7300/7500 Real-Time PCR Systems Spectral Calibration Kits

Introduction
Life Technologies is committed to designing products with the environment in mind—it’s one more step toward a smaller footprint. This fact sheet provides the rationale behind the environmental claim that the 7300/7500 Real-Time PCR Systems Spectral Calibration Kits utilize less packaging material than their preceding packaging design. Environmental benefits include reduced use of resources for packaging, thereby improving the packing density and weight, and decreasing greenhouse gas emissions from transport of the same amount of product. Furthermore, less packaging waste is generated at end-of-life.

Product Description
7300/7500 Real-Time PCR Systems Spectral Calibration Kits enable the user to establish the pure dye spectra and multi-component values needed to perform accurate fluorogenic PCR assays with the Applied Biosystems® 7300/7500 Real-Time PCR Systems.

Green Benefits
- Less packaging
- Increased freight density
- Decreased fuel consumption and greenhouse gas emissions for transport
- Less waste disposal
Green Features

Sustainable Packaging

The 7300/7500 Real-Time PCR Systems Spectral Calibration Kits are shipped at reduced temperatures. As such, the cold chain transport requires use of specially designed coolers. The internal dimensions of the coolers mandate that the inner packaging be limited so as to maximize the number of units shipped per cooler (increasing freight density).

Applying sustainable packaging principles, we re-engineered the inner packaging and designed the kit box for the 7300/7500 Spectral Calibration Kits to be “right sized”. This reduced the cubic dimensions by 44% and material consumption by 20% (Table 1, Figure 1). Furthermore, this reduction in size allowed an optimization of our cold chain packaging. By this single reduction, we reduced the overall cooler requirement by 50%, removing 7.3 tons of packaging per year.

Table 1. Reduced Packaging for the 7300/7500 Real-Time PCR Systems Spectral Calibration Kits.

<table>
<thead>
<tr>
<th>Kit Design</th>
<th>Length (in)</th>
<th>Width (in)</th>
<th>Height (in)</th>
<th>Volume (cu. in.)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old</td>
<td>13.56</td>
<td>4.75</td>
<td>6</td>
<td>386</td>
<td>0.162</td>
</tr>
<tr>
<td>New</td>
<td>8.75</td>
<td>6.19</td>
<td>4</td>
<td>217</td>
<td>0.129</td>
</tr>
<tr>
<td>Material Reduction</td>
<td>44%</td>
<td>20.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Reduced Packaging for the 7300/7500 Real-Time PCR Systems Spectral Calibration Kits.