

# New Staff...



Cape Town

Back Row (left to right): Lee-anne Carelse (Receptionist), Thomas Smith (Hygiene Inspector), Melanie Davids (Student) Front Row (left to right): Natalie Anthony (Sample Registrar), Charlene Cyster (Sample Registrar), Bonisile Senkoto (Microbiologist), Janine Africa (Microbiologist)



Gauteng

(left to right): Daphney Malinga (Microbiologist), Rebecca Motlhale (Lab Technician), Lawrence Mashego (Driver), Anel van Wyk de Vries (Marketer), Anna Tshwene (Hygiene Inspector)

## COD customers please take note

With effect 1 September 2006 Swift's existing COD payment system was replaced with a **Pre-Pay** payment system for all existing and new COD clients.

This means that all samples submitted after this date must be paid before testing can commence. Payment can still be made into our bank account, or samples sent to the lab may be accompanied by a cash payment.

Rochelle from our Accounts Department will furnish you with a Pro Forma Invoice on request, so that you are able to make the correct payment. Proof of payment or cash must accompany samples or can be faxed to us. This will prevent any delays in logging-in of samples, commencement of tests and faxing of results.

**Swift also offers the option of a 30 day credit facility.** Should you wish to make use of this option, kindly contact Rochelle who will fax the necessary forms, for completion, to you.  
[rochelle@swift.co.za](mailto:rochelle@swift.co.za) or 021 689 9344

# VACANCY

We are looking for a dynamic go-getter to appoint as a Junior Marketer/Sales Representative at our Cape Town office.

### Requirements

BSc (Microbiology / Food Science) or ND Food Technology.

The candidate must have excellent people skills, valid drivers licence & own transport. Previous experience in the food industry essential and knowledge of HACCP is an advantage. Must be willing to travel.

Send your CV to [info@swift.co.za](mailto:info@swift.co.za) before 1 November 2006.



### FOR FURTHER INFORMATION CONTACT

Swift's marketing department or send an e-mail to: [info@swift.co.za](mailto:info@swift.co.za)  
Cape Town (021) 689 9344  
Gauteng (011) 805 4310  
[www.swift.co.za](http://www.swift.co.za)



# Bug News

OCTOBER 2006



CLIENTS AT OUR MIDRAND LAUNCH FUNCTION

If you are a regular reader of our newsletter you would have received our July "Special Edition" dedicated exclusively to the opening of our brand new facilities, including our state-of-the-art ISO 17025 accredited Micro Laboratory, in Midrand, Gauteng. You might also have noticed our ads and editorials in recent editions of Food Review, Pharmaceutical & Cosmetic Review, and the Food and Beverage Reporter.

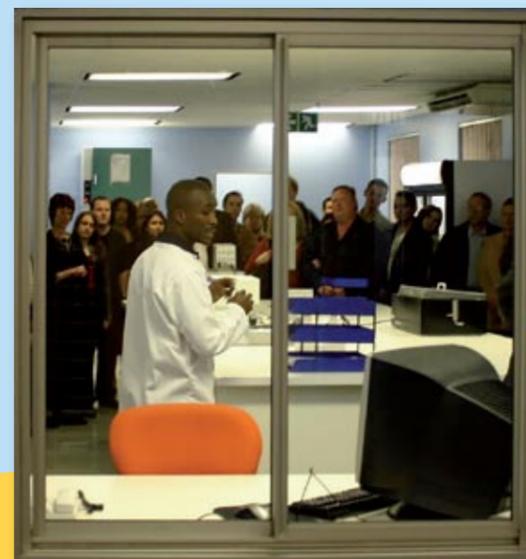
Our well-attended launch function on 28 July 2006, during which our guests were given a guided tour of our new training facilities, our offices, and the laboratory, was held at Soundstage (a dinner theatre on the same site as our new laboratory).

At the beginning of August we were extremely proud to announce that ISO 17025 accreditation had been awarded to the Midrand satellite laboratory by SANAS (South African National Accreditation System). Since then the new laboratory has grown in leaps and bounds, and the staff complement at the new branch has already increased with a further 4 staff members during the last 3 months!

