



Project Information Sheet

ECUVal

Programme area:	First Application and Market Replication Projects
Coordinator:	Carmen Gutiérrez-Bouzán Universitat Politècnica de Catalunya (UPC), Spain E-mail: gutierrez@intexter.upc.edu Tel: +34 937398008
Partners:	Fundació Privada per la innovació textil d'Igualada (FITEX), Spain ICOMATEX S.A Spain GRAU SA Spain
Website:	www.ecuval.eu
Benefits (max. 150 characters incl. space):	Reduction of water consumption in dyeing processes from 70 to 100%. Saving of 15-60% electrolyte. No chemicals are needed, no residues are generated
Keywords:	photo-electrochemical treatment, colour removal, effluent reuse
Sector:	Green Business
Type of solution	technology
Duration:	DD/01/2015 – DD/07/2017
Budget:	€ 1.476.511 (EU contribution: 50%)
Contract number:	ECO/13/630452

Summary

ECUVal is based on the application of a photo-electrochemical treatment to the degradation of dyes contained in textile effluents. This new system could solve the problem of textile wastewater with strong coloration and high salts concentration.

ECUVal system removes residual dyes without the addition of chemical reagents. Salts contained in the effluents act as electrolyte during the electrochemical treatment. No wastes requiring further treatment are generated. After the ECUVal treatment, an uncoloured effluent is obtained. The effluent, which contains a certain amount of salt, can be reused in a new dyeing process. This new technology is expected to reduce water consumption of dyeing process between 70 and 100%, and from 15 to 60% of electrolyte.

The ECUVal project covers the following objectives: manufacture of an industrial pilot to demonstrate the feasibility of the technology, scale up of the system at commercial level and creation a sustainable business model based on an innovative process for the treatment of effluents.

ECUVal system could be transferable to other industrial sectors (pharmaceutical, chemical...), which generate coloured and/or non-biodegradable effluents.

Expected and/or achieved results

- Design, implementation and validation of ECUVal pilot (4m³) to achieve significant colour reduction (>90%).
- Reuse of the treated effluent for new dyeings. Lower consumption of salt (15-60%) and water (70-100%).
- Reduction of effluents salinity which also reduces the cost of the wastewater discharge (less chemicals and lower sludge production).
- Commercialization of a new ecological product which investment recovery 2 years after the end of the project.
- The ECUVal system can be transferred to other EU countries 2 years after the end of the project and reach transnational markets 5 years after the end.

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