**Introduction**
To minimize the adverse environmental impact of packaging and shipping products on dry ice, Thermo Fisher Scientific investigated the feasibility of shipping its Applied Biosystems™ TaqMan™ Assay products at ambient temperature. Functional and stability testing demonstrated that assay products shipped at ambient conditions provided the same quality as assays shipped on dry or gel ice. By these actions, we are decreasing packaging and both dry and gel ice, thereby reducing energy and fuel use, greenhouse gas emissions, and volume in the waste stream.

**Product description**
TaqMan Assays are the most comprehensive set of products available for gene expression, miRNA, copy number variation, and single nucleotide polymorphism (SNP) genotyping analyses. They include off-the-shelf gene-specific probe and primer sets, custom probes, primers manufactured to your desired sequences, and everything in between. All TaqMan Assays have been designed using our validated bioinformatics pipeline and can be performed with the same PCR protocol, eliminating the need for primer design or PCR optimization. TaqMan Assays provide fast, reliable, and convenient methods for generating reproducible results for your research.
The annual carbon footprint to manufacture EPS and convert it into coolers for our oligonucleotide products is approximately equivalent to 102 tons of CO₂ [1].

Adding gel or dry ice to each cooler to ensure the product is delivered frozen to our customers further increases the mass and dimensions of each package. Factoring in the number of shipments and average distance traveled per package, and the fact that most packages are shipped via air, the annual total carbon footprint for transporting frozen oligonucleotides is in excess of 111 tons (measured as CO₂ emissions) [2].

By “going ambient” for the TaqMan Assays, Thermo Fisher Scientific will help divert an annual total of nearly 27,675 kg (75,235 ft³) of EPS from landfills and incinerators, and will reduce the total carbon footprint from manufacture of the EPS coolers and their transport by more than 214 tons annually.

Functional and stability testing demonstrated that TaqMan Assays exposed to simulated ambient shipping conditions remained stable and performed identically to assays shipped on dry or gel ice.

Further details can be found at thermofisher.com/ecotaqman