



S Balu, CMD, INKARP with Steve Bendefy, International Product Manager for Radleys

THE LABORATORY EQUIPMENT FROM RADLEYS HAS BEEN WELCOMED BY MEDICINAL AND PROCESS LAB CHEMISTS ACROSS THE WORLD; AND THE INDIAN PHARMACEUTICAL INDUSTRY CONTINUES TO BE A HEAVY USER OF THE RADLEYS BRAND OF INNOVATIVE CHEMISTRY PRODUCTS.

Refining Chemistry

“ BUSINESS IN OUR SEGMENT EXPLODED IN INDIA ORIGINALLY DUE THE HARD WORK OF INKARP, AND THE INNOVATIVE IDEAS OUR PRODUCT RANGE BRINGS. WITH THE RE-DEVELOPMENT OF OUR TRADITIONAL RADLEYS GLASS JACKET REACTOR RANGE FOR AN EXPORT MARKET, WE ARE SEEING THIS INTEREST AND GROWTH IN OUR PRODUCTS CONTINUE IN INDIA AND GLOBALLY. ”

Radleys is a laboratory equipment manufacturer, founded by a skilled glassblower, Bill Radley in 1966, primarily as a manufacturer of chemistry tools for areas of Pharmaceutical Discovery, Medicinal R&D, Pharmaceutical Scale Up, Process R&D and Process Plant Support; they are focussed and experienced specialists in this field.

In the late 1990's they developed a range of parallel synthesisers with GlaxoSmithkline, the best known of which is the Radleys Carousel. This is a non automated, 12 or 6 position synthesis tool which incorporates reflux and inert atmosphere, with all reactors at the same temperature and stirring speed.

INDIAN VENTURE

Radleys has been associated with Inkarp for almost a decade. Steve Bendefy, International Product Manager for Radleys, elaborated, “We exhibit at pharmaceutical and chemical conferences in Europe and elsewhere. Following several orders in 1998-99, we formally met

with Inkarp at Achema in 2000 to discuss how we can co-operate to introduce our products to the Indian market. Business in our segment exploded in India originally due the hard work of Inkarp, and the innovative ideas our product range brings. With the re-development of our traditional Radleys Glass Jacket Reactor range for an export market, we are seeing this interest and growth in our products continue in India and globally.”

Radleys has found the Indian market to be very interesting. There are the CRO's which are highly significant in the growth of the Indian Pharma Industry over the past three decades. The demands of these companies have evolved with time, and some now have sites in Europe, the US and elsewhere for their own primary and secondary manufacturing.

“New business development in India is thrilling to be involved in. The entrepreneurial spirit, combined with highly skilled chemists and engineers gives the Indian Pharmaceuti-

cal industry not only strong traditional roots but also excellent future prospects for growth and investment,” commented Bendefy.

PRODUCT PORTFOLIO

Many of Radleys’ products have certainly found applications in Life Sciences as there is a very close affiliation and regular catering to this market.

Similarly the plastics, polymer and petrochemical industries use many of their reaction systems and parallel synthesisers as they offer some very unique, cost effective solutions for chemistry.

“Some years ago there was a huge interest in combinatorial and high through put chemistry to build compound libraries. This put a great pressure on R&D to develop the new compounds and their manufacturing processes. Radleys recognised a market for low cost parallel synthesisers which, together with GlaxoSmithkline and other pharmaceutical giants, developed into the Radleys Discovery Technology (RDT) range of products. These products all offer some unique and significant advantages whilst remaining extremely cost effective,” explained Bendefy.

PRODUCT DEVELOPMENT

Radleys has a dedicated R&D division, which is headed by Mr. Martyn Deal who previously was working at GlaxoSmithkline in the Medicinal Chemistry R&D for over 23 years. Being an experienced chemist himself, Martyn has an excellent understanding of the end user’s requirements and future needs of the laboratory.

LARA CONTROLLED LAB REACTOR

The Lara is an automated, modular reaction station unit. Traditionally au-

tomation requires a significant financial investment, although only one chemist is trained in its use; Lara is designed in a way that every lab chemist can easily understand how to operate it and automate their process.

Bendefy explained, “Lara reactors can be exchanged in minutes; in this way the investment in automation can be easily spread over many different reactor volumes from 100ml to 10 L. Scale up and process analysis can be carried out and data-logged whilst the correct reaction can be used depending on the reagent value or scale of synthesis which is demanded that day.” This means that the investment in automation can be more widely used both by reaction volume and personnel, and is therefore a much more cost effective option than other systems currently available.

All devices are linked and controlled by software which also allows full data logging and the Lara CLR platform allows changing reactors in less than 2 minutes, requiring no tools, and there is no oil spillage.

Lara is now being used in India, UK, USA, Singapore, and all over Europe for medicinal chemistry, scale up, process R&D and manufacturing plant support.

RADLEYS REACTOR READY

Earlier this year Radleys launched their Reactor Ready system. Currently many chemists use round bottom flasks (RBFs) in mantles or oil baths for scale up and process development.

Although this practice can give poor control of exothermic reactions and therefore poor process temperature control, it is often the chemists’ tool of choice being perceived as relatively quick and easy to assemble compared

with traditional glass jacketed lab reactors (JLRs sometimes referred to as controlled lab reactors CLR).

Bendefy explained, “Following in depth discussions in India in September 2008, with chemists at a well known global pharmaceutical company, Radleys identified the typical problem areas with glass JLRs of all suppliers, and developed the Radleys Reactor Ready. This brings the excellent process temperature control, safety and visibility offered by JLRs, with apparatus set up time less than that of RBFs. This is combined with reducing the need for multiple stirrers and heat chill packages which can be very expensive, and so save the laboratory significant financial investment in the transition to a better method of process control.”

The Radleys Reactor Ready has now been taken up as the preferred JLR in many laboratories across India and the world. □

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