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COMPANY

"We plan to double our sales"

In addition to Red Bull, Power Horse, is creating a furor, and has already become a market leader in several countries, particularly in the Middle East and Africa. **25**



BEVERAGE

Fruit juice producer sold over 200 million bottles in 2010

Pago is a fruit juice producer in the premium segment with international operations. **26**

► INTERVIEW — CARLA FIFORD, RADICAL WATERS LTD.

Radical Waters restructures and invests for further growth

Radical Waters products are used in a wide range of markets formerly dependent on chemicals for controlling contamination and bacterial infection. The company has a focus on markets that include beverage production, meat & seafood, sauce manufacture, milling & starch and catering. Under managing director Carla Fiford, the South African-based company sales team, in addition to covering the Rand Monetary Area, continues to service global enquiries and handle sales in countries where distributors have not been appointed, and enquiries from sectors in countries where distributors do not have exclusivity for all market sectors. Beverage Manager Global spoke to Carla Fiford, managing director.

Beverage Manager Global (BMG): Where did Electrochemically Activated Water (ECA) originate?

Carla Fiford (C.F.): A Russian scientist, Professor Bakhir, developed the technology based on electro-chemistry that enables water to be electrically activated by passing it through an invention of his (in conjunction with other inventions of his) originally known as the Flow-through Electrolytic Module (FEM).

BMG: Is the technology unique to Radical Waters?

C.F.: No, however Radical Waters entered into an agreement with Prof. Bakhir's Russian company, Laboratory for Electrochemical Technology, to enable us to enter the field of Electrochemical Activation of Water (EAW), using the science and technology developed by Prof. Bakhir.

BMG: How does it work?

C.F.: A brine solution is passed through a reactor unit where it is activated by an electrical charge. Through the electrochemically activated water (ECA) process, two distinct solutions are produced and are generically known as "anolyte" (oxidising) and "catholyte" (reducing). Anolyte is highly effective against all forms of micro-organisms, while catholyte is highly effective as an anti-oxidant. While each solution has unique properties and applications, they are often used on a complementary basis.

BMG: What is the Radical Waters product range?

C.F.: The Radical Waters product range comprises Hygiene Management Generators which come in two versions, HyGen-S (for standard and large installations) and HyGen-C (for small installations). They are available as on-site upgradable modules and offer PLC design with Direct Logic, Allen Bradley or Siemens as options. The generators are quickly installed and easily integrated into existing plant systems and can be integrated with an optional compact mix system, and they are installed with a compact stand-alone supply unit for salt, water and descale solution. They require minimal floor space and a three-phase power supply, food grade salt and potable water for production of ECA solutions.

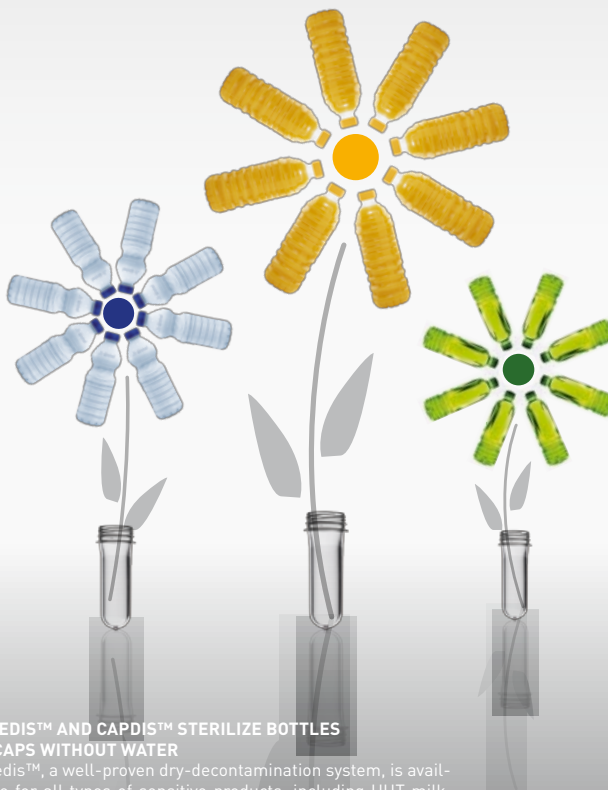
BMG: When was Radical Waters established?

C.F.: Radical Waters was established in South Africa in 1997 to develop and patent novel applications of ECA technology for various industries identified as having high potential to benefit from its use. Radical Waters Intellectual Property (IP) was subsequently formed in 1999 to hold the intellectual property rights associated with its research findings, which would be made available for use by Radical Waters.

BMG: Fourteen years on, what is the group's structure today?

