



Eastman Custom Manufacturing

Get a Reaction![™]

Eastman has a long history of manufacturing chemicals that has led to the creation of a vast technology base and production capability supported by expert chemists, engineers, and operating staff. We look forward to working with you and developing mutually beneficial business relationships. Eastman wants the chance to earn your business!

Fast Development and Commercialization results when we match your product development needs with Eastman's process capabilities and technology base. Dedicated, experienced technical resources are available to reduce your development time.

Short Lead Times are available for long-term contract business. Eastman can provide just-in-time inventory to reduce your inventory liabilities.

Ideal Opportunities are Single, Well-Defined Concepts for Verified Markets, Synthetic Process Available (lab process acceptable), Annual Volumes > 3000 KG, Sales Opportunities > \$0.5M, and Regulatory Filings Completed. Eastman is a large-scale chemical manufacturer. Thus, working with Eastman to make your custom chemicals that require Eastman products lays the foundation for a synergist relationship.

Non-Ideal Opportunities are Research Projects (still selecting between molecule concepts), Pilot Plant Work, and cGMP Projects.

Chemistries Available

Eastman has a long history doing complex organic chemistry and a proven track record of product development and scale-up. The following are typical processes that are available:

Acetoacetylations

- Acetylations
- Acid Chlorides
- Acylation
- Addition Reactions
- Aldol Condensations
- Alkylations
- Amidations

Brominations

- Chlorinations
- Chlorosulfonations**
- Claisen Condensations
- Dehydrogenations
- Diazotizations

Esterifications

- Friedel-Crafts Reactions

Hydrogenations

- Imidizations
- Isomerizations
- HF Reactions (reagent only)

Knoevenagels

- Malonic Ester Synthesis
- Quaternizations

Reductions

- Reductive Alkylations
- Saponifications
- Sulfonamide Formations
- Sulfonations

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Equipment Available for Custom Chemical Manufacturing

Manufacturing facilities for industrial and performance chemicals in scales ranging from a few thousand Kg to more than a million Kg annually are available. Eastman's extensive general-purpose and batch equipment can be configured or modified to meet your needs. The following list provides an overview of the major equipment systems available.

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Manufacturing Equipment

Synthesis	Fourteen Glass Batch Reactors (750 to 2,000 gallons) Seventeen Stainless Steel Batch Reactors (1,500 to 3,000 gallons) One Inconel™ (750 gallons) One Hastelloy™ (2000 gallons) Three Stainless Steel (316) Autoclaves (1500 gallons, 900 psig hydrogen) Inconel™ Autoclave (600 gallons, 900 psig hydrogen)
Isolation	Eighteen Epoxy and Stainless Steel Nutsches One Stainless Auto Filter Dryer (8 m ²) Two Heinkel™ Inverting-basket Centrifuges (316 Stainless Steel and Hastelloy)
Distillation	Stainless Steel Batch Vacuum Stills with Multiple Receivers (1200 gallons) Multiple Solvent Recovery Columns
Waste Disposal	On-site Wastewater Treatment and Incinerations Facilities
Other	Glass and Stainless Steel Rotary Double-Cone Dryers Stainless Bethlehem™ Porcupine Dryer Ribbon Dryer Clarification Filters Bulk Storage to/from Railcars or Truck Trailers

Eastman Chemical Company

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Material Safety Data Sheets providing safety precautions, that should be observed when handling and storing Eastman products, are available online or by request. You should obtain and review the available material safety information before handling any of these products. If any materials mentioned are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

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