



# LABOTEC BULLETIN



## LABOTEC AWARDED KIMBLE CHASE AGENCY: THE WORLD'S LARGEST LABORATORY GLASSWARE MANUFACTURER

*Labotec has been awarded the exclusive agency in southern Africa for Kimble Chase; the world's largest laboratory glassware manufacturer. According to Stefan Harth, Managing Director at Labotec, "this move is in line with our roots, where Labotec started with glass supply in the sixties. Our clients have requested glass from us many times, and we would like to listen to their needs and supply what they are looking for. We have the necessary network, skills, delivery and storage facilities needed for this venture and are well poised to expand the glass range in southern Africa".*

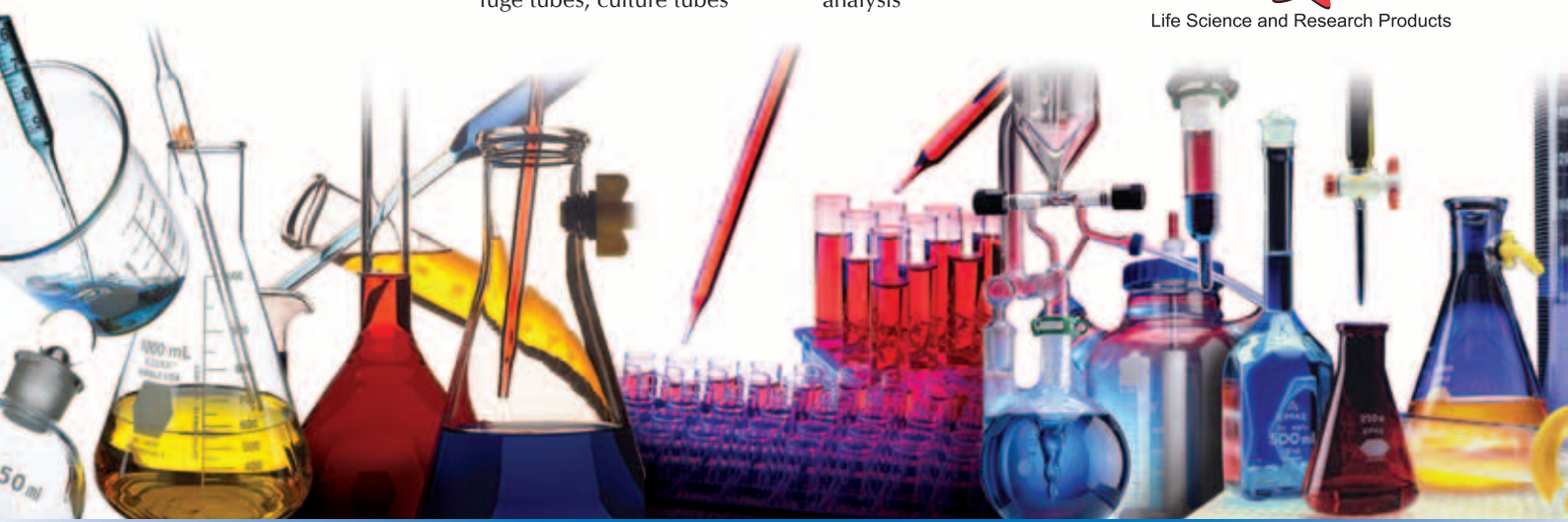
If a product is mixed, created, processed, stored or examined the world over, then more than likely it has come into contact with glassware manufactured by Kimble Chase. Its brand names; Kimble, KIMAX, Kontes, BOMEX, Pfeiffer, Scherf, Chase Scientific and others are manufactured across multiple sites in three continents. The process begins with raw sand to formulate finished products, a start-to-finish process unique to Kimble Chase in compliance with ISO standards, which enables them to achieve lower producer costs. Kimble Chase Life Sciences and

Research Products are the result of a joint venture in July 2007 with Gerresheimer Glass and Thermo Fisher Scientific, but the origin of Kimble started a century ago with homeopathic droppers, vials and volumetric ware.