We would like to take this opportunity to thank all our Gauteng clients (old and new) for their interest and their well-wishes with this exciting venture. To all our Gauteng readers who are not already regular clients – *we sincerely hope that you will afford us the opportunity to impress you with our personalised service in the very near future!*

On the subject of our clients: we often receive requests for articles from our readers, and try to accommodate the more topical requests where possible. There seems to be great interest in information regarding the use of "sterilisation" techniques such as irradiation, UV and Ozone. In this edition of Bugnews, our guest article focuses on the often controversial subject of Food Irradiation. We hope to bring you guest articles on the other topics mentioned in future.

We also do a feature on one of the newer additions to our Training Course Portfolio, namely "HACCP – the Basics for Agriculture". Due to popular demand we will in future advertise staff vacancies in this newsletter and on our web-site. On the back page we therefore feature an exciting opportunity to join our dynamic Marketing team in Cape Town!



A guided tour through the laboratory.



The most reliable, affordable solution for microbiological defence.





# Focus on... FOOD IRRADIATION

by Dr R A Basson

**F**ood irradiation is the process of exposing food to ionizing radiation in a Cobalt-60 facility to disinfect, sterilize, or preserve food. It is, like most technology involving ionizing radiation, the subject of some controversy regarding its safety. Irradiation is used on other products as well, such as the sterilisation of disposable medical products. Largely to avoid consumer fear of the term "radiation", it is often called cold pasteurization in order to emphasize its similarity to the process of pasteurization (i.e. treatment of solid food by ionizing radiation can provide an effect similar to heat pasteurization of liquid food such as milk).

The radionuclide used almost exclusively for the irradiation of food by gamma rays is cobalt-60. It is produced by neutron bombardment in a nuclear reactor of the metal cobalt-59, then doubly encapsulated in stainless steel "pencils" to prevent any leakage during its use in an irradiator.

By irradiating food, depending on the dose, some or all of the microbes and insects present are killed. This prolongs the life of the food in cases where microbial spoilage is the limiting factor in shelf life and can be compared with conventional food processing methods such as heat pasteurisation, refrigeration and freezing.

Irradiation has been widely used for the decontamination of herbs and spices for many decades and has been recognised as the most efficient method in ensuring food hygiene in additives which have high microbial counts. Herbs and spices can be irradiated at such high doses of 5kGy (kilo grays) or more that they are partially sterilized. **Low-dose irradiation** of up to 1 kGy is used for sprout inhibition, to delay ripening of fruit or vegetables, insect disinfection and parasite inactivation. **Medium-dose irradiation** of 1 to 10 kGy will reduce the number of spoilage microorganisms, the reduction in numbers / elimination of non-spore forming pathogens (disease causing microorganisms). **High-dose irradiation** of above 10 kGy is used for the reduction in numbers of microorganisms to the point of sterility.

Following many outbreaks of food poisoning from the deadly *E.coli* 0157 / H7 organism, the irradiation of hamburger patties and ground beef in the United States is being used routinely. The irradiation of school lunches to ensure safety is also being introduced and the application of the technology to poultry in order to eliminate *Salmonella* is also being launched.

Another important new application is the treatment of export fruit for the USA in order to comply with quarantine requirements. Presently used treatments such as cold sterilisation often affect fruit quality negatively and irradiation could significantly expand markets. It has also been shown that irradiation can delay the ripening or sprouting of fruits and vegetables and replace the need for pesticides used against fruit flies and seed weevils.

In a reverse quarantine application, the South African authorities require imported garlic and honey to be irradiated before being commercially released. Honey can be contaminated with a bacterium fatal to bees – which would affect local honey production, and also have a disastrous effect on fruit pollination.

International bodies such as WHO (World Health Organization), FAO (Food & Agriculture Organization) FDA (Food and Drug Administration) have conducted extensive tests over many years and pronounced the technology to be perfectly safe. It is also important to note that treated foods do not become radioactive. Despite all these scientifically sound proofs of safety, the consumers' right to choice is respected by ensuring that treated foods are clearly labelled in words and by the RADURA logo. In South Africa, Act 54 of 1972, labelling regulations (R1600 of 1983) states that irradiated foodstuff may NOT be sold without the permission of the Minister of Health or the Director General. Irradiated food must also bear a label stating that it has been irradiated. In effect, the applicant has to show that there is a reasonable technological need, that the process does not present a health hazard, and is a benefit to consumers. Normally, the maximum permissible dose for a foodstuff is 10 kGy. Furthermore, in a processed foods, if more than 10% by weight has been irradiated the food must be labelled as irradiated.