C.F.: Our Chairman, Dion Friedland, has recently restructured the group for growth and it is now under the umbrella of Radical Waters International

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▶ INTERVIEW — CARLA FIFORD, RADICAL WATERS

(UK) LLP (RWI), headquartered in London, which manages distribution relationships outside the Rand Monetary Area (RMA). Under Radical Waters (Pty) Ltd, production and technical development are based in South Africa. The company also handles distribution in the RMA and in countries where distributors have not yet been appointed. Radical Waters IP, also South Africa-based, manages our significant patent portfolio.

BMG: What is the Radical Waters group's key business objective?

C.F.: Radical Waters' primary objective is to revolutionise the approach to achieving quality solutions for a range of industries with cost-effective, natural, unique and innovative hygiene solutions, backed by sound research and quality service, while reducing costs and the wastage of natural resources.

BMG: How is this put into practice?

C.F.: We are committed to achieving this objective by building safe, reliable Hygiene Management Systems that are remotely monitored for commercial applications, using both the specialist product knowledge and applications expertise we have developed. We are also striving to effectively exploit opportunities in chosen industry sectors, to retain intellectual leadership and to benefit from the vast amount of research conducted by Radical Waters over the past 12 years. Another aspect is building on Radical Waters' long association with academic leaders in the field of ECA and our relationship with Prof Bakhrir, who continues to develop new reactor designs for highly specialised applications.

BMG: What are the benefits of using ECA?

C.F.: Aside from being a wholly natural disinfectant and detergent for a variety of applications, the use of ECA has proven benefits by substantially reducing costs through saving both time, energy and water. Being naturally safe and environmentally friendly, it also represents a "green" technology, a benefit that is of increasing value to industry around the world.

BMG: To which industries is ECA most applicable?

C.F.: Radical Waters' ECA technology is of greatest benefit to the beverage and food industries, including the meat, grain, sauces and fishing industries, and benefits as well the catering and hospital sectors.

BMG: Where does Radical Waters have installations?

C.F.: We have installations in blue chip beverage and food plants in the USA, as well as in 21 countries worldwide, and are actively adding distributors as part of our international growth strategy. To this end, agreements have recently been signed with Anasac, distributors in South America and Activtek in Spain and Portugal. Other agreements are in the process of being finalised and will be announced as they are concluded.

BMG: You have mentioned a patent portfolio. What patents are owned by Radical Waters IP?

C.F.: Between 1997 and 2003, Radical Waters filed a total of 133 South African, PCT and foreign patent applications and registered approved patents in South Africa and a number of other countries, incurring expenses of R39 million (US\$ 5.2 million) for the development and patenting of ECA technology applications.



“We have installations in blue chip beverage and food plants in the USA, as well as in 21 countries worldwide, and are actively adding distributors as part of our international growth strategy.”

Carla Fiford, Managing Director

The research covered the following areas, with many left unexploited due to the decision to focus on a limited number of applications during the growth phase of the company: microbial research, microbial results in the food industry, animal safety trials, human safety trials, agricul-

ture yield enhancement, borehole resuscitation, corrosion, mining, industrial water and cleaning in place (CIP). We have positive efficacy validation by numerous institutions and the following patents are owned by Radical Waters IP: beverage (patent pending) for the use of electrochemically activated water in the manufacture, processing, packaging and dispensing of beverages, live Animal (USA) and for the use of an aqueous solution in the preparation of a medicament for treatment of live animals. Other patents owned by Radical Waters IP are dental, in the USA as an irrigation medium for root canals and, in the USA and Japan, for dental equipment and a method of operating such equipment (dental unit water lines) and, in Europe, as a coolant and irrigant for use in dental surgery; also for meat and Food Product (Europe and US) as an aqueous solution for disinfecting animal products, comprising a method and a plant for such disinfection.

BMG: Who are some of Radical Waters major customers?

C.F.: In South Africa they include Tongaat Hewlett, The Pride Milling Group, Bromor Foods, I-slices, Chubby Chick, Enterprise Foods and Famous Brands Limited. Worldwide, they include the world's second largest brewer, SAB-Miller and the Coca-Cola Corporation, with whom we have master equipment and service agreements, as well as other blue chip organisations.

BMG: What is the outlook for ECA?

C.F.: The outlook is extremely positive as there are numerous applications for the use of ECA technology, because it is safe for use on food and in all food environments. It is non-toxic, safe for the treatment of water used in food and beverage plants, free-rinsing (no need to rinse once applied), produced on site on demand, and residue and spoil free. It is also a real time application solution and a quality management tool that continuously monitors optimal dosage levels for compliance with approved safety and efficacy specifications. ● (bmg)



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