Today, Kimble Chase distributes a full range of reusable, disposable and specialty laboratory glassware for the pharmaceutical, chromatography, environmental, petrochemical, government, life science, and education markets.

- Full range of disposable glassware: vials, bottles, pipettes, columns, centrifuge tubes, culture tubes

- Full range of reusable products: beakers, Erlenmeyer flasks, Petri dishes, flasks, and cylinders
- Clinical laboratory products including culture tubes, vials, Pasteur pipettes, sed-rate tubes
- Type I and III storage containers
- Full range of closures, septa, and liners
- Specialty glass apparatus referenced in ASTM, USP and AOAC and APHA procedures
- Laboratory apparatus for sample preparation and analysis
- Chromatography columns and accessories for HPLC, TLC and other chromatography products including mobile phase handling systems
- Analytical instrumentation replacement and accessory parts
- Micro filtration apparatus and assemblies
- Molecular biology sample preparation products and accessories
- NMR tubes and accessories



TRAINING BALANCES AT UCT.....	2
SOLID LIQUID SEPARATION WITH LARGE CAPACITY CENTRIFUGE.....	3
DNA AMPLIFIED IN MLST FUNGAL RESEARCH.....	3
NEW PRODUCTS.....	4-7
KIMBLE CHASE GLASSWARE DEALS .....	8



**LABOTEC**  
Your Partner in Science and Technology

## SARTORIUS TRAINING BALANCES AT UCT

*Deborah Shaw from Labotec spoke to Claire Lawrence-Naidoo, Chief Scientific Officer at University of Cape Town's Department of Chemistry, who revealed the reasons behind why 40 Sartorius M-Power Analytical Balances were recently ordered for the University.*

Just some background, where and in which departments are the new Sartorius balances situated, and what are the objectives here?

The balances were purchased as part of an ongoing process of updating equipment and instruments in our undergraduate Chemistry teaching laboratories. They have been placed in two locations: the first-year teaching laboratories, and in those used by our second and third-year students. The objectives are to train students in quantitative chemical experimentation. Clearly, the use of chemical balances is essential in this regard.

What was the reason for the need to purchase the Sartorius balances?

Our current balances are very old and many are no longer working, so a plan has been instituted to replace them over a number of years. Our students will one day work in industrial laboratories so it is imperative that they are exposed to state of the art equipment in their undergraduate studies.

For which applications will the balances be used?

As these balances will be used by undergraduate students, they will be used for general weighing purposes during the practical afternoons. Our first-year laboratories service some 1120 students (including those in engineering and health science) and our second and third-year laboratories; 270 students. These numbers clearly indicate the need for a large number of balances.

How will this fit into the existing process, and how will it make a difference to the set up?

Already we have seen the huge difference that the balances have made during our practical afternoons. As many of the practicals involve multiple weighing, long queues to use the balances are the norm particularly in the first-year laboratories. These have been significantly reduced and in the second and third-year laboratories have been almost eliminated. This ensures students finish their practicals timeously and also enhances their laboratory experience.



UCT - Chemistry Department recently received over 40 Sartorius Balances from Labotec. Pictured from left are: Malcolm Mclean, Dr Meredith Hearshaw, Claire Lawrence-Naidoo and Dr Eileen Murray from the Department.

Were there any features you liked that made you decide on this model?

This is a new model that has been specially designed for the tertiary education market. Sartorius is a well-known brand and this model is priced very competitively. We are also impressed by the ease with which we are able to clean the inside of the balance chamber, which is imperative as students are always spilling chemicals on the balances.

Any other interesting facts from your department you would like to add?

Several of our undergraduate students proceed to the Honours course and then to Masters and Doctoral studies.

The remainder seek jobs in industry. In both scenarios, highly capable skills in fundamental laboratory techniques are required. We strive to achieve these levels of competence.

Any future projects relating to the new equipment?

Our laboratory courses are constantly being modified and updated. Future projects will address the needs of industry as well as those of our own internal research and teaching objectives.



