

**Technical Bulletin for operators at plastic sorting facilities**

**Sorting Detectable Black Trays – with NIR /Optical sorters**

An in-market trial conducted in July and August 2014 sought to test whether food packaging that is black yet detectable could be automatically sorted and recovered by plastic sorting facilities (including Material Recovery Facilities (MRFs) and Plastics Recovery Facilities (PRFs)) after being collected at kerbside. The project also evaluated the recovered to assess if it could be reintroduced into new food packaging.

The project was successful in demonstrating black CPET trays could be recycled and this may lead to more of these trays on the market.

***Potential technical issue:***

There is a possibility that detectable black CPET trays may be detected and ejected into the clear PET fraction. This can be rectified by a simple adjustment to the software of the sorting equipment and has been already proven by recent WRAP-sponsored studies with all of the major sorting systems used in UK.

***Technical adjustments for sorting equipment:***








Plastic sorting facilities such as MRFs and PRFs use a variety of sorting equipment and the technical specification for each machine varies. The adjustments required for nearly all makes of NIR sorting machines have been determined by the manufacturers within the technical centre associated with each manufacturer. The major suppliers of NIR sorting equipment (listed in Table 1) showed that they were all able to positively identify and separate CPET trays made with detectable black colourant and eject them into the coloured PET stream or into a separate category (black CPET).

In order to prevent any black trays entering the clear PET stream, plastic sorting facilities are advised to contact their technical support at the equipment supplier for the necessary upgrades to their machinery settings. In addition NEXTEK Ltd can also advise on the specific issues and contacts for these

machinery adjustments. The majority of machinery suppliers are shown in Table 1.

***Equipment Suppliers:***

**Table 1:** Machinery suppliers whose equipment was adjusted and tested as part of previous trials and can detect CPET trays made with detectable black colourant. Others that can be adjusted may not be listed below.

Supplier	
Titech	
Pellenc	
REDWAVE & BTW-Binder	
S+S	
MSS	
RTT Steinart	
UniSensor	



Jonathan Mitchell

Email: [jonmitchell@nextek.org](mailto:jonmitchell@nextek.org)

Edward Kosior

Email: [edkosior@nextek.org](mailto:edkosior@nextek.org)