BECKMAN COULTER

The superior solution for disease state diagnosis.

IMMAGE 800 Special Chemistry System

BR-11343B

Can your laboratory…

Renal Assessment and Monitoring

… deliver accurate results to measure proteins in urine samples?

Neonatal Screening

… improve productivity with a fast and cost-effective solution for disease state diagnosis and monitoring?

Rheumatoid Factor

… provide quick and precise results to help improve patient care?

Nutritional Assessment

Immune Assessment

Cardiovascular Risk

Achieve optimal laboratory efficiency

Innovative Performance Coupled with a Broad Test Menu

With the IMMAGE 800 Special Chemistry System, your laboratory can closely monitor the dynamics of a disease. The system delivers innovative technology and a broad test menu, which offers outstanding protein measurement.

The IMMAGE 800 builds on Beckman Coulter's expertise in protein analysis and rate nephelometric technology. The fully automated, random-access system runs critical tests for proteins and serologies — used to diagnose very destructive diseases.

Beckman Coulter simplifies and automates the complex processes of protein analysis. Joining science and medicine, we can help continue to provide total solutions for better patient care**.**

Simplified User-Defined Reagents (UDR) Capability

The IMMAGE 800 UDR capability simplifies lab processes — providing greater flexibility and enhanced menu opportunities. The system allows your laboratory to run additional chemistries that are not currently part of the system menu. Store protocols for up to 50 different UDR chemistries and perform up to 12 of these chemistries on a single test run. With advanced UDR capability, your lab has access to all the analytes you need on an easy-to-use system.

- Plot UDR data curves
- Ability to utilize existing buffers and diluents for UDRs
- Perform single-point calibration updates
- Enter reagent-specific information
- Utilize within-lot calibration
- Flag antigen excess

Enhance your Special Chemistry testing

Efficient Reagent Process

Bar-coded, liquid, ready-to-use reagents maximize efficiency.

- Cooled reagent compartment holds 24 bar-coded cartridges and accommodates up to four buffer bottles, sufficient for 1,400 tests.
- 39 semi-permanent cuvettes process calibrators, controls and patient samples simultaneously.
- Multiple cartridges of the same chemistry can be loaded simultaneously as needed. When one cartridge is empty, the system will automatically switch to a new one to complete the run.
- Single-point calibration verification minimizes the need to buy additional calibrators and reagents.
- Sample load while the instrument is running delivers speed and convenience.

The IMMAGE 800 utilizes fast, accurate and cost-effective assays for disease state diagnosis and monitoring. Our broad menu includes approximately 30 assays and an extensive list of disease state panels including Renal Function, Cardiac Risk Assessment, Neurological (Spinal Fluid) Disorders, and Autoimmune Panels.

The IMMAGE 800 provides utmost flexibility for disease state testing. It holds up to eight sample racks, accommodating up to 72 samples in a variety of containers.

Renal Function

Tests/Profiles

$Alpha_1$-Microglobulin
$Alpha_2$-Macroglobulin
$Beta_2$-Microglobulin*
Cystatin C*
Immunoglobulin G (Urine)
Microalbumin
Urine Transferrin

Cardiac Risk Assessment

Tests/Profiles

Apolipoprotein A-1
Apolipoprotein B
High Sensitivity Cardiac C-Reactive Protein
Lipoprotein(a)

The presence of protein in urine (proteinuria) has long been recognized as an indicator of disease. Today, especially in the diabetic patient, progressive proteinuria is a strong predictor of future overt nephropathy.

Diabetic nephropathy is a clinical syndrome characterized by hypertension and developing renal insufficiency, which results in albuminuria. It is the major cause of death in insulin-dependent diabetics.

The degree of microalbuminuria is predictive of the progression to clinical proteinuria in both Type I and II diabetes. Patients with microalbuminuria display a greater risk of various significant complications of diabetes than patients with normal urinary albumin excretion (UAE).

Early detection of microalbuminuria is critical to initate treatment to slow or even prevent the development of diabetic nephropathy.

An increase in the concentration of serum $Beta_2$-Microglobulin can result from an over-production of the protein by nucleated cells and/or decreased clearance by the kidneys. Under normal conditions, $Beta_2$-Microglobulin* passes readily through the glomerular membrane. Levels of $Beta_2$-Microglobulin in serum are, therefore, inversely proportional to glomerular filtration rate (GFR).

Coronary Heart Disease (CHD) is the leading cause of death in the industrialized nations of the world. Most cases of CHD are caused by atherosclerosis, the accumulation of fatty deposits in artery walls. Researchers have identified a number of factors that seem to increase the risk for CHD. These include high blood pressure, diabetes, smoking and genetic makeup.

