



## Contamination of plastics

### Application note Resolve 03-01

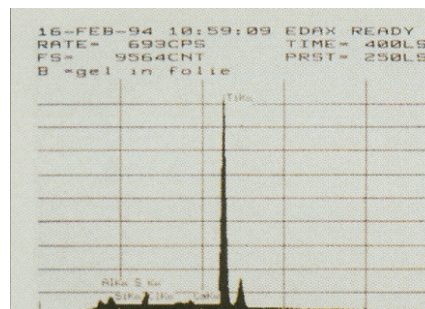
Contaminants can be present in many forms of plastics - powders, granulates, foils, fibres, or blow-moulded products. Contaminants are generally of unknown nature and origin and are often unacceptable to both the producer and the end user. In order to resolve problems resulting from contamination, the source of the contamination must first be identified.

Analyzing contaminants in polymers is routine at DSM Research. We are geared to identify the nature and composition of contaminants, whether large or of submicron dimensions, organic or inorganic. We have at our disposal a variety of analytical techniques useful for contaminant identification. We can also isolate subsurface contaminants and determine in which layer or product component they reside. We determined the impurity in the multilayer film shown in the accompanying photo, a cross section of a three-layer film with a large impurity in the middle layer.

Elemental analysis (see spectrum) revealed that the impurity was composed primarily of titanium, indicating that the contaminant is an agglomerate of titanium dioxide added to the film. Other impurities often encountered include catalyst residues, sand grains and even fibres from cleaning rags.

Should you have any contamination problems, please feel free to contact us. We offer independent, accurate and rapid measurements conducted by experts in the field and will be happy to send you a quotation free of charge.

For more information on analysis of contaminants or other morphological problems with plastics, please contact us.



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