



2023 Scope 1 and Scope 2 Emission Sources

Per the GHG Protocol, these are the Scope 1 and Scope 2 emissions sources that are applicable to Alto Ingredients' facilities for 2023 sustainability reporting. Scope 1 emissions were included in the evaluation based on Alto's request or availability of data. Note: CO₂ emissions from fermentation were not calculated or included in Scope 1 emissions previously but were estimated for 2023 using stoichiometric calculations, and Alto has indicated that metered data may be included in future years. Mobile fuel combustion was included for Alto ICP and Alto Columbia where it had not been in prior years.

Facility: Alto Pekin Scope	Emission Source	Included in Evaluation?	Part 98 EPA Reportable?
Scope 1	Natural gas and biogas combustion (Subpart C)	Yes	Yes
Scope 1	Biogas from Wastewater Treatment (Subpart II)	Yes	Yes
Scope 1	Sale of CO ₂ (Subpart PP)	Yes	Yes
Scope 2	Electricity (Scope 2)	Yes	No
Scope 1	Fermentation of corn	Yes	No
Scope 1	Combustion of ethanol vapors (from truck loading)	Yes	No
Scope 1	Mobile fuel combustion	Yes	No
Scope 1	Aerobic growth of yeast	No	No
Scope 1	Contractor equipment emissions	No	No
Scope 1	Emissions associated with on-road company vehicles	No	No
Scope 1	Fugitive component emissions	No	No
Scope 1	Emissions associated with refrigerant leaks	No	No
Scope 1	Emissions associated with fire suppression usage	No	No
Facility: Alto ICP Scope	Emission Source	Included in Evaluation?	Part 98 EPA Reportable?
Scope 1	Natural gas and biogas combustion (Subpart C)	Yes	Yes
Scope 1	Biogas from Wastewater Treatment (Subpart II)	Yes	Yes
Scope 1	Sale of CO ₂ (Subpart PP)	Yes	Yes
Scope 1	Fermentation of corn	Yes	No
Scope 1	Mobile fuel combustion	Yes	No
Scope 2	Electricity (Scope 2)	Yes	No
Scope 1	Contractor equipment emissions	No	No
Scope 1	Emissions associated with on-road company vehicles	No	No
Scope 1	Fugitive component emissions	No	No
Scope 1	Emissions associated with refrigerant leaks	No	No
Scope 1	Emissions associated with fire suppression usage	No	No
Facility: Alto Columbia Scope	Emission Source	Included in Evaluation?	Part 98 EPA Reportable?
Scope 1	Natural gas combustion (Subpart C)	Yes	Yes
Scope 1	Sale of CO ₂ (Subpart PP)	Yes	Yes
Scope 2	Electricity (Scope 2)	Yes	No
Scope 1	Fermentation of corn	Yes	No



Scope 1	Combustion of ethanol vapors (from truck loading)	Yes	No
Scope 1	Mobile fuel combustion	Yes	No
Scope 1	Fugitive component emissions	No	No
Scope 1	Contractor equipment emissions	No	No
Scope 1	Emissions associated with on-road company vehicles	No	No
Scope 1	Emissions associated with refrigerant leaks	No	No
Scope 1	Emissions associated with fire suppression usage	No	No

Facility: Alto Magic Valley Scope	Emission Source	Included in Evaluation?	Part 98 EPA Reportable?
Scope 1	Natural gas combustion (Subpart C)	Yes	Yes
Scope 2	Electricity (Scope 2)	Yes	No
Scope 1	Fermentation of corn	Yes	No
Scope 1	Combustion of ethanol vapors (from truck loading)	Yes	No
Scope 1	Mobile fuel combustion	No	No
Scope 1	Fugitive component emissions	No	No
Scope 1	Emissions associated with on-road company vehicles	No	No
Scope 1	Contractor equipment emissions	No	No
Scope 1	Emissions associated with refrigerant leaks	No	No
Scope 1	Emissions associated with fire suppression usage	No	No