Recently, quantitation of apolipoproteins, specifically Apolipoprotein B (Apo B) and Apolipoprotein A-1 (Apo A1), has been suggested to be a more specific and sensitive marker for profiling individual CHD risk than corresponding levels of lipoprotein-cholesterol.[1]

Measurement of C-Reactive Protein (CRP) aids in the evaluation of stress, trauma, infection, inflammation, surgery and associated diseases. Cardiac disease is believed to be the end result of an interplay between minor changes in the cardiovascular endothelium and the corresponding inflammatory response to these changes. The ability to measure CRP at extremely low concentrations has raised the possibility of using CRP to detect early inflammatory responses and potentially detect cardiac disease in the preclinical stages.[2,3]

Recent studies indicate that decreased levels of Apo B and increased levels of high density lipoprotein (HDL) cholesterol are associated with favorable clinical outcome.[1]

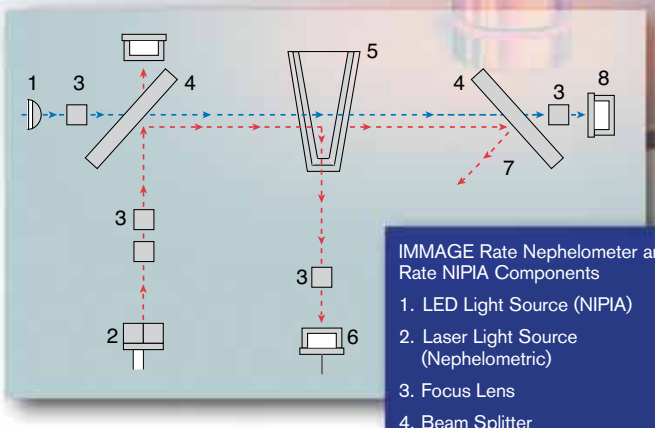
Automated technology enhances productivity

Innovative Technology Minimizes Lab Processes

- Patented dynamic blanking methodology reduces sample background noise, minimizes the effects of non-specific reaction scatter on the final result and increases the reliability of results at lower dilution levels.
- Calibration history allows the operator to review the previous four calibrations to ensure instrument reliability and performance.
- User-selectable default dilution allows users to preset an assay range and define specific measurement criteria for increased throughput.

Advanced Features Save Time, Boost Efficiency

- The automatic reagent tracking and inventory function tracks chemistry name, individual serial number, lot number, calibration status, expiration date and remaining buffer and diluent solution.
- Automatic true antigen excess checking allows the instrument to step up or down automatically between sample dilutions until a final result is obtained. Operator involvement is not required when the system detects a potential antigen excess condition.
- Environmentally-friendly wash station offers automatic, variable cuvette wash.
- Minimal system maintenance consists of wiping the reagent and sample probes — equals less than one minute per day.



IMMAGE Rate Nephelometer and Rate NIPIA Components

1. LED Light Source (NIPIA)
2. Laser Light Source (Nephelometric)
3. Focus Lens
4. Beam Splitter
5. Reaction Cuvette
6. Nephelometric Detector
7. Laser light bounces into light trap
8. NIPIA Detector

Four Proven, High Performance Detection Technologies

The IMMAGE family of systems is the only group of analyzers on the market that provides four onboard measurement techniques and two technologies. Whichever methodology is used for analysis, the system monitors the reaction throughout its entire duration — providing greater accuracy and precision.

Rate Nephelometry**

- Delivers timely, accurate analysis of specific proteins in laboratories. For more than two decades, Rate Nephelometry has been the industry standard for precision and reliability.

Rate Inhibition Nephelometry**

- Also known as competitive binding.

Rate NIPIA (Near Infrared Particle Immunoassay)

- Increases analytical sensitivity and expands the test menu to include high-sensitivity assays.

Rate Inhibition NIPIA**

- Extends the measuring range of the system to detect low molecular weight analytes.

1. Albers, J. J., Marcovina, S. M., "Standardization of Apolipoprotein B and A-1 Measurements", Clin. Chem., Vol. 35, No. 7 (1989).
2. Kuller, L., H., "Relationship of CRP and Coronary Heart Disease in the MRFIT Nested Case-Control Study", Am. J. Epidemiol., 144:537 547 (1996).
3. Koenig, W., et al., "CRP, A Sensitive Marker for Inflammation, Predicts Future Risk of Coronary Heart Disease in Initially Healthy Middle-aged Men",MONICA-Augsburg Cohort Study, Circulation, 99:237 242 (1999).

* User defined reagent

** Available for future use and UDRs.

BECKMAN COULTER
We're better together

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