Standardization
in research and innovation projects

Success story: **environment**

SuperCleanQ:

The 3-year project SuperCleanQ - Development of processes and quality procedures for the valorisation of recycled plastics for food contact applications, received funding from FP7 (7th European Research Framework Programme). SuperCleanQ consisted of a 12-strong consortium that developed quality assurance tools and procedures for plastics recycling processes targeted at food contact applications. The tools will be applied to a new process for the recycling of coloured and layered PET into food contact applications that cannot be processed by current PET recycling facilities.

www.supercleanq.eu

THE PROJECT

To meet the Packaging and Packaging Waste Directive 94/62EC and improve sustainability, Europe must reuse waste plastics in large high value applications. The largest and highest value market for recycled plastics is packaging, especially in food contact applications. SuperCleanQ will enable SMEs to take advantage of this market opportunity.

The SuperCleanQ project consortium brought together SME's, Trade Associations, RTDs and standardization bodies, in order to develop quality control, quality assurance tools and procedures for plastics recycling processes targeted at food contact applications. These will enable SMEs to conform to Commission Regulation EC 282/2008 on recycled plastic materials and articles intended to come into contact with foods.

STANDARDS: A SOLUTION FOR MARKET UPTAKE

Standardization was a key dissemination activity for the project, and seen as fundamental for the potential long-term use and impact of project results.

The standard developed by the SuperCleanQ project is a CEN Technical Specification 'Plastics – Recycled Plastics - Determination of Marker Compounds in Food Grade Recycled Polyethylene Terephthalate (PET).'

The project results will accelerate the development of new recycling processes for the wider food contact materials market and provide quality assurance for converters and end-users of recycled products applications for food contact thereby overcoming barriers and expanding this high value recycling market.

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HOW WAS THE STANDARD DEVELOPED?

The laboratory work to develop the standardized analysis method, was carried out as a major Work Package within SuperCleanQ. To enable this, PET recycling partners in the project provided a large number of samples that were taken from various stages in their recycling systems. These partners also provided samples of food contact PET products (e.g. bottles) that had been manufactured using recycled PET. Once the fundamentals of the analysis method were established, further work was carried out to validate it and ensure that it contained sufficient information to become a CEN standard.

NEN, the Dutch National Standardization Body who also participated in the project led the standardization work-package and provided an important link to existing CEN committees. Their support supplied the knowledge, experience and contacts necessary to ensure smooth progress through the CEN system and the eventual setting up of CEN/TC249 WG20 to complete work on the Technical Specification.

BENEFITS OF LINKING WITH STANDARDIZATION

The objectives of the SuperCleanQ project were:

- Development of a process to recycle currently unrecyclable coloured and barrier-modified PET
- A post-process quality validation protocol for assuring the consistency of plastics recycling processes for food contact applications with 100% reliability
- Real time in-line monitoring for process quality control to verify that the amount of chemicals meet the required levels
- Quality Assurance tests for recycled materials used in food contact applications to ensure compliance with regulations

The establishment of a new standard for the determination and quantification of selected contaminants (i.e. Marker Compounds) in recycled PET for the manufacture of food contact articles is an important addition to the quality control tools that are available to the plastics recycling industry. It will enable companies to comply with the requirements of Commission Regulation EC 282/2008, as well as enabling them to demonstrate to their clients that they are operating good manufacturing practices within a quality assurance framework.

LONG-TERM EXPECTED IMPACT

Once it is published the new CEN Technical Specification will be available to any interested stakeholder, for use on a voluntary basis.

In addition to assisting compliance with EC 282/2008, it will enable the PET recycling industry to provide its clients with additional confidence that they are able to deliver food grade recycled PET of a consistently high quality and are operating to a good quality assurance system.

The Technical Specification will provide a stepping-stone for other European, or possibly, international standards.

> The standard analytical method being developed for the identification and quantification of marker compounds in recycled, food grade PET will be proposed as a potential standard. The availability of such a standard for recycled, food grade PET will provide governing bodies, regulators and analysis laboratories with the capability to determine the purity of such products in a cost-effective and accurate manner.
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> Tim Marsden, Senior Executive - Projects, The British Plastics Federation

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Every project is different. The CEN-CENELEC Research Helpdesk can provide you with advice on how to include standardization in your project. Please feel free to contact us!

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