CONTACT: SONJA STRYDOM

### Smartphone Adapts to Walking Speed



Researchers at the Helsinki Institute for IT and the interactive systems group at the University of Glasgow measured the effects of increased walking speed on the accuracy of touchscreen aiming movements. The researchers write: "Ideally, we will now be able to develop interaction techniques that are optimised to reduce the detrimental effects of increasing walking speed".

### Moringa Miracle Tree



"The next potential solution to malnutrition", says a scientist at University of KwaZulu Natal. The Moringa tree from India and West Africa contains more vitamin A than carrots, more calcium than milk, more iron than spinach etc....

## SOLID LIQUID SEPARATION WITH LARGE CAPACITY CENTRIFUGE

*A large capacity Roto Silenta centrifuge from Hettich has been installed at Mintek's Hydrometallurgy department as part of a streamlining exercise to save time and cost when separating liquids from Copper and Cobalt solids. This department forms part of the comprehensive minerals processing package offered to clients at Mintek, SA's national mineral research organisation.*

The Hydrometallurgy department previously extracted liquids from solids using vacuum, a lengthy process especially since the solid samples usually range between 75µm to 200 µm. The Roto Silenta with its unusually large size capacity of two litres proved ideal for extracting liquids from solid Co/Cu ore samples. According to Seshree Krishna, manger of the Co/Cu project, "this was the only model we could find with a two litre capacity, which is ideal for the volumes we handle, which could be anything from 0.5 litre to 5 litre. She explained "the centrifuge reduces the amount

of time spent per test, which in turn reduces the price charged to the client."

Mintek specialises in mineral extractive metallurgy and related areas. In the Hydrometallurgy department they perform feasibility studies for mining companies, and develop flowsheets for commodities such as Copper, Cobalt, Uranium, Nickel and Zinc. Metals are extracted using solid liquid extraction and leaching (extraction of valuable metals from ore deposits) and precipitation tests (extraction of valuable metals from solutions by raising the pH of the solution).



Cynthia Phiri, Mintek Laboratory Technician working with the large scale Hettich centrifuge to separate solids from leach liquor.



CONTACT: ATHISHA RAMPERSAD

## DNA AMPLIFIED IN MLST FUNGAL RESEARCH

*The Mycology Reference Unit at the National Institute for Communicable Diseases (a Division of the NHLS) is the first in the country to use the new Implen NanoPhotometer Pearl, which was recently supplied by Labotec for a new project that started in February this year.*



Nthabiseng Matjomane Medical Technologist from the Mycology Reference Unit at NICD uses the Pearl for PCR amplification.

Approximately 700 000 people are estimated to develop cryptococcal meningitis in Sub-Saharan Africa every year (Park BJ et al AIDS 2009). The burden of cryptococcal meningitis is still high in South Africa; more than 7000 laboratory-confirmed cases were detected by NICD in 2010 (GERMS-SA Annual Report 2010; www.nicd.ac.za). By using MLST, Marelize van Wyk, who manages the molecular mycology laboratory, is investigating which molecular types cause most disease.

MLST requires that multiple loci are sequenced; this involves PCR amplification followed by DNA sequencing. For this purpose the Mycology Reference Unit was supplied with a demonstration Implen NanoPhotometer Pearl model for a short time period to verify its suitability for their amplification requirements. They found the Pearl provided accurate, precise and highly reproducible results over the range they

required. "The fact that the Pearl is not PC linked", says Marelize van Wyk, "means that it takes up less bench space and is easy to move around. If need be, the unit can be linked to a PC and printouts are obtainable; also the printer can be supplied with the Pearl that is small and compact in size". The Nano volume option on the Pearl allows for a fast answer on small quantities without prior dilution.

Therefore the sample handling is simple, and a high throughput rate and results are achieved in very short measuring time. The Mycology Reference Unit is finding their new "Pearl" a pleasure to work with.



CONTACT: KIRSTY COLLARD

## 'Why we Dream' is Challenged



The able-bodied dreams of people with a variety of disabilities challenge the theory that dreams are mere echoes of your day. Recent dream studies in people with disabilities suggest dreams may spring from innate, fully functional representations of our body and sensory perceptions that do not always match real-life situations.

