-of-abuse testing, therapeutic drug monitoring, and for new assays such as Cystatin C and CardioPhase® hsCRP. IMMULITE® Immunoassay Systems deliver specialty testing, with a menu breadth that enables patient-test consolidation on one analyzer.

DASA operates in the public sector through the CientificaLab brand, and has implemented the ADVIA® LabCell® Automation Solutions. The ADVIA LabCell System is an automation system that integrates instrumentation including ADVIA Centaur and ADVIA Clinical Chemistry Systems. Thus, DASA is able to consolidate processes along an automation track while also allowing each instrument to operate independently for maximum reliability.

This high-throughput engine enhances the economic feasibility of performing low-margin, government-funded testing in DASA core labs.

“You just set up the LabCell, you put the tubes in the sample manager and it goes,” Dr. Fernandes says. “Sometimes I take DASA investors to see the LabCell because even if they don’t understand the science of lab testing, they see the efficiency of process automation.”



Siemens' solutions also streamlines workflow in DASA hospital environments and smaller labs. Here, Dimension® Integrated Chemistry Systems deliver rapid-response immunoassay and chemistry testing for critical-care patients.

"The ADVIA, the Dimension, the IMMULITEs—these are very robust instruments that support our strict performance measures and quality controls," says Dr. de A. Pereira. "DASA is very focused on the analytical quality of our tasks—the calibration of the assays, the results, the internal controls and traceability. We have Siemens instruments in all our labs, in almost all lab specialties from hematology to microbiology."

#### DASA collaborates to enhance clinical value

With its Siemens solutions, DASA has reduced TAT and error rates. Service Level Agreements are targeted for patient needs in each DASA division. In DASA's Public Laboratory in Sao Paulo, the percentage of tubes aliquotted dropped from 100% to 62% after the introduction of ADVIA LabCell System. 22% of the staff were reallocated to other activities.\*

Beyond improving these quality indicators, DASA strives to enrich the patient experience across the spectrum of service levels. The healthcare market in Brazil is customer-driven. Patients choose which lab to frequent and the lab report belongs to the patient. Call-center operators help patients schedule exams and learn about test procedures. At DASA Patient Service Centers, each patient is assigned a password, login, and date to access his or her lab report online. The reports themselves are designed to be clear and educational. In addition, DASA centers offer patient seminars on such topics as senior health, pregnancy, diabetes, and other public-health concerns.

DASA also delivers robust support to clinicians. A telephone hotline staffed by DASA doctors assists physicians in reviewing and interpreting test results. DASA participates in medical meetings and lectures on healthcare topics to ensure clinicians know how to best use lab resources. These collaborative offerings are designed to provide the right information at the right time, contextualized to deliver meaningful diagnostic decision support.

\*The outcomes achieved by the Siemens customer described herein were achieved in the customer's unique setting. Since there is no "typical" laboratory and many variables exist, there can be no guarantee that others will achieve the same results.



**"Siemens is a company fully associated with innovation. We will ask Siemens to help advance our reporting capabilities by integrating both imaging and clinical analysis. Physicians are eager for this kind of value-added information."**

Dr. Odilon Porto Denardin  
Clinical Trials Director, DASA

#### Innovation transforms data into knowledge

At the heart of DASA's service to patients and physicians is the lab report. Embodied in these pages are DASA advances in transforming data into knowledge through innovation. DASA recently ran a pilot project to develop a thyroid report that integrates results from immunology, biochemistry, and molecular biology. The report not only consolidates data across disciplines, it also includes a DASA physician's interpretive commentary.

"We think the report is our product, so it has to be clear, educational, and rich with meaning," Dr. de A. Pereira says. "We have a very intelligent report and some automatic actions that can make the report variable using our Lab Information System. We are always advancing the report's ability to communicate."

Siemens automation supports data integration for consolidated reporting, notes Dr. Odilon Porto Denardin, DASA Clinical Trials Director and leader of the thyroid-report pilot. He points out that Siemens also makes imaging equipment and a next step would be to integrate those results as well.

"Siemens is a company fully associated with innovation," Dr. Denardin says. "We will ask Siemens to help advance our reporting capabilities by integrating both imaging and clinical analysis. Physicians are eager for this kind of value-added information."

"Everything we do is ultimately focused on supporting physicians to do what's best for patients," says Dr. Fernandes: "Advanced technology, process integration, cost efficiency—these are all important things. These are the means by which DASA enables physicians to sit down with their patients with the utmost confidence they can provide the best possible care."

Additionally Dr. Marchini says: "I look for good practices and techniques. It's important for a lab to provide good technical communication to discuss any questions about the diagnosis. Also, they have to meet their patients' needs through good infrastructure; quick and efficient service; and by making use of modern, reliable, and accurate techniques. I have been sending my patients to DASA labs for 30 years."





Siemens Healthcare Diagnostics, a global leader in clinical diagnostics, provides healthcare professionals in hospital, reference, and physician office laboratories and point-of-care settings with the vital information required to accurately diagnose, treat, and monitor patients. Our innovative portfolio of performance-driven solutions and personalized customer care combine to streamline workflow, enhance operational efficiency, and support improved patient outcomes.

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