Industrial food irradiation facilities must be licensed, regulated and inspected by national radiological safety and health authorities, many of whom base their rules upon irradiation standards and



International Symbol of Irradiation

codes of practice jointly established by the IAEA (International Atom Energy Agency), FAO and WHO. The common features of all commercial irradiation facilities are the irradiation room and a system to transport the food into and out of the room.

The major structural difference between this type of plant and any other industrial buildings is the concrete shielding (1.5 - 1.8 metres thick) surrounding the irradiation room, which ensures that ionising radiation does not escape. In the case of a gamma irradiator, the radionuclide source continuously emits radiation and when not being used to treat food must be stored in a water pool, usually 6 metres in depth. Known as one of the best shields against radiation energy, water absorbs the radiation energy and protects workers from exposure if they must enter the room.

Currently, there are three such facilities in the country sited in Cape Town, Johannesburg and Durban.



Irradiation of spices.

The use of irradiation alone as a preservation technique will not solve all the problems of post-harvest food losses, but it can play an important role in cutting losses and reducing the dependence on chemical pesticides.

### For more information:

- [www.iaea.org/programmes/nafa/d5/public/foodirradiation.pdf](http://www.iaea.org/programmes/nafa/d5/public/foodirradiation.pdf)
- [www.foodfacts.org.za/siteindex/foodirradiation](http://www.foodfacts.org.za/siteindex/foodirradiation)
- [www.doh.gov.za/docs/factsheets/guidelines/food-irradiation04.html](http://www.doh.gov.za/docs/factsheets/guidelines/food-irradiation04.html)

### Abbreviated Curriculum Vitae

Rocco Basson holds a PH.D. from Cambridge University. He is a former Director of the Atomic Energy Board, Founder of the Hepro Cape Irradiation Facility, Chairman of Picowave Technology and consultant to various United Nations Scientific Bodies.



## In the Spotlight...

### "HACCP - the Basics for Agriculture" TRAINING COURSE

**W**orld Health Organisation figures reflect that about 100-million people die of food poisoning every year. This alarming figure has compelled the South African Food and Agriculture Industry to focus on the implementation of a management philosophy and quality-control system which has been implemented worldwide.

HACCP (Hazard Analysis Critical Control Points) is a philosophy based on maintaining food safety from farm to fork.

Implementing HACCP is a means to increase confidence in the products from the South African agricultural industry, as it provides the basis for high production standards.

Moreover, it is critical for the exportation of locally-manufactured goods.

In response to this increased demand, Swift Micro Laboratories has added the following course to our portfolio of training courses offered to the industry:

**HACCP – the Basics for Agriculture**  
With the Agribusiness Industry expanding beyond food – to energy, industrial products, and pharmaceuticals – the need for quality and food safety systems is greater than ever.

This 1 day practical course is applicable to all sectors of the agriculture industry. Special focus on typical hazards associated with primary products and their control. Case studies relevant to the agricultural sector will be discussed during the duration of the course.

This course introduces delegates to:

- Background to HACCP
- Food safety hazard identification
- Application of HACCP principles in produce
- Case study relevant to the agricultural sector
- HACCP benefits

### Target Group

Supervisors, Middle Management & Management

This course is offered in both English & Afrikaans.

### Further Information

For more information on the dates for this or any other course that Swift offers, please contact Yvonne Wood on 021 689 9344 or [yvonne@swift.co.za](mailto:yvonne@swift.co.za)

## SATURDAY SERVICE

Due to customer demand Swift will now offer clients a SATURDAY SERVICE from 8am – 10am.

Should you wish to send in samples for processing on a Saturday, prior arrangements on a Friday before 4pm will need to be made with one of our Laboratory Managers.

CAPE TOWN: Sean Swatton or Brenda du Toit

GAUTENG: Mandla Sodladla