## ROTAVAPOR DISTILLATION SOFTWARE

*Buchi has announced the availability of their new "Distillation Record" Software that will record all evaporation parameters and show it on different charts to supervise the process. The Software will be available as a full version and as a demo version with reduced functionality.*

To use the software, all you need is a PC with Microsoft Windows® on it and a USB cable to connect the PC with the Vacuum Controller.



CONTACT: NATASHA MALAN



## CONTROLLED LAB ENVIRONMENTS

*Thermo Scientific has introduced its new Smart-Vue wireless monitoring solution, which can protect precious samples by 24/7 monitoring of key laboratory parameters including temperature, CO<sub>2</sub> concentration, humidity and differential pressure.*

It can be installed by the user on most laboratory equipment, including ultra-low temperature freezers, laboratory refrigerators, CO<sub>2</sub> incubators and clean rooms. This intuitive, wireless monitoring solution is designed for controlled laboratory environments, such as pharmaceutical research and production, IVF clinics, tissue banking and diagnostic laboratories, where sample protection and monitoring is a priority. To facilitate regulatory compliance with various protocols, Smart-Vue provides full audit-trail traceability.



**Thermo**  
SCIENTIFIC

CONTACT: ATHISHA RAMPERSAD

## CYTOLOGY SLIDE PRINTER REDUCES ERRORS

*Thermo Scientific's Slidemate will print slides on demand and reduce the risk of loading the incorrect slide/vial combination into the Cytology slide processor.*

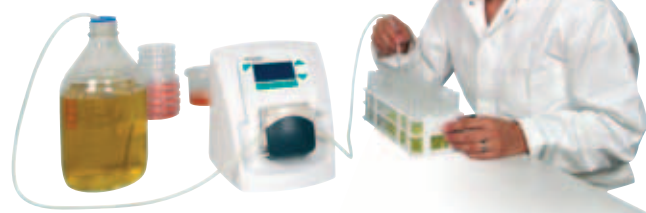
Francesco Mercuri, Cytology/Histology Manager, Enzo Clinical Labs, USA has this to say about the Slidemate, "the elimination of manually applying labels and hand writing patient names on slides by using the Slidemate slide printer has virtually eliminated human error with this critical step in the cytology process. Additionally, the Slidemate slide printer has paid for itself in 12 months since we started using it last year due to discontinuing purchases of expensive xylene resistant slide labels."



**Thermo**  
SCIENTIFIC

CONTACT: SUE McVICAR

## ENHANCED DOSE-IT



*INTEGRA has launched a new version of its popular DOSE IT peristaltic pump with enhanced functionality enabling laboratories to now undertake even challenging liquid handling tasks.*

Some liquid handling applications require more than just simple pumping. The new DOSE IT "CUSTOMIZE" software mode allows users to create their own personalised liquid handling protocols. Up to 20 consecutive dispensing and aspirating steps can be defined. A wide range of settable parameters, such as volume, flow rate and repetitions, can be

assigned to each step. In addition, the flow rate can be set to ramp up or down to the target speed, thus avoiding foaming, splashing or unwanted turbulences during dispensing.

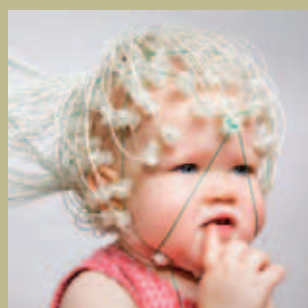
**INTEGRA**

CONTACT: SONJA STRYDOM



### Does the Multiverse Exist?

In the past decade cosmologists have toyed with the idea of a multiverse - the universe we see around us is not the only one; that billions of other universes are out there too. Proof may still lie beyond the domain of science.



