



TPP Statement ISCC Mass Balance Approach

TPP supports sustainable manufacturing approaches, including the use of certified renewable feedstocks through the ISCC mass balance method where applicable.

The ISCC Mass Balance approach allows renewable and/or recycled feedstocks to be introduced into existing production systems while maintaining traceability through certified chain-of-custody principles. Renewable or circular raw materials are allocated via a controlled bookkeeping system, enabling a gradual reduction of reliance on fossil-based resources while utilizing existing manufacturing infrastructure.

Virgin Raw Material Strategy for Laboratory Consumables

TPP laboratory products are manufactured from virgin raw material USP Class VI compliant to ensure:

- Compliance with stringent quality and performance requirements
- Consistent material composition and product reproducibility
- Minimization of risks associated with unintended substances potentially introduced through recycled material streams
- Reduction of risks related to extractables and leachables that could interfere with sensitive laboratory applications

For laboratory consumables, product safety, material consistency, sterility assurance, and performance reliability remain critical requirements.

The use of recycled post-consumer or post-use material is currently not supported by TPP laboratory consumables, as recycling and reprocessing processes cannot presently be validated to ensure compliance with requirements related to sterility, purity, material integrity, and defined product performance expectations consistent with quality management principles according to ISO 13485.

Identified Limitations for Reuse or Recycling of Post-Use Laboratory Consumables

- Material degradation: Polymer reprocessing may alter material properties and compromise product performance.
- Contamination risk: Post-use handling and recycling cannot reliably eliminate biological or chemical contamination risks.
- Potential extractables and leachables: Recycled material streams may introduce unintended substances that could affect sensitive laboratory applications.
- Lack of validated processing: Recycling processes are generally not validated against product-specific laboratory consumable performance requirements.

TPP continuously evaluates sustainable material solutions while maintaining its commitment to product quality, safety, and reproducible performance standards required for laboratory and life science applications.



Sources

- International Sustainability & Carbon Certification: <https://iscc-system.org/>
 - ISCC PLUS – International Sustainability & Carbon Certification (ISCC), Mass balance = chain-of-custody approach enabling renewable/recycled feedstocks in existing infrastructure with traceability.
 - ISCC – “Mass Balance Explained” (2024), Certified feedstocks can replace fossil feedstocks through bookkeeping allocation; physical separation is not always possible in chemical manufacturing.
- ISO.org: ISO 13485:2016 Medical devices — Quality management systems — Requirements for regulatory purposes

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