Case Study

Ambition 2025: Lucozade Ribena Suntory

All but ten percent of British blackcurrants are used by Lucozade Ribena Suntory (LRS) in the production of Ribena. The berries are harvested in late summer and pressed for juice, leaving the skins as a waste product. Researchers at the University of Leeds have now developed a hair dyeing technology to utilise the blackcurrant skins and find new, innovative ways to reduce the food waste – with LRS already putting the skins to use, mainly by the way of animal feed.

Researchers at the University of Leeds worked together to identify and isolate naturally-occuring alternatives for hair dye products – as well as a sustainable process to produce them. The aim is to develop biodegradable alternatives that minimise potential risks to health.

The number of people colouring their hair is on the increase, but some ingredients in synthetic hair dyes are known irritants and can trigger severe allergic reactions. There is also much debate whether these ingredients also cause cancer. Furthermore, it is thought up to 95% of all dye end up washed down the drain; their effect on the environment is unknown.

Researchers combined expertise to develop a new technology to extract anthocyanins from blackcurrant fruit waste. Anthocyanins are pigments that provide colour to most berries, flowers, and many fruits and vegetables. They are non-toxic, water soluble and responsible for pink, red, purple, violet and blue colours. They bond strongly with proteins; blackcurrant skins have high concenttrations of anthocyanins, and represent a sustainable supply of raw material – the extraction technology is also based on sustainable concepts. The researchers have developed a patented hair dyeing technology that provides intense red, purples and blues on hair that, when combined with a natual yellow, could provide a wide range of colours. The colours produced were stable for at least 12 washes – comparable with conventional semi-permanent dyes.

The researchers are commercialising their patented technology through a University of Leeds spinout company; the blackcurrant-based dyes should be on sale this summer.

If you would like to learn more about this work you can read the <u>published research</u>.

"We feel passionately that the 10,000 tonnes of blackcurrants grown each year for Ribena are sustainably sourced, and for us, that means using all parts of our supply chain to help protect the environment.

"We've always recycled our blackcurrant skins but given the issues and concerns around conventional hair dyes, it's great to see out blackcurrant skins being used in other ways to help offer consumers greater choices and minimise the impact on the environment in the process."

Michelle Norman, Director of External Affairs and Sustainability, Lucozade Ribena Suntory

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