### Building Better Learners

Thinking cap records electrical signals from the brain of one-year-old, Elise Hardwick, who is helping scientists figure out how the youngest children process sounds that make up the building blocks of language. Image: Photograph by Andrew Hetherington

## NEW LABOCOOL LAB FRIDGES FROM LABOTEC

*Labotec has launched a brand new range of laboratory fridges called Labocool. This freshly branded and attractive range is available in three sizes to suit different lab refrigeration requirements, and has been packed with features and quality components to ensure smooth running for years of dependable service.*

The Labocool fridges have an operating range from +1°C to +8°C. They are manufactured in accordance with ISO 9001 (Quality management systems certified) and ISO 14001 (Environmental Management system compliant) and come with a two year warranty for added piece of mind. The range is ideally suited for general storage and typically can be used for reagents and kits, whole blood chromatography apparatus, test

samples, biological and culture media, patient medication, vaccines and more. The glass door is double tempered for safety, and the magnetic door gasket promotes stable temperature within the cabinet.

Shelving is adjustable so it can be moved around for optimal usage of the cabinets' capacity. The shelves are also plastic coated to ensure that they stay hygienic and rust-free. An automatic defrost minimises any trace

amounts of frost build-up. Other optional components that can be fitted on request are a lock, digital thermometer and electronic voltage protection.



CONTACT: ATHISHA RAMPERSAD



## SWISS PIPETTES

*Swiss company Socorex has upgraded and extended their electronic micropipette Acura electro for more versatility, safety and simplicity than ever before. This extended range includes seven micro models (0.1 to 1000µl), three macropipettes (0.1 – 10ml) and eight multichannel instruments (0.1 to 350 µl).*



Each Acura electro conforms to European standards; CE and EN, and comes with a two year warranty. The intuitive control software avoids any complicated programming with four keys for quick access to the working modes. The new TACTILE mode has been added for simplified gel loading and titration. The patented height adjustable mechanism allows for efficient tip ejection.



CONTACT: SAMPIE V VUUREN

## DRYVAC PUMPS

*Oerlikon Leybold Vacuum, a leading supplier of advanced vacuum systems has launched a new range of dry vacuum pumps called DRYVAC. Customers will profit due to the low energy consumption, the small and immensely flexible combinations, and the intelligent design for high system uptime.*



Drawing on Oerlikon Leybold Vacuum's extensive engineering and applications experience, all models from the DRYVAC platform have been designed and adapted to the special needs of processes in the photovoltaic production chain, petroleum, coating applications and various industrial

manufacturing processes. DRYVAC pumps and system combinations are rugged, reliable and durable, ready to fulfill stringent process requirements.



CONTACT: LOUIS VD HEEVER

## DISPOSE LIQUID WASTE

*The new VACUSIP from INTEGRA is an out-of-box vacuum aspiration solution for the wide array of liquid waste disposal tasks carried out at the laboratory bench.*

Occupying a small bench top footprint – the VACUSIP makes disposal of liquid waste both safe and convenient. The VACUSIP provides an optimised solution for applications including the aspiration of small volumes of liquid, such as supernatants after centrifugation steps, removal of washing solutions and multi-channel removal of sample from multi-well microplates.



CONTACT: SONJA STRYDOM

## Time to Stop Ageing

Live long enough and your body stops ageing – so can we learn to stop the clock before our twilight years? Recent research resumes on findings made by Greenwood and Irwin in 1939; mortality rate increases exponentially with age, except between the ages of 93 and 100 years.

Photograph: Ruth Frith, born in 1909



## SHAKING MICRO INCUBATOR

Esco has launched ProvoCell, a new shaking micro incubator designed for a wide variety of mixing applications and accurate incubations of reactions and denaturation of nucleic acids and proteins.



To minimise any contamination risk, ProvoCell can be used in a biological safety cabinet or laminar flow or merely placed on the benchtop. The Peltier technology used in the design has the advantage of allowing for rapid switching between heating and cooling

along with accurate temperature control and block uniformity.



CONTACT: ATHISHA RAMPERSAD

## CENTRIFUGE MICRO SAMPLES

Scie-Plas has introduced their new Mini Centrifuge, the perfect alternative for quickly spinning down samples, micro gel filtration applications and micro-volume centrifugation. It is compact, easy to use and designed to meet the wide range of applications found in research.

