Textile Dyeing without Water or Waste

→ The use of supercritical fluids in textile dyeing completely eliminates the use of water and reduces the energy required to dye textiles.

Employing supercritical fluids technology in textile dyeing has the **potential to revolutionize the textile industry**. This waterless solution not only conserves a valuable and diminishing resource, it also uses less energy than traditional water-based textile dyeing.

Rather than using aqueous or solvent solutions, Applied Separations' technology **uses supercritical CO2** to take up the dye, which replaces water completely. And instead of sending the spent mix to waste-treatment facilities (or into rivers and lakes, as is sometimes done in less-developed production facilities), **the dye-mix can be captured and reused**. The CO2 for the process is taken from the environment and returned to it, **creating no pollution and no waste**.

ENVIRONMENTAL
Supercritical fluids technology eliminates use of water in dyeing textiles.

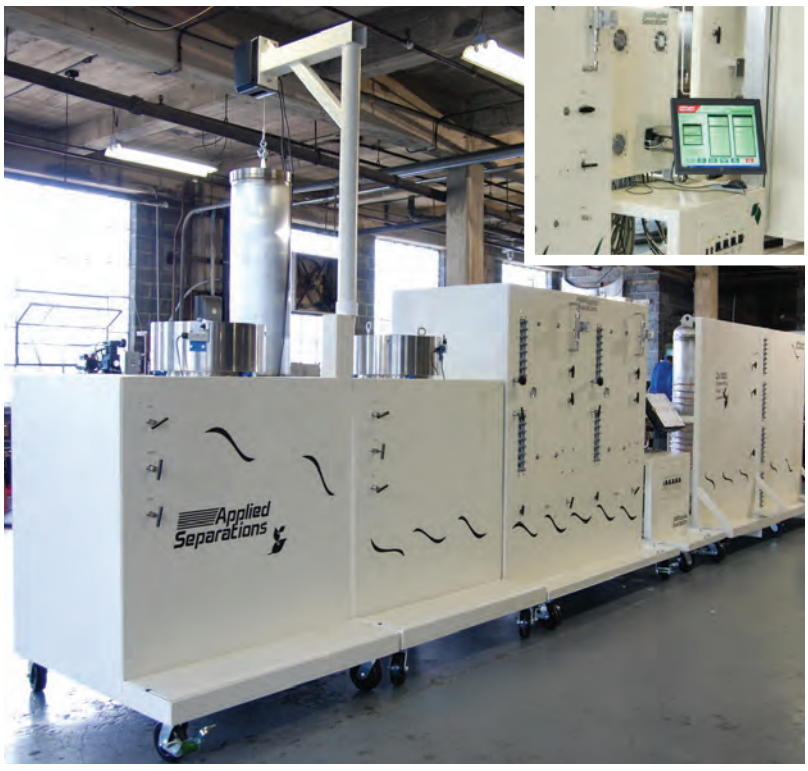
SOCIAL
Water-poor areas around the world can become or continue to be viable locations for textile manufacturing.

ECONOMIC
Applied Separations claims that the use of supercritical fluids in textile dyeing will require 50% less energy and 50% fewer chemicals, cutting production costs.

Why a Sustainia100 solution?
The textile industry is a major consumer of water, as evidenced by the 25 liters of water required to dye just one T-shirt. Applied Separations' supercritical fluids technology is viable and currently under production with industry partners. 2013 looks to be a breakthrough year for the technology, allowing the process of textile dyeing to become more resource efficient.

Developed in USA

Deployed in USA, East Asia



"APPLIED SEPARATIONS IS EXCITED TO HELP REINVENT THE TEXTILE INDUSTRY. GREEN IS NOT JUST A COLOR."

ROLF SCHLAKE, PRESIDENT AND CEO, APPLIED SEPARATIONS.