



Sustainable Extraction Technology Essential for Green Beauty Innovation

Perfect skin, clear conscience

Asynt reports how sustainable cosmetics innovator – **Keracol Ltd (Leeds, UK)** is using its DrySyn heating blocks and CondenSyn air condensers in the development and scale-up of their award-winning Dr Craft Mandarin green beauty product range.



Keracol Ltd is a sustainable cosmetics spin-out company born from over 15 years of scientific research between Professor Chris Rayner and Professor Richard Blackburn of the University of Leeds, UK. The company breathes new life into otherwise unused or under-researched natural ingredients with an emphasis on waste fruit and vegetable materials from the food industry, paired with their innovative & sustainable extraction processes, to develop their "Dr Craft" safe cosmetic actives with scientifically proven results.



Images: Sustainable extraction of mandarin orange peel using DrySyn heating block and CondenSyn Maxi waterless condenser

benefits at a chemical level, Dr Craft skincare products

Supported by an in-depth knowledge of their cosmetic are not only better for the environment, but safer for consumers. Recently the company launched its award-winning* Mandarin Range based on upcycling mandarin peels as part of a collaborative research project to eliminate waste and improve



food safety. The peels are rich in the anti-inflammatory, antioxidant, and wound healing actives - Narirutin and Hesperidin – making them ideal for inclusion in skin treatments.

Dr Kristina Hetherington, senior scientist

at Keracol said “Finding alternative ways to reduce water consumption and conserve energy by utilising laboratory equipment such as the DrySyn heating blocks and CondenSyn air condensers is essential to our development of green beauty products. Working with different food waste requires researching and identifying the optimal conditions for extraction of specific actives and for this task we have standardised on Asynt DrySyn heating blocks, hotplate stirrers and CondenSyn waterless condensers as our ‘go to’ laboratory tools. The DrySyn heating blocks and hotplate stirrers have proven to be highly reliable in reproducing the conditions for our world-first optimised extraction protocols. We rely on the CondenSyn waterless condensers heavily too as we always recycle our solvents. Crucially, when we scale-up our extraction process, the CondenSyn MAXI is an incredible tool which has ensured we recover an amazing 98% of the solvent which we recycle for subsequent extractions of each active material.

She added “Purchasing our lab equipment from Asynt

makes sense in every way. Their technical team has been a constant source of knowledge and support, and the equipment has proven to be highly reliable, allowing us to do our essential research effectively and sustainably. Additionally, Asynt are incredibly responsive to queries or changing demands in our laboratories”.

The CondenSyn Waterless Air Condenser

range is a proven ‘green’ replacement for water cooled condensers and suitable for greater than 95% of all chemical reflux applications. By not using cooling water the environmental impact of a lab using CondenSyn is dramatically reduced, as is the cost of water usage. The DrySyn range of laboratory heating blocks is the ideal lower-power consumption alternative to oil baths and heating mantles. DrySyn is designed to offer clean, safe synthesis for single or multiple reactions – great for the environment and for your chemistry. For further information on these products which are available worldwide, please visit <https://www.asynt.com/> or contact Asynt on +44-1638-781709 / enquiries@asynt.com.

It is estimated that the mandarin canning industry

in China produces up to 10 million tonnes of peel waste annually. The Dr Craft Mandarin Range from Keracol Ltd. brings new life to this mandarin peel by extracting its wonderful antioxidant benefits to create sustainable, high-performance skincare. For further information please visit <https://drcraft.co.uk/collections/mandarin-range>.

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