The Mini Centrifuge will operate at 6000 rpm /2000g and includes three rotors: (i) a 6 place, 1.5ml rotor, (ii) a PCR Strip rotor and (iii) a 1 x 3 inch slide rotor. In addition two adapters are included for 0.5 to 0.65ml and 0.4ml. The fast acceleration and braking make it perfect for quick spins. A tiny footprint of 6x6 inch and its economical pricing makes it possible for every laboratory bench to have one.



CONTACT: ATHISHA RAMPERSAD

## STATE-OF-THE-ART DOSING PUMP

The KNF Flodos SIMDOS® dosing pump is a highly efficient and precise diaphragm dosing pump specially designed for easy and maintenance-free operation. In all, it is a practical, economic and future-proof solution for the laboratory planning to stay at the cutting edge.



The new SIMDOS® dosing pump transfers liquids with a flow rate of 1 to 100 ml/min and doses volumes of 1 to 1000 µl. It offers excellent long-term stability and consistent reliability throughout entire processes.

CONTACT: LOUIS VD HEEVER

## FINE SAMPLE GRINDING

Fritsch has added a special cyclone adapter to their Variable Speed Rotor Mill Pulverisette 14 that enables very efficient air cooling for rapidly grinding difficult samples like temperature-sensitive powder coatings and plastic, or slightly moist materials.



The Variable Speed Rotor Mill can therefore be used to grind soft to medium-hard, brittle as well as fibrous samples.



CONTACT: LYLE HANEKOM

## 32 SAMPLES GROUND SIMULTANEOUSLY

Fritsch is using new technology to enable sample preparation of up to 32 samples simultaneously in ordinary glass vials using the Fritsch Planetary Mills classic line.



The patented Multisample Adapters, each of which can hold eight samples, are mounted in the normal grinding bowl fasteners of the mill in place of grinding bowls. The benefit is you can grind as many samples simultaneously. Of particular note, due to the optimal ratio of surface area to volume, practically no heating of the sample occurs.

The Planetary Mills classic line in combination with the Multisample Adapter has already been used for the following applications:

- Milling, size-reduction, solid state reactions
- Drug compounds
- Refractory materials and ceramic precursors
- Food ingredients



CONTACT: LYLE HANEKOM

### Safer Medicine?



Chemists have converted the element Boron from an acid to a base. The boron bases could replace some toxic phosphorus bases used as catalysts to make medicines, says Bertrand of the University of California, Riverside

### Text Message Unlocks Car



Thought your shiny new car looked pretty impregnable? Think again. Two researchers have shown that they can unlock a car - and even start the engine - using a simple text message in a technique they call "war-texting."

## FURNACE PROVIDES FAST, PRECIOUS METALS ASSAYS

*A specially designed cupellation furnace from Carbolite has enabled Presman Mastermelt Ltd. to increase the productivity and consistency of precious metals assaying operations at its premises while reducing energy costs and the need for repeat processes to confirm results.*



CONTACT: LYLE HANEKOM



## "RED DOT AWARD: PRODUCT DESIGN 2011"

*ELGA, the global labwater brand of Veolia Water Solutions & Technologies, which is supported locally by Labotec, has won the coveted 'Red Dot Award' for the PURELAB flex in April this year.*

Born 1955, the Red Dot awards recognise and honour the very best product designs and, in 2011, over 4,400 of the world's most advanced products from 60 different countries were considered for this internationally recognised mark of excellence and innovation. ELGA has been at the forefront of innovation in laboratory water purification

for over 50 years and this latest award follows a string of design awards for the PURELAB flex range.



# ELGA

CONTACT: NATASHA MALAN

## Bizarre Helmets



Tiny insects called treehoppers sport bizarre "helmets" on their backs that are cunningly shaped to mimic aggressive ants, as in the case of this species from Ecuador.

## ECO-FRIENDLY TEMPERATURE CONTROL

*Julabo has a wide range of heating and refrigerated circulators. The three categories Economy, TopTech and HighTech offer solutions for every temperature control application in research and industry.*



A selection of 120 models for working temperatures from -95 to 400°C are available. The broad product range allows users to select models specific to their application requirements; from economic models for routine

applications to powerful units with top-level features for highly demanding purposes.

