

Standards in Calculating GHG Emissions, Commercial Averages vs. Vendor Submitted Data, and Working with Vendors to Achieve Reported Emissions Reductions

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Purpose

When conducting a Life Cycle Assessment (LCA), industry standards exist to aid companies in the calculation of greenhouse gas emissions. To determine whether these differed from how Pfizer vendors would report their own emissions, two studies were conducted. One comparing the CO₂e emissions of two often cited higher emissions material (Aclar and PCTFE) and asking a vendor to report their own emissions for a higher emissions material (Aluminum) along with a request to present lower emissions identical options. In both situations, vendor reported data differed from commercial averages used to conduct most LCAs. While this finding is in-line with data quality standards listed in industry standards, it can likely serve as a useful case study on the importance within NetZero of holding active dialogue with vendors while conducting LCAs.

Methods

Two companies offering comparable barrier solutions (Aclar and PVDC) were contacted and asked to report their GHG emission per kg of material. Steps were taken to document that these were reliably calculated numbers. A comparison was then made of commercial averages reported for this data, and the numbers provided by vendors. A similar exercise was conducted with an aluminum film vendor, who was in addition asked to provide alternative options to further reduce their GHG emissions.

Results

In the first experiment, results reported by material suppliers were lower than those reported in commercial averages. Additionally, the % difference between a commercial-average comparison vs. vendor-specific comparison was different. In the second experiment, differences between commercial-average and vendor-specific averages were also reported, which were further different than optimal options offered by said vendor.

Conclusion

Supply chains are complex. LCA industry standards specifically highlight this complexity and suggest using vendor-specific data when sufficiently high-quality data exists. A comparison of various commercial-average vs. vendor-specific data supports these data standards in the pharmaceutical industry. Further, study results suggest further vendor-specific GHG data integration in pharmaceutical development are likely to result in LCAs that are more reflective of the current state of supply chains.

Keywords: Life Cycle Assessment, Packaging, Pharmaceutical Development, Sustainability, NetZero