

Air Emissions? “We *Render* Solutions!”

- Odor Control
- Scrubbers



Maximum control of mercaptans, aldehydes, carbonyls, esters, amines

SO₂, H₂S, HCl, NH₃, particulate



Integrated and independent rendering facilities generate emissions compounds with detection thresholds as low as 1 part per billion. Tri-Mer odor control scrubbers are “best available” technology for efficiently eliminating these emissions.

Scrubbers are custom-engineered to the facility requirements and odor composition. Systems are 98-99%+ efficient for the elimination of particulate, ammonia, hydrogen sulfide, organic sulfides, disulfides, aldehydes, trimethylamine, C-4 amines, pyrazines, and organic acids.

Tri-Mer odor control scrubbers provide continuous, automatic control and can adapt to the control of fugitive emissions as well. Gas volume ranges from 35 cfm to 150,000 cfm and higher. Where gas streams contain corrosives, fumes are neutralized using Tri-Mer Minimal Energy Technology.

Tri-Mer odor control systems are engineered for both the high intensity odor emissions from rendering, and for interface with plant ventilation. Multi-stage Tri-Mer wet scrubbers have become an important alternative to incinerators.

Tri-Mer Venturi wet scrubbers are used to remove PM from waste streams before treatment by multi-stage wet scrubbers because particles in sufficient concentrations can foul scrubber internals.

Tri-Mer Venturi scrubbers collect particulate, from coarse to sub-micron. They are ideal for air emissions that contain agglomerative, hygroscopic PM, which is difficult to manage with dry filtration devices.

[More information on odor control systems and venturi scrubbers is on the reverse side.](#)

"Lower capital and operating costs than RTOs"

That's a primary benefit of Tri-Mer odor control technology – one that's particularly important when complex odors are generated from multiple sources within the facility.

Tri-Mer systems are proven effective for the most challenging odors, including:

Acetaldehyde	Camphor	Methyl Mercaptan
Acrolein	Carbon Disulfide	Phenol
Allyl Disulfide	Chlorine	Propyl Mercaptan
Allyl Mercaptan	Diethylsulfide	Pyridine
Ammonia	Dimethylamine	Sulfur Dioxide
Benzyl Chloride	Dimethylsulfide	Trichloroethylene
Benzyl Mercaptan	Formaldehyde	Trimethylamine
Butyric Acid	Hydrogen Sulfide	Valeric Acid

Tri-Mer wet scrubbers for odor control are engineered to use less of the 4 resources that are typically required for odor scrubbing: water, chemicals, media and electricity.

This makes the Tri-Mer design a practical alternative, with life cycle costs lower than RTOs and other systems.

Tri-Mer equipment can be designed to accommodate multiple contaminants and operating conditions, from batch to continuous processing – one reason why Tri-Mer systems are among the most widely-specified for the control of odors from manufacturing and agricultural product processing.

Cloud Chamber Gas and Particulate Scrubber

Tri-Mer's Cloud Chamber scrubber uses charged water droplets to remove submicron particulate (PM2.5, fine, submicron, ultrafine and condensable as well as PM10 and coarser particles) at efficiencies of 99% or higher.

Simultaneously, CCS removes all gases that are treatable with a wet scrubber, including HCl, NO2, SO2, Cl2, NH3, HF, H2SO4, HNO3, ammonia and amine compounds.

Whirl/Wet: the "Workhorse" Dust Collector

Whirl/Wet is engineered for the continuous, reliable collection of dusts 3 microns and larger from processing, blending and packaging operations.

It is 95-99% efficient for the collection of all particulate generated in rendering environments, uses very little water and energy, and has no internal moving parts. *The Clean in Place design of the Whirl/Wet makes it highly advantageous from a maintenance standpoint.*