# Julabo

CONTACT: KIRSTY COLLARD

## Lego for Adults



Microsoft has released a new rapid prototyping toolkit that promises to let electronic enthusiasts put together small gadgets in a matter of hours. Devices built with the kit, dubbed .NET Gadgeteer, include an MP3 player, digital camera, and a mini arcade cabinet

## STIRRER PACKAGE

*Along with the solid, sturdy, long-lasting magnetic stirrers you can expect from Heidolph, they also offer an innovatively designed electronic temperature controller EKT Hei-Con that can be combined with various Heidolph stirrer models to help to avoid any temperature overshoots and prevent potential damage to the controller caused by heat and vapour.*

# Heidolph

Research made easy

CONTACT: KIRSTY COLLARD



## SURFACE ANALYSIS

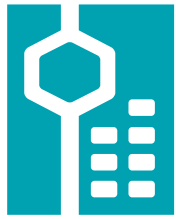


*Today Physical Electronics (PHI) is the world's largest supplier of surface analysis instrumentation and the only supplier with a complete product line including; AES, XPS, TOF-SIMS and D-SIMS instruments.*

PHI surface analysis instruments are used typically to help accelerate the development of new material systems, evaluate new manufacturing processes and determine the root cause of any product defects in application areas such as catalyst activity, adhesive bond strength, corrosion resistance, bio-compatibility and printability.

# PHYSICAL ELECTRONICS

CONTACT: LYLE HANEKOM



Labotec is proud to introduce the world's  
largest laboratory glassware manufacturer:

**KIMBLE CHASE**  
Life Science and Research Products

**NEW!**

# Value Ware®

*Discover the Value*

## Value Range Launch Special Promotions

*Designed to ISO & ASTM Standards*

*Made from heat resistant & chemical resistant borosilicate glass 3.3*

*Combines quality with economy*

### Beaker

Beaker, Low Form, with graduation and spout	250 ml	R11
Beaker, Tall Form, with graduation and spout	800 ml	R26
Beaker, Low Form, Heavy Duty with graduation and spout	600 ml	R39

### Flask

Flask, Erlenmeyer, narrow neck	250 ml	R14
Flask, Erlenmeyer, wide neck	100 ml	R15
Flask, flat bottom narrow neck, with beaded rim	500 ml	R26
Flask, Volumetric, Class A, with polyethylene stopper	250 ml	R67

### Cylinder

Measuring Cylinder with hex base with graduation	100 ml	R31
--	--------	-----

### Funnel

Filtering Funnel, Short Stem, 60°	55 mm	R19
Filtering Funnel, Long Stem, 60°	55 mm	R11

### Tubes

Test tube, with rim	16 x 100 mm	R2
Screw thread tube, with cap	16 x 100 mm	R6

### Pipettes

One-mark pipette, volumetric, class A-bulb	10 ml	R34
Measuring pipette, graduated, class B	1 ml	R12

### Bottle

GL45 Bottle	250 ml	R116
-------------	--------	------

All glassware available in other sizes. Price on request.

*Special offers run until **November 2011** – or while stocks last*



VISIT OUR WEBSITE [WWW.LABOTEC.CO.ZA](http://WWW.LABOTEC.CO.ZA)

HEAD OFFICE: PO Box 6553  
CAPE TOWN: PO Box 790  
DURBAN: PO Box 178  
BLOEMFONTEIN:

HALFWAY HOUSE 1685  
HOWARD PLACE 7450  
UMHLANGA ROCKS 4320

TEL: (011) 315 5434  
TEL: (021) 531 7660  
TEL: (031) 566 4870  
TEL: (051) 436 9532

FAX: (011) 315 5882  
FAX: (021) 531 7690  
FAX: (031) 566 4875  
FAX: (051) 436 9532



**LABOTEC**  
Your Partner in Science and Technology

Email: [sales@labotec.co.za](mailto:sales@labotec.co.za) Home page: [www.labotec.co.za](http://www.labotec.co.za)