

SIRIO launches first smart nutra factory in China

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SIRIO – a leading nutraceutical contract development and manufacturing organisation (CDMO) – has completed a new ‘smart factory’ at its Ma’anshan site in China, with Internet of Things (IoT) enabled automated processes and monitoring, intelligent distribution robotics and Artificial intelligence (AI).



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Sirio is a first adopter of smart factory tech (industry 4.0) among nutraceuticals manufacturers, bringing a level of reporting, manufacturing control, production efficiency and automation not seen before. This empowers both the manufacturer and client with real-time production parameters, and machine learning for continual process optimisation, providing improved reproducibility and precision quality standards.

Rui Yang, CSO at Sirio, commented, “Rather than build a conventional factory setup, we have taken a lead in the nutra industry to look ahead at how quality, manufacturing and logistics can be augmented by connected technologies. Our new smart factory, using IoT and AI, ensures an unmatched level of process control, with intelligent energy consumption and far greater logistical efficiencies.”

The smart factory – being built in stages will span some 240,000sqm when complete – is designed to optimise manpower, materials and financial resources, which in turn has enabled Sirio to significantly improve energy efficiency and reduce waste. For example, new pallet robots – also referred to as Automated Guided Vehicles (AGVs) – now perform a number of functions including intelligent production scheduling. The AGVs are self-charging and fitted with collision avoidance technology meaning they overcome existing difficulties associated with manual control of warehouse logistics. This helps lower existing logistical costs by improving storage density, expediting transfer times and reducing the incidence of lost items.

The IoT and other equipment monitoring technologies remove the need for some manual intervention on the production line, removing human errors and vulnerabilities in manufacturing. Smart management systems also enable dynamic control orders and schedules in response to any unforeseen changes in manufacturing processes, and even, update cost changes of labour and materials accordingly.

“What this technology also enables is enhanced deliverability for smaller production runs for partners – which something many nutra CDMOs would be unable to accommodate. It means we can better adapt and flexibly support smaller volumes of

products and deliver them expeditiously to customers – or alternatively quickly scale up. We several years ahead of our competitors but intelligent production management is the future of nutraceutical manufacturing.” added Yang.

Significantly, the smart factory will greatly improve the Sirio customer experience as clients will be empowered with real time monitoring of their products. The system provides detailed analysis covering individual batches and manufacturing production efficiency, final passed yield, equipment utilisation rate, cost monitoring and order delivery.