

Design for sustainability (DfS) scorecard



With our DfS scorecard, we drive sustainability improvement during the product development process through multiple product sustainability criteria divided into seven impact areas.

Extract-N-Amp Cellular RNA Lysis Buffer

The Extract-N-Amp™ Cellular RNA Lysis buffer is a single working solution that allows for rapid, room-temperature extraction and stabilization of RNA from a range of cells.



Impact areas

Results



MATERIALS

Reduction in the mass of consumables required for the workflow by 88%.
Eliminates the use of Chloroform, a hazardous substance



SUPPLIERS & MANUFACTURING

Tier 1 suppliers participate in Together for Sustainability (TfS) as a commitment to improving sustainability throughout the value chain.



PACKAGING

Considerable reduction of the mass of primary packaging required for the workflow but added cold shipping requirement.



ENERGY & EMISSIONS

New product workflow eliminates the need for a refrigerated microcentrifuge consuming 0.468 kWh per 100 reactions. However, the new product requires a refrigerated storage, adding 0.007 kWh per year of storage (assuming using a 600L freezer consuming 0.8 kWh per day).



WATER

No change compared to baseline product in consideration of our DfS criteria.



USABILITY & INNOVATION

Simplified workflow and elimination of chemical hazards (Chloroform) offers improved customer experience.
Cold storage conditions increase shelf-life.



CIRCULAR ECONOMY

Reduction in the mass of waste generated throughout the workflow by 89%.
Eliminates hazardous waste generation by solvent elimination.

Baseline product: Organic Extraction with Silica Spin Column Purification