X-Supreme8000

HITACHI
Inspire the Next

OBJECTIVES:

| Ensure customer confidence in recycled polymer products

| Reduce testing costs

RESULTS:

| Accuracy of raw material and finished product composition

| Reduction of testing time by over a half

Quality Assurance in Polymer Reprocessing: Improved Speed and Accuracy

This established polymer manufacturer collects, sorts and recycles waste polymers (e.g. scrap rubber). Their customers use this reprocessed material in the manufacture of products such as tyres, construction materials, automotive components etc. Accurate chemical composition of the feedstock (waste polymer) and finished product is essential for in-house processing, and for ensuring products meet specifications for their customers. This is so important that they have set up their own laboratory for a wide range of in-house testing, including X-ray Fluorescence (XRF) analysis.

Carrying out all their compositional testing in-house, without outside support, means they have to prove testing accuracy to fulfil their own – and their customers' – quality standards. Achieving this proven high accuracy within a reasonable testing time-frame relies on the right equipment. This is where Hitachi's X-Supreme8000 has made a real impact in the lab.

The first noticeable improvement when using the X-Supreme8000 over the previous XRF model in the lab is its speed of analysis. A test that used to take five minutes, now only takes two. With its autosampler, the X-Supreme can take ten samples at one time, meaning that a 50 minute test now takes only 20 minutes. This has a knock-on effect that the process uses far less helium than before. With the rising global cost of helium, this is an important advantage.

> " The X-Supreme's accuracy in testing is vital to our assurance that we're telling our customers the truth. "

IMPROVED QUALITY CONTROL

Since using the X-Supreme8000 in our lab, the efficiency of the testing has increased, due to the reduced time of the analysis and the reduction in costs.

The quality assurance process has improved and they can now control product specification more tightly. The results shown on the X-Supreme's screen are used for immediate acceptance or rejection of materials. The data is now used for improved statistical process control, and for better understanding of the properties of the raw materials entering the manufacturing site.

In future, they will begin to use the X-Supreme's data capture features to further improve their process efficiency and quality control.

PARAMETERS CRITICAL TO THE MANUFACTURING PROCESS ARE:

| Chlorine content

| Bromine content

| Calcium content

If you'd like to see the X-Supreme8000 in action visit www.hitachi-hightech.com/hha or book a demo.

◉ Hitachi High-Tech Analytical Science

X-SUPREME8000 FOR QUALITY ASSURANCE AND PROCESS CONTROL

The X-Supreme8000 is the ultimate bench-top XRF analyser for materials such as petrochemicals, polymers, minerals and general chemicals in production environments and laboratories.

The X-Supreme8000 makes it easy to get reliable, repeatable results by combining application-optimised hardware with software that is simple but powerful. To take a measurement, the operator simply prepares the sample, loads it into the auto sampler and presses the start key. Results are displayed on-screen, including pass/fail messages and instructions on how to handle a sample that